POLOKWANE MUNICIPALITY

BID NUMBER: PM23-25/26

TENDER DESCRIPTION:	**THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS**

NAME OF BIDDER: ……..

CSD NUMBER: ……..…..

CONTACT NUMBER ……

EMAIL ADDRESS: ……...

TOTAL BID AMOUNT: _____

Document Prepared by:

Polokwane Municipality
Corner Landdros Mare and Bodenstein Street
Polokwane
0699

CLOSING DATE: **15 December 2025 @ 10H00**

Documents must be deposited in the bid box not later than **10:00 on 15 December 2025** when bids will be opened in public.

Bidders must contact the following officials for any enquiries:

- Technical enquiries: Technical enquiries: Mr. Wimpie Redelinghuys/ Mr. Dennis Mokoala 015 290 2280/015 290 2271; wimpier@polokwane.gov.za / dennism@polokwane.gov.za

• Supply chain enquiries: Mr. Tiro Pilusa: (015 290 2148) tirop@polokwane.gov.za

• **Bids will remain valid for a period of 90 days after the closing date.**

Bids received after the closing date and time will not be considered. Polokwane Municipality does not bind itself to accept the lowest or any other bid in whole or in part.

VERY IMPORTANT NOTICE ON DISQUALIFICATIONS

A bid that does not comply with the peremptory requirements stated hereunder will be

regarded as not being an “acceptable bid”, and such a bid will be rejected. An “acceptable bid” means any bid which, in all respects, complies with the conditions of the bid and the

specifications as set out in the bid documents, including the conditions as specified in the

preferential procurement policy framework Act and The Preferential Procurement Regulation, 2022 and related legislation, in terms of which provision is made for this policy

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

2. If the bid document is completed using a pencil. Only black ink must be used to complete the bid document.

3. The bidder attempts to influence or has in fact influenced the evaluation and/or awarding of the contract.

4. The bid has been submitted after the relevant closing date and time.

5. 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.

6. 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;

(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 to the municipality in respect of a contract that would cause a conflict of interest.

7. Bid offers will be rejected if the bidder or any of his/her directors are listed on the Register of Bid Defaulters in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act 12 of 2004) as a person prohibited from doing business with the public sector.

8. Bid offers will be rejected if the bidder has abused the Polokwane Municipality supply chain management system.

9. Failure to complete and sign the certificate of independent determination or disclosure of wrong information.

Failure to comply with the above will lead to immediate disqualification.

“Polokwane Municipality is committed to maintaining the highest standards of honesty, integrity and ethical conduct and has adopted a zero tolerance to fraud and corruption. Thus, Polokwane municipality urges all stakeholders and potential service providers to exercise extreme caution and be vigilant of imposters in the name of the Polokwane Municipality.

Service Providers are reminded of the importance of verifying the authenticity of any requests for personal information and avoid engaging with unsolicited communications, particularly those involving financial matters or the promise of tenders and jobs. Any suspicious activity, including fraudulent calls or messages, should be reported immediately to the relevant authorities and the police for investigation. Polokwane Municipality does not request potential service providers to pay any gratification to individual in any way whatsoever in exchange for the appointment to render services for the Municipality.”

Signed by Bidder

PART: A: INVITATION TO BID: **MBD1**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (*POLOKWANE MUNICIPALITY*)					
BID NUMBER:	**PM23-25/26**	CLOSING DATE:	**15 December 2025**	CLOSING TIME:	**10:00**
BID DESCRIPTION	**THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS**				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7) or SERVICE LEVEL AGREEMENT OF POLOKWANE MUNICIPALITY.					

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(*Polokwane Municipality, Civic Centre, corner, Bondenstein and Landdros Mare Street) not later than 10:00 on 15 **December 2025**.

An official and compulsory site inspection will **NOT** be held.
The Bid box is generally open 24 hours, 7 days a week.
Completed Bid document, fully priced and signed must be sealed in an envelope marked **"PM23-25/26: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS"**
Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.
Bids documents containing the Conditions of Bid and other requirements in terms of the Supply Chain Management Policy will be downloaded from e-tender Publication Portal at www.etenders.gov.za and www.polokwane.gov.za at no fee.

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 NUMBER	----------		**COMBINED RATES AMOUNT**		**R**	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes	☐ No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT		☐ Yes	☐ No

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]			
ARE YOU THE ACCREDITED REPRESENTATIVE **IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?**	☐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]
MINIMUM WORK OPPORTUNITIES TO BE CREATED	**TO BE CONFIRMED PER PRJOECT**	**CIDB GRADING**	**3EP OR HIGHER**
SIGNATURE OF BIDDER	……	**DATE**	
CAPACITY UNDER WHICH THIS BID IS SIGNED			

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		**TECHNICAL INFORMATION MAY BE DIRECTED TO:**	
MUNICIPALITY	POLOKWANE	POLOKWANE MUNICIPALITY	Mr. MD Mokoala
CONTACT PERSON	Mr. Tiro TM. Pilusa	TELEPHONE NUMBER	015 023 5271
TELEPHONE NUMBER	015 023 5148	FACSIMILE NUMBER	N/A
FACSIMILE NUMBER	N/A	E-MAIL ADDRESS	dennism@polokwane.gov.za
E-MAIL ADDRESS	Tirop@polokwane.gov.za	Principal Agent: Contact: Telephone: E-mail address:	City of Polokwane Mr. W Redelinghuys 015 290 2757 wimpier@polokwane.gov.za
EXPANDED PUBLIC WORKS PROGRAMME Creating opportunities towards human fulfilment		mineral resources & energy Department: Mineral Resources and Energy REPUBLIC OF SOUTH AFRICA	

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, 2017, 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:

……..

POLOKWANE MUNICIPALITY

CONTENTS OF TENDER DOCUMENTATION

BID NUMBER: **PM23-25/26: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS**

DIRECTORATE: **ENERGY SERVICES**

BUSINESS UNIT: **PLANNING AND DEVELOPMENT**

Bids are hereby invited for THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS.

The Council also reserves the right to negotiate further conditions and requirements with the successful bidder. It is estimated that tenderers must have a cidb contractor grading designation of **3EP** or higher

THIS BID IS SUBJECT TO THE, PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATION, 2022, AND THE GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS (THIRD EDITION) (2015) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

The Municipality shall adjudicate and award bids in accordance with preference points of 80/20-point system, 80 points for the price and 20 points for specific goals. Prospective bidders must accept that the bid will be adjudicated, according to the said legislation. Bids will remain valid for 90 (ninety) days.

MS. THUSO NEMUGUMONI
CITY MANAGER
CIVIC CENTRE
LANDDROS MARE STREET,
POLOKWANE

POLOKWANE MUNICIPALITY

RESPONSIVENESS AND EVALUATION CRITERIA

1. **RESPONSIVENESS CRITERIA**

The Polokwane Municipality will consider no Bid unless it meets the following responsiveness criteria:

- The bid must be properly received in a sealed envelope clearly indicating the description of the service and the bid number for which the bid is submitted.
- The bid must be deposited in the relevant bid box as indicated on the notice of the bid on or before the closing date and time of the bid.
- A valid Central Supplier Database number to be provided.
- Bid forms must be completed in full and each page of the bid initialed.
- Submission of a Joint Venture Agreement, where applicable, which has been properly signed by all parties.
- Proof of payment of Municipal Rates and Taxes or letter for Tribal Authority or lease agreement must be attached.
- Complies with the requirements of the bid and technical specifications.
- Registered in the relevant contractor category in the Construction Industry Development Board Register of Contractors (CIDB).
- Adheres to Pricing Instructions.
- Financial ability to execute the contract.
- Comply in full and observe the requirements of the Notice to Bidders.
- Experience with similar work – demonstrate a track record of a project of similar scope and size

2. **EVALUATION OF BIDS**

a) All bids received shall be evaluated in terms of the Supply Chain Management Regulations, Polokwane Municipality Supply Chain Management Policy (on request from Municipality), the preferential procurement regulation 2017, and other applicable legislations.

b) The Council reserves the right to accept all, some, or none of the bids submitted – either wholly or in part – and it is not obliged to accept the lowest bid.

By submitting this bid, bidder authorises the Council or its delegate(s) to carry out any investigation deemed necessary to verify the correctness of the statements and documents submitted and that such documents reasonably reflect the ability of the Bidder to provide the goods and services required by the Council.

PLEASE NOTE

1. **The Municipal Manager may cancel a contract awarded to a person if:**

   a) The person committed a corrupt or fraudulent act during the procurement process or in the execution of the contract, or

   b) An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefited that person.

2. **The Municipal Manager may reject the bid or quote of any person if that person or any of its directors has:**

   a) Failed to pay municipal rates and taxes or municipal service charges and such rates, taxes and charges are in arrears for more than three months;

   b) Failed, during the last five years, to perform satisfactorily on a previous contract with the Polokwane Municipality or any other organ of State after written notice was given to that bidder that performance was unsatisfactory;

   c) Abused the supply chain management system of the Municipality or have committed any improper conduct in relation to this system;

   d) Been convicted of fraud or corruption during the past five years;

   e) Wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or

   f) Been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No. 12 of 2004) or has been listed on National Treasury's database as a person prohibited from doing business with public sector.

POLOKWANE MUNICIPALITY

T1.2 Tender Data

1. CONDITIONS OF TENDER

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (SFU) of May 2010, as published in Government Gazette No 33239, Board Notice 86 of 2010 of 28 May 2010. Those Standard Conditions of Tender remained the same as those published in the previous edition of the SFU as published in Government Gazette No 31823, Board Notice 12 of 2009 of 30 January 2009 – See www.cidb.org.za.

Each Tenderer shall obtain its own copy of the Standard Conditions of Tender.

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

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

Clause number	Tender Data
2. EMPLOYER **Cl. F1.1**	The "Employer" is "Polokwane Municipality" The Employer's domicilium citandi et executandi (permanent physical business address) is: Polokwane Municipality, Civic Centre, Landdros Mare Street, Polokwane The Employer's address for communication relating to this project is: PO Box 111, Polokwane, 0700
3. TENDER DOCUMENTS **Cl. F.1.2**	"The following documents form part of this tender: **VOLUME 1** **Part T1 Tendering procedures** T1.1 Tender notice and invitation to tender T1.2 Tender data T1.3 Standard and Particular conditions to tender **Part T2 Returnable Documents** T2.1 List of Returnable Documents T2.2 Returnable Schedules that will be incorporated into the Contract **Part C1 Agreements and Contract Data** C1.1 Form of offer and acceptance C1.2 Contract data C1.3 Form for Adjudicators Appointment C1.4 Agreement in terms of Occupational Health and Safety **Part C2 Pricing Data** C2.1 Pricing Instructions C2.2 Bill of Quantities **Part C3 Scope of Work** C3.1 Description of the Works C3.2 List of Drawings C3.3 Procurement C3.4 Construction C3.5 International, National and Eskom Standards C3.6 Health and Safety Specifications C3.7 Environmental Management during Construction C3.8 Management of the Works **Part C4 Site information** **Part C5 Drawings**

Clause number	Tender Data
4. EMPLOYER'S AGENT **Cl. F.1.4**	The Employer's Agent is: **a)** Principal Agent **ONLY TO BE CONFIRMED AFTER CONSULTANT APPOINMENT** Physical Address: …… …… …… Postal Address: …… …… …… …… Tel.: …… Fax: …… E-mail: ……
5. TENDERER'S OBLIGATIONS	
5.1. Eligibility **Cl. F.2.1**	A tender offer may only be submitted if the Tenderer satisfies the criteria stated in the Tender Data and if the Tenderer, or any of his principals, is not under any restriction to do business with the Employer.
5.2. Site Visit and Clarification Meeting **Cl. F.2.7**	The arrangements for a compulsory pre-tender meeting are: **Location: NOT APPLICABLE** **Date:**
5.3. Insurance **Cl. F.2.9**	No insurance cover will be provided by the Employer.
5.4. Alternative Tender Offers **Cl. F. 2.12**	Unless anything to the contrary has been determined in the Contract Data, a Tenderer may, together with his tender for the original designs contained in the contract documents, submit alternative designs and tender offers for consideration. All designs, calculations, drawings and Operation and Maintenance manuals shall be fully endorsed by a third party registered engineer, accomplished in such specific field of practice and the cost thereof shall be borne solely by the Contractor. Such alternative designs and offers shall be subject to the following conditions and requirements: 5.4.1. Tenders An alternative offer or design will be considered only if the tender for the original items has been fully priced and completed. The alternative tender offer is to be submitted in **the same envelope as the main tender offer**, together with a schedule that compares the requirements of the tender documents with the alternative requirements the Tenderer proposes. No alternative tender will be considered unless a tender free from qualifications is also submitted. Unless the alternative offer stipulates to the contrary, it shall be assumed that the period for completion of the Works shall be the same as for the original design. Designs, calculations, drawings and a modified schedule of quantities (as determined hereafter) in respect of each alternative offer or design shall accompany the alternative tender offer and shall be endorsed fully by a third party registered engineer, accomplished in such specific field of practice. 5.4.2. Preliminary calculations Preliminary calculations for an alternative design shall be submitted with the tender. Such calculations shall give adequate details so as to enable an assessment to be made of the general efficacy of the design and of its principal elements, also of the degree to which the design prescriptions and codes of the Employer are being complied with. The calculations shall be clear and in a logical sequence and shall clearly reflect all the design assumptions.

Clause number	Tender Data
	5.4.3. Preliminary drawings Preliminary drawings of the alternative designs shall also be submitted with the tender. These drawings shall comprise adequate layout plans, elevations and sections and shall clearly illustrate the general efficacy of the design and its principal elements. 5.4.4. Quantities Each alternative offer shall be accompanied by a modified priced schedule of quantities compiled in accordance with the specifications, in so far as it is applicable, which clearly shows the manner in which the price for the alternative offer has been determined and the items in the original schedule of quantities which fall away or are being changed. In addition to the schedule of quantities, a set of calculations shall be supplied to show how the quantities have been determined. All assumptions in regard to factors which will determine quantities shall be clearly and conspicuously marked by underlining or coloring, and shall indicate whether or not the assumptions have been based on information furnished in the Contract Data (with the necessary references). 5.4.5. Further details Should the Employer's Agent find that the calculations and drawings submitted for alternative designs are not complete enough for proper adjudication of the alternative designs, the Employer reserves to itself the right to call on the Tenderer to submit such further calculations and drawings as may be required. If such further details are not submitted within ten days of having been requested, the alternative designs will not be given further consideration. 5.4.6. Preliminary adjudication of alternative designs The Employer's Agent will undertake a preliminary scrutiny of any alternative designs for compliance with the specified requirements of the Employer. Should he find any mistakes or unsatisfactory aspects, he may afford the Bidder the opportunity to rectify them within a period to be determined by the Employer's Agent. However, it is emphasized that the preliminary scrutiny of the design and tender by the Employer's Agent, by its very nature, cannot be comprehensive, and no guarantee can be given in this regard that all the mistakes made by the Bidder will in fact be detected. Any correction of such mistakes shall be made with the tender price of the bidder being retained, and, wherever necessary, the priced schedule of quantities for the alternative design shall be adjusted accordingly. 5.4.7. Acceptance of alternative design The Bidder shall note that the acceptance of a tender which includes alternative designs shall mean that the alternative designs have been approved in principle only. If the final calculations, drawings and details do not comply with the specified requirements, such alternative designs may be rejected, unless they are suitably amended by the Bidder so as to be acceptable to the Employer. 5.4.8. Final drawings and calculations and the priced schedule of quantities Where a tender with an alternative design has been accepted, the Contractor shall, not less than two months before he intends starting with the construction of such design, submit to the Employer's Agent a complete set of working drawings, detailed calculations and a complete schedule of quantities, for approval. The schedule of quantities shall be based on the preliminary schedule of quantities, but with the necessary adjustments in quantities and prices and with the tendered price for the alternative design being retained.

Clause number	Tender Data
	Within three weeks of having received the above, the Employer's Agent will indicate which drawings, calculations, quantities, prices and other particulars are acceptable to him and which not, with reasons furnished. The Contractor shall then submit to the Employer's Agent in good time any modified drawings and other particulars for approval, for which he will require two weeks. Any delay arising from the fact that the amended particulars do not meet the requirements shall be the responsibility of the Contractor. No work which will be affected by an alternative design may be commenced, unless the drawings, schedule of quantities and prices for such alternative design have been approved. Should the Contractor fail to modify any drawings, calculations, quantities, prices or any other particulars to the satisfaction of the Employer's Agent, the alternative design will be rejected and the original design shall be constructed for the same amount as has been tendered for the alternative design. 5.4.9. Responsibility for alternative design The approval of a design by the Employer's Agent shall not in any way relieve the Bidder of his responsibility to produce a design which conforms in all respects to all the specified requirements and which will be suitable for the purpose envisaged. Should it appear later during construction or during the maintenance period that the design does not conform to the specified requirements, the Contractor only, shall be liable for any damage arising there from and he shall, at his own expense, do all the necessary work to ensure that the Works conforms to all the specified requirements. 5.4.10. Indemnity Once the alternative design has been approved, the Contractor shall indemnify and hold harmless the Employer, its agents and assigns, against all claims howsoever arising out of the said design whether in contract or delict.
5.1. Submitting a Tender Offer Cl. F2.13	5.5.1. Whole of the Works (Cl. F.2.13.1) Tenderers shall offer to provide for the whole of the Works identified. 5.5.2. Original tender documents (Cl. F2.13.3) The original tender document, issued to the Bidder, shall be submitted in its entirety. No copies are required. 5.5.3. Marking of Tender Submissions (Cl. F2.13.5) The complete tender documents shall be enclosed and sealed in a single envelope, marked: **"BID NO. PM23-25/26: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS"** The Employer's address for delivery of tender offers to be shown on each tender submission package is the Tender Box located at: Polokwane Municipality Civic Centre Landdros Mare Street Polokwane 5.5.4. Two envelope system (Cl. F.2.13.6) A two-envelope procedure will not be followed.

Clause number	Tender Data
	5.5.5. Closing time (Cl. F.2.15) The closing time for submission of tender offers is: **10H00** Telegraphic, telephonic, telex, facsimile, e-mail, electronic and late tender offers will not be accepted. 5.5.6. Tender offer validity (Cl. F.2.16) The tender offer validity period is **90 days** after tender closing date. 5.5.7. Clarification of tender offer after submission (Cl. F.2.17) Delete the last part of the second sentence, commencing with the word "and". Furthermore, delete the last two sentences of Cl. F2.17. Add the following sentence: "The rates stated by the Bidder shall be binding". 5.5.8. Provide other Material (Cl. F.2.18.1) Upon request by the Employer, the Bidder shall promptly supply any other material that has a bearing on the tender offer, the bidder's commercial position (including, where applicable, notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the Employer for the purpose of a full and fair assessment. Should the Bidder not provide the information or material called for, by the time for submission stated in the Employer's request, the Employer will regard the tender offer as being non-responsive. 5.5.9. Certificates (Cl. F.2.23) The following certificates are to be provided with this tender: a) A valid CSD number to be provided. b) Compensation Fund registration certificate c) Certificate of Contractor Registration issued by the Construction Industry Development Board or a copy of the application Form for registration in terms of the Construction Industry Development Board Act (Form F006). (A minimum grading of **3EP** is required). **Important Note:** Failure to provide the required particulars as per the above-listed certificates implies a non-responsive tender and warrants rejection of the tender on account of non-compliance with the requirements of the Tender Data
6. EMPLOYER'S UNDERTAKING	
6.1. Opening of Tender Submissions **Cl. F3.4**	The time and location for opening of the tender offers are: **10:00 on 15 December 2025** **Location: Tender Box, Polokwane Municipality,** **Civic Centre, Landdros Mare Street, Polokwane**
6.2. Arithmetical Errors **Cl. F.3.9.1**	Delete paragraphs (b) and (c) of Cl. F.3.9.1 and replace with: b) If a bill of quantities (or schedule of quantities or schedule of rates) applies and there is an error in the line item resulting from the product of the unit rate and the quantity, the rate shall be binding and the error of extension as entered in the tender offer will be corrected by the Employer in determining the Contract Price.

Clause number	Tender Data
	c) Where there is an error in addition, either as a result of other corrections required by this checking process or in the Bidder's addition of prices, such error will be corrected by the Employer in determining the Contract Price. d) The Contract Price for the completed Contract shall be computed from the actual quantities of authorized work done and compliant with the Contract Data, valued at rates contracted against the respective items in the bill of quantities, schedule of Quantities or schedule of rates and shall include such authorized Provisional Sums and items of extra work as have become payable in terms of the Contract Data.
7. <u>ACCEPTANCE OF TENDER OFFER</u> Cl. F3.13	Tender offers will only be accepted if: a) A valid CSD number to be provided; b) The bidder is registered with the Construction Industry Development Board in an appropriate contractor grading designation. (A minimum grading of **3EP** is required for the main contractor); c) The bidder has demonstrated previous experience with the type of work required under this contract having successfully completed a **similar project**. d) The bidder or any of its principals is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; and e) The bidder has not abused the Employer's Supply Chain Management System. f) The bidder has not failed to perform on any previous contract. g) has complete the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the bidder's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.
8. <u>PROVIDE COPIES OF THE CONTRACT DOCUMENT</u> Cl. F.3.18	The number of paper copies of the signed Contract to be provided by the Employer to the successful bidder is one

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

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

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1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

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

1.2 To be completed by the organ of state

a) The applicable preference point system for this tender is the 80/20 preference point system.

b) 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

(a) Price; and

(b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	**100**

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

(a) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

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

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right) \text{ or } \qquad Ps = 90\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

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

80/20 **or** **90/10**

$$Ps = 80\left(1 + \frac{Pt - P\,max}{P\,max}\right) \text{ or } \qquad Ps = 90\left(1 + \frac{Pt - P\,max}{Pmax}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) 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,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

***Note to tenderers: The tenderer must indicate how they claim points for each preference point system.*)**

The specific goals allocated points in terms of this tender	MEANS OF VERIFICATION DOCUMENTS REQUIRED	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Ownership of 51% or more by persons who are black	CSD/Company registration copy and ID Copies of directors	5	
Ownership of 51% or more by persons who are woman	CSD/Company registration copy and ID Copies of directors	5	
Ownership of 51% or more by persons who are disable	Medical report indicating disability	4	
Ownership of 51% or more by persons who are youth	CSD/Company registration copy and ID Copies of directors	4	

Ownership by persons who are residing within jurisdiction of Polokwane Municipality	municipal rates and taxes statement of account/ signed valid leasing agreement/Letter from tribal authority	2	
Total points claimed		**20**	

Table 2: Business entity ownership disclosure

Bidders must list all shareholders and provide ownership information in terms of the business entity registration certificate

Full Names	**Identity Number**	**% of ownership**	**South African (Yes/No)**	**Race**	**Gender**	**Disable (Yes/No)**	**Youth (Yes/No)**	**Local enterprise (Yes/No)**

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm……..

4.4. Company registration number: ……...

4.5. TYPE OF COMPANY/ FIRM

- □ Partnership/Joint Venture / Consortium
- □ One-person business/sole propriety
- □ Close corporation
- □ Public Company
- □ Personal Liability Company
- □ (Pty) Limited
- □ Non-Profit Company
- □ State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

i) The information furnished is true and correct;

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

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution, if deemed necessary.

	…… **SIGNATURE(S) OF TENDERER(S)**
SURNAME AND NAME:	……
DATE:	……
ADDRESS:	……
	……
	……
	……

ANNEXURE A

SUPPLY CHAIN MANAGEMENT

EVALUATION PROCESS AND CRITERIA

The following evaluation process and criteria will be used to evaluate all bids submitted:

1. Administrative Compliance – Phase One

1.1 All bids duly lodged will be examined to determine compliance with bidding requirements and conditions. Bids with obvious deviations from the requirements/conditions, will be eliminated from further evaluation.

1.2 **Critical Criteria**:

The following critical criteria have been identified for this bid and any noncompliance thereto will lead to the bid being regarded as non-responsive and disqualified from further evaluation:

- Authority to sign filled in full
- All Pages initialed
- Certified ID Copies of All Directors/Members/Shareholders of The Company/Business (If JV, For Both)
- Valid original tax compliance status certificate (If JV, For Both)
- Joint venture agreement (Where applicable)
- BOQ in black ink
- Signed for all alteration and in the BOQ
- Central Supplier Database (CSD) report (If JV, For Both)
- Company certificate
- Municipal rates and taxes/Lease agreement/Local tribal authority letter (For company and all the directors) not older than 3 months
- Completed and signed Invitation to bid **(MBD1)**
- Completed and signed declaration of interest **(MBD4)**
- Completed and signed preference points claim form **(MBD6.1)**
- Completed and signed declaration on past SCM practices form **(MBD8)**
- Completed and signed certificate of independent bid determination **(MBD9)**
- Completed and signed declaration for procurement above R10 million (Including tax) **(MBD5)**

NB: THE BIDDERS THAT MEET THE ABOVE ADMINISTRATIVE COMPLIANCE WILL FUTHER BE EVALUATED ON FUNCTIONALITY

2. Functionality – Phase Two (100 points allocation)

2.1 EVALUATION ON QUALITY/ FUNCTIONALITY= 100

2.2 TABLE A1: Points Allocation Breakdown

FUNCTIONALITY ASSESSMENT CRITERIA	
CRITERIA	**POINTS ALLOCATION (WEIGHT)**
1. Bidder's Experience in Similar Projects	60
2. Plant and Equipment	20
3. Financial standing/Ability to execute the project	20
OVERALL EVALUATION SCORE	**100**

2.3 Relevant Experience of Company (60 points)

This will take into consideration similar contracts successfully completed by the bidder.

NB. Proof of similar projects must be attached, e.g. Appointment Letter and Certificate of Completion for EACH project. Failure to provide proof will result in disqualification of points.

2.4 TABLE A2: PREVIOUS EXPERIENCE OF THE COMPANY IN THE RELEVANT EXPERIENCE

CRITERIA 1: BIDDER'S EXPERIENCE IN SIMILAR PROJECTS WEIGHT: 60 POINTS			
REQUIREMENT		**POINTS (Max)**	**ALLOCATED POINTS**
PREVIOUS EXPERIENCE OF THE COMPANY. ▪ Relevant experience in similar projects for Company. ▪ Attach Appointment letter and completion certificate in Electrical Environment. The Contractor must have experience in any sphere of Government Environment Failure to do so will result in loss of points.	6+ Projects	60	
	5 Projects	50	
	4 Projects	40	
	3 Projects	30	
	2 Projects	20	
	1 Project	10	
	MAXIMUM POINTS	**60**	

2.5 TABLE A3: CRITERIA 2: PLANT AND EQUIPMENT (20 points)

This will be assessed against a minimum number of different types of plant and equipment required to successfully complete the project within the stipulated construction period as determined by the engineer.

Access to plant may be in a form of ownership, hire or leasing arrangements, orders etc. A letter of intent from hiring or leasing companies stating the number and type of plant and equipment on which arrangement has been made must be submitted. Any changes to the lease/hire agreement must be approved by the Municipality prior commencement.

NB. 50% of points will be allocated to equipment leased/hired.

Consultants Estimation				
(A) Plant and equipment required	**Points allocation**	**(B) Minimum Plant required**	**(C) Bidder Plant own**	**(D) Bidder Plant hire**
LDV (7 points each)	14	2		
8 Ton Truck with crane	2	1		

Rock Drill	2	1		
Cherry-picker / Hydraulic platform	2	1		

NB. Proof of ownership on equipment indicated above must be submitted with the bid document. Failing to submit will result in disqualification of points.

2.6 FINANCIAL STANDING/ABILITY TO EXECUTE THE PROJECT (10 points)

2.7 TABLE A4: CRITERIA 3: FINANCIAL STANDING/ABILITY TO EXECUTE THE PROJECT

CRITERIA 3: FINANCIAL REFERENCE WEIGHT: 20 POINTS		
REQUIREMENT	**POINTS (WEIGHT)**	**ALLOCATED POINTS**
Proof of funding from an Authorized Financial Service Provider OR a Credit facility with a +Balance of R3 000 000.00	20	
Proof of funding from an Authorized Financial Service Provider OR a Credit facility with a Balance of between R1 000 000.00 to R3 000 000.00	10	
MAXIMUM POINTS	**20**	

Note: Bidders are required to attach the most recent proof of funding from Registered Financial Institutions **(Funding letter, Credit facility letter or Bank Statement not older than 30 days)** Failure to do so will result in loss of points.

NB: A bid will be disqualified if it fails to meet the minimum threshold of 60% on functionality and a minimum of 30 points on relevant experience.

3 Business Registration

Prospective bidders shall be registered:

(a) With the South African Revenue Services for all categories of taxes applicable to it.
(b) Central Supplier Database (CSD)
(c) With the Compensation Commissioner
(d) With the Construction Industry Development Board. (A minimum grading of **3EP** is required).

4 Acceptance of Tender Offer (Cl. F3.13)

Tender offers will only be accepted if:

a) The bidder provides a valid Central Supplier Database (CSD) number;

b) The bidder is registered with the Construction Industry Development Board in an appropriate contractor grading designation. (A minimum grading of **3EP** is required);

c) the bidder or any of its principals is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; and

d) The bidder has not abused the Employer's Supply Chain Management System.

e) The bidder has not failed to perform on any previous contract.

f) has complete the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the bidder's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.

5. Provide copies of the Contract Document (Cl. F3.18)

The number of paper copies of the signed Contract to be provided by the Employer to the successful bidder is **one.**

Annexure A: Standard Conditions of Tender

F.1 General

F.1.1 Actions

The employer and each bidder 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.

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 for the calling for expressions of interest, the following definitions apply:

a) **Comparative offer** means the bidder's financial offer after the factors of non-firm prices, all unconditional discounts and any other tendered parameters that will affect the value of the financial offer have been taken into consideration

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

c) **Fraudulent pra**ctice 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

d) **Quality (functionality)** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs

F.1.4 Communication and employer's agent

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

F.1.5 The employer's right to accept or reject any tender offer

F.1.5.1 The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a bidder for such cancellation and rejection, but will give written reasons for such action upon written request to do so.

F.1.5.2 The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received and such tender was returned unopened to the bidder.

F.2 Bidder's obligations

F.2.1 Eligibility

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

F.2.2 Cost of tendering

Accept that the employer will not compensate the bidder 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 satisfy requirements.

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 bidders 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 bidder 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 bidder, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.

F2.10.2 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

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 bidder. All signatories to the tender offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.

F.2.12 Alternative tender offers

F.2.12.1 Submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted. The alternative tender offer is to be submitted with the main tender offer together with a schedule that compares the requirements of the tender documents with the alternative requirements the tenderer proposes.

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.2.13 Submitting a tender offer

F.2.13.1 Submit a tender offer 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 in black 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 bidder. Signatories for bidders 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 bidder'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 bidder'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.2.14 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. Proof of posting shall not be accepted as proof of delivery. The employer shall not accept tender offers submitted by telegraph, telex, facsimile or e-mail, unless stated otherwise in the tender data.

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.

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 total of the prices or substance of the tender offer is sought, offered, or permitted. The total of the prices stated by the bidder shall be binding upon the bidder.

Note: Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred bidder 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 bidder's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the bidder not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

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

F.2.19 Inspections, tests and analysis

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

F.2.20 Submit securities, bonds, policies, etc.

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

F.2.21 Check final draft

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

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

F.3 The employer's undertakings

F.3.1 Respond to clarification

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 bidders who drew procurement documents.

F.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each bidder during the period from the date that tender documents are available until seven days before the tender closing time stated in the Tender Data. If, as a result a bidder applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all bidders 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 bidder 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 bidders' 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 bidder whose tender offer is opened, the total of his prices, preferences claimed and time for completion, if any, 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 bidders' agents who choose to attend at the time and place stated in the tender data and announce the name of each bidder whose technical proposal is opened.

F.3.5.2 Evaluate the quality of the technical proposals offered by bidders, then advice bidders 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 bidders, who score in the quality evaluation more than the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to bidders whose technical proposals failed to achieve the minimum number of points for quality.

F.3.6 Non-disclosure

Not disclose to bidders, 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 bidder.

F.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a bidder to influence the processing of tender offers and instantly disqualify a bidder (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, on 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) Change the Employer's or the bidder's risks and responsibilities under the contract, or
c) Affect the competitive position of other bidders presenting responsive tenders, if it were to be rectified.

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

F.3.9 Arithmetical errors

F.3.9.1 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, the line-item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted shall govern, and the unit rate shall be corrected.
c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the bidder's addition of prices, the total of the prices shall govern and the bidder will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices

F.3.9.2 Consider the rejection of a tender offer if the bidder does not correct or accept the correction of his arithmetical errors in the manner described in F.3.9.1.

F.3.10 Clarification of a tender offer

Obtain clarification from a bidder 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 it using the tender evaluation method that is indicated in the Tender Data and described below:

Method 1: Financial offer	1) Rank tender offers from the most favourable to the least favourable comparative offer.
	2) Recommend highest ranked bidder for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 2: Financial offer and preferences	1) Score tender evaluation points for financial offer.
	2) Confirm that bidders are eligible for the preferences claimed and if so, score tender evaluation points for referencing.
	3) Calculate total tender evaluation points.
	4) Rank tender offers from the highest number of tender evaluation points to the lowest.
	5) Recommend bidder with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 3: Financial offer and quality	1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data.
	2) Score tender evaluation points for financial offer.
	3) Calculate total tender evaluation points.
	4) Rank tender offers from the highest number of tender evaluation points to the lowest.
	5) Recommend bidder with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
Method 4: Financial offer, quality and preferences	1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data.
	2) Score tender evaluation points for financial offer.
	3) Confirm that bidders are eligible for the preferences claimed, and if so, score tender evaluation points for preferencing.
	4) Calculate total tender evaluation points.
	5) Rank tender offers from the highest number of tender evaluation points to the lowest.
	6) Recommend bidder with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

Score financial offers, preferences and quality, as relevant, to two decimal places.

F.3.11.2 Scoring Financial Offers

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

NFO = W1 x A where:
NFO = the number of tender evaluation points awarded for the financial offer.
W1 = the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.
A = a number calculated using either formulas 1 or 2 below as stated in the Tender Data.

Formula	Comparison aimed at achieving	Option 1	Option 2
1	Highest price or discount	$A = (1+ \frac{(P - Pm)}{Pm})$	A = P / Pm
2	Lowest price or percentage commission / fee	$A = (1 - \frac{(P - Pm)}{Pm})$	A = Pm / P

Where:

Pm = the comparative offer of the most favourable tender offer.
P = the comparative offer of tender offer under consideration.

F.3.11.3 Scoring quality (functionality)

Score quality in each of the categories in accordance with the Tender Data and calculate total score for quality.

F.3.12 Insurance provided by the employer

If requested by the proposed successful bidder, submit for the bidder'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

F.3.13.1 Accept tender offer only if the bidder complies with the legal requirements stated in the Tender Data.

F.3.13.2 Notify the successful bidder 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. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful bidder as described in the form of offer and acceptance.

F.3.14 Notice to unsuccessful bidders

After the successful bidder has acknowledged the employer's notice of acceptance, notify other bidders that their tender offers have not been accepted.

F.3.15. Prepare contract documents

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

a) Addenda issued during the tender period,
b) Inclusion of some of the returnable documents,
c) Other revisions agreed between the employer and the successful bidder, and
d) The schedule of deviations attached to the form of offer and acceptance, if any.

F.3.16 Issue final contract

Prepare and issue the final draft of contract documents to the successful bidder for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any). Only those documents that the conditions of tender require the bidder to submit, after acceptance by the employer, shall be included.

F.3.17 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.3.18 Provide copies of the contracts

Provide to the successful bidder 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

A: SCHEDULE OF LABOUR CONTENT

The Tenderer must complete the table below to reflect the labour force anticipated to be employed on this contract, including labour employed by sub-contractors. The specified target value is 10% of the contract value

Note: **The full amount of this 10% target value should be obtained from Local Labour content. This 10% labour content shall be from the LOCAL COMMUNITY; the contractors own key skilled and unskilled personnel will not be counted towards the said 10% of the contract amount minimum labour content**

Type of Labour	Man-hours	Minimum Wage Rate per Unit	Total Wage Cost (Excl VAT)
Permanent Labour			
Temporary Labour			
SMME/HDI's Labour			
		TOTAL	
		PERCENTAGE	

Notes to Tenderer:

(1) Labour is defined as hourly paid personnel.
(2) The penalty will be applied for non-compliance during the contract or for fraudulent disclosure.
(3) Polokwane Municipality approved daily rate is R191.60 per EPWP labourer.
(4) It's not expected from the Contractor to employ EPWP Local Labourer target for the whole duration of the project.
(5) Provision should also include the appointment of a CLO for the duration of the project, with a monthly salary up to R 4, 500.00 per month. (To be discussed with client before appointment).

SIGNED ON BEHALF OF THE TENDERER: ……

B: EMPLOYMENT OF AFFIRMATIVE BUSINESS ENTERPRISE (ABE)

Target values of work to be executed by and goods & services to be procured from ABEs shall be **10%**.

Schedule Item No	Name of ABE	Item Description/ Goods & Services to be provided	Value	
			Rands (Excl VAT)	% of Tender Sum (Excl VAT)
TOTAL				

Notes to tenderer:

1. **Regardless whether the tenderer fits the classification of an SMME/PDI, as defined in Section 3.3 of this specification, the tenderer nevertheless retains the obligation to commit to the target values prescribed**
2. **Tenderers shall insert "unknown" if an SMME/PDI has not been selected prior to tender closing date.**
3. **The penalty will be applied for non-compliance during the contract or for fraudulent disclosure**

SIGNED ON BEHALF ON THE TENDERER ……

B.1 EMPLOYMENT OF AFFIRMATIVE BUSINESS ENTERPRISE DECLARATION AFFIDAVIT (ABE).

It is understood and agreed that should this contract be awarded to me, an ABE Declaration Affidavit will be completed by each and every ABE employed by me on this contract and will be submitted to the Employer immediately upon demand by the Employer.

SIGNED ON BEHALF OF THE TENDERER: ……

1. GENERIC TRAINING

Name of Training Institution: …….

Name of Programme: …….

Trainer's Name	Qualification	Subject

Notes to tenderer:
Provide details here, or attach hereto, the subjects to be covered and the manner in which the training is to be delivered.

SIGNED ON BEHALF OF THE TENDERER……

2. ENGINEERING SKILLS TRAINING

Name of Training Institution: ……

Name of Programme: ……

Trainer's Name	Qualification	Subject

Notes to tenderer:

1. **Provide details here, or attach hereto, the subjects to be covered and the manner in which the training is to be delivered.**
2. **Provision should also include on-job student / (in-service) training for the duration of the project, with a monthly stipend up to R 4, 500.00 per month. (To be discussed with client before appointment).**
3. **Student qualification is preferred in the ELECTRICAL PROTECTION FIELD of study.**

SIGNED ON BEHALF OF THE TENDERER……

POLOKWANE MUNICIPALITY

T2.1 List of Returnable Documents

The bidder must complete the following returnable documents:

1. Returnable Schedules required only for tender evaluation purposes

A. Certificate of Authority of Signatory
B. Certificate of Registration with the Construction Industry Development Board
C. Certificate of authority for joint ventures (where applicable)
D. Compulsory Enterprise Questionnaire
E. Record of Addenda to Tender Documents
F. Proposed Amendments and Qualifications
G. Form of Intent to Provide a Demand Guarantee
H. Schedule of Subcontractors
I. Schedule of Available Infrastructure, Resources and Experience
J. Financial Information of the Bidder
K. Certificate for Municipal Services and Payments: Annexure B
L. Authorisation for deduction of outstanding amounts owed to Municipality: Annexure C
M. Declaration of Bidder's Past Supply Chain Management Practices: MBD 8
N. Declaration of interest: MBD 4
O. Declaration for procurement above R10 Million: MBD 5
P. National industrial participation programme: SBD 5
Q. Certificate of the Independent Bid Determination: MBD 9
R. Compliance with OHSA (Act 85 of 1993)
S. Proof of an accredited person, registered and certified as an installation electrician MUST be attached.

2. Other documents required only for bid evaluation purposes

- Compensation Fund Registration Certificate
- Curricula Vitae of Personnel
- Rates of Labour and Materials (Day work Rates)
- A valid CSD number to be provided.
- Schedule of Labour Content
- Employment of ABE'S
- ABE Declaration Affidavit
- Generic Training
- Complete MBD 5 where the bid amount inclusive of VAT exceeds R 10 million
- Complete and signed Declaration of Interest (MBD 4)

3. Other documents that will be incorporated into the contract

3.1 The offer portion of the C1.1 Offer and Acceptance

3.2 C1.2 Contract Data (Part 2)

3.3 C2.2 Bills of Quantity

T2.2 RETURNABLE SCHEDULES

Certificate of Authority of Signatory

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

A	Company	
B	Partnership	
C	Joint Venture	
D	Sole Proprietor	
E	Close Corporation	

A. Certificate for company

I, ……., chairperson of the board of directors of ……

……, hereby confirm that by resolution of the board (copy

attached) taken on ……. 20……, Mr./Ms. ……,

acting in the capacity of ……., was authorized to sign all documents in connection with this tender and any contract resulting from it on behalf of the company.

As witnesses:

1. ....
Chairman

....
Print Name Print Name

2. ....
Date

.....
Print Name

B. Certificate of partnership

We, the undersigned, being the key partners in the business trading as ……

....., hereby authorize Mr./Ms. ……, acting in

the capacity of ……..., to sign all documents in connection with

the tender for Contract ……..., and any contract resulting from it on our behalf.

Name	Address	Signature	Date

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

C. Certificate for Joint Venture

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize

Mr/Ms …….., authorized signatory of the firm .....

....., acting in the capacity of lead partner, to sign all documents in

connection with the tender offer for Contract …… and any contract resulting from it on our behalf.

This authorization is evidenced by the attached power of attorney signed by legally authorized signatories of all the partners to the Joint Venture.

Name of Firm	Address	Authorizing	
		Signature	Name
Lead Partner			

D. Certificate for sole proprietor

I, ……, hereby confirm that I am the sole owner of the

business trading as ……...

As witnesses: -

1. …… ……
Signature: Sole Owner

…… ……
Print Name **Print Name**

2. …….. ……
Date

…….
Print Name

E. Certificate for Close Corporation

We, the undersigned, being the key members in the business trading as ……..

…… hereby authorize Mr/Ms ……., acting in

the capacity of ……, to sign all documents in connection with

the tender for Contract ……..…… and any contract resulting from it on our behalf.

Name	Address	Signature	Date

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

Certificate of Registration with the Construction Industry Development Board

1. <u>General</u>

The Register of Contractors is established by the Construction Industry Development Board in terms of the CIDB Act 38 of 2000 and Construction Industry Development Regulations as published in Government Gazette number 26427 of 2004.

The Act makes it mandatory for public sector clients to apply this register when considering tenders. Any enterprise that submits a tender or enters into contract for construction works with the public sector, must be registered.

Once-off joint ventures do not have to register, provided that each partner of the joint venture is separately registered.

2. Status

Bidders shall fill in the following sections of this form, depending on their status:

2.1 Section A

Bidders who have accomplished registration and can provide proof of their grading designation.

2.2 Section B

Bidders who are in the process of registration of an update to an existing registration or a renewal.

2.3 Section C

Bidders who have submitted the first application.

2.4 Section D

Bidders submitting this Tender offer in Joint Venture and can provide proof that each partner of the Joint Venture is separately registered.

Note: Only complete <u>one</u> of Sections A, B, C or D.

SECTION A							
I, …….. Acting in capacity of ……							
was authorized to sign all documents in connection with this tender an any contract resulting from it on							
behalf of the following entity: ……..							
hereby declare that the above mentioned entity has achieved registration with the Construction							
Industry Development Board on date …… and declare that the grading							
designation is reflected in the following **symbols** on the registration certificate.							
		Contract Value					
		Type of Work					
……..					……..		
Signature of Bidder					Signature of Witness		
……..					……..		
Print Name					Print Name		

SECTION B

I, …….. acting in capacity of …… was authorised to sign all documents in connection with this tender an any contract resulting from it on

behalf of the following entity: ……. hereby declare that the above mentioned entity has achieved registration with the Construction Industry Development Board on date ……., furthermore declare that the existing grading designation is:

Contract Value		
Type of Work		

and the following update has been applied for:

Amendment of category status		mark with "❄"
Change of Particulars		
Annual confirmation of Particulars		
Renewal of Registration		

…….. ……..

Signature of Tenderer Signature of Witness

…….. ……..

Print Name Print Name

SECTION C

I, …… acting in capacity of ……
was authorised to sign all documents in connection with this tender an any contract resulting from it on

behalf of the following entity: …….
hereby declare that the above mentioned entity has submitted its FIRST APPLICATION FOR REGISTRATION with the Contraction Industry Development board on date ……..

I furthermore accept that failure to achieve registration with the Construction Industry Development Board in a category stipulated in the Tender Data within 10 days from the date of closing this tender, implies a non-responsive tender and warrants rejection of the Tender on account of non-compliance with the requirements of the Tender Data.

……..	……..
Signature of Tenderer	Signature of Witness
……..	……..
Print Name	Print Name

SECTION D

I, ……. acting in capacity of the LEAD PARTNER in the Joint Venture

……..

was authorised to sign all documents in connection with this tender and any contract resulting from it, hereby declare that each partner of the Joint Venture is separately registered with the Construction Industry Development Board and declare that the grading designation is reflected in the following **symbols** on the registration certificates:

Name of Lead Partner:		
Contract Value		
Type of Work		

Name of 2nd Partner:		
Contract Value		
Type of Work		

Name of 3rd Partner:		
Contract Value		
Type of Work		

…….. ……..

Signature of Tenderer Signature of Witness

…….. ……..

Print Name Print Name

Certificate of Authority for Joint Ventures (Where applicable)

Employer: ……

Contract Number: ……

NOTE 1 This form need only be completed in the event of a Joint Venture submitting this tender.

NOTE 2 Fill in all the information requested in the spaces provided. Attach additional sheets if required.

NOTE 3 Provide a copy of the Joint Venture agreement. Demonstrate that the partners to the Joint Venture share in the ownership, control, management responsibilities, risks and profits of the Joint Venture. The Joint Venture agreement shall include specific details relating to:

a) the contributions of capital and equipment;
b) portions of the Contract to be performed by the partner's own resources; and
c) portions of the Contract to be performed under the supervision of each partner.

NOTE 4 Provide copies of all written agreements between partners concerning the Joint Venture, including those that relate to ownership options and to restrictions/limits regarding ownership and control.

1. Joint Venture Particulars

Name ……...

Postal Address ……...

Physical Address ……

……...

Telephone ……...

Fax ……...

Name of authorized representative ……

2. Identity of Partner No. 1

Name ……....

Postal Address ……....

Physical Address ……....

……....

Telephone ……....

Fax ……....

Contact Person ……

3. Identity of Partner No. 2

Name ……...

Postal Address ……...

Physical Address ……

……...

Telephone ……...

Fax ……...

Contact Person ……

4. Identity of Partner No. 3

Name ……...

Postal Address ……...

Physical Address ……

……...

Telephone ……...

Fax ……...

Contact Person ……

5. Description of the role of the partners in the joint venture

Partner No. 1: ……...

……

Partner No. 2: ……...

……

Partner No. 3: ……...

……

6. Ownership of the joint venture

(i) Ownership percentage(s) Partner No. 1 …….. %

Partner No. 2 …….. %

Partner No. 3 …….. %

(ii) Partner percentage in respect of:
a) Profit and loss sharing: Partner No. 1 ……...%

Partner No. 2 …….. %

Partner No. 3 …….. %

b) Initial capital contribution Partner No. 1 R……..

Partner No. 2 R…….

Partner No. 3 R…….

(iii) Anticipated ongoing capital contributions:

Partner No. 1 R.....

Partner No. 2 R.....

Partner No. 3 R.....

(iv) Contributions of equipment (specify types, quality and quantities of equipment) to be provided by each partner:

Partner No. 1 …….

……

Partner No. 2 …….

……

Partner No. 3 …….

……

7. Recent contracts performed by partners in their own right or as partners in other joint ventures

a) Partner No. 1

(i) ……..

(ii) ……...

(iii) ……...

(iv) ……...

(v) ……...

b) Partner No. 2

(i) ……...

(ii) ……..

(iii) ……...

(iv) ……...

(v) ……...

c) Partner No. 3

(i) ……...

(ii) ……...

(iii) ……...

(iv) ……...

(v) ……...

8. Control and participation in the joint venture

(Identify by name and firm those individuals who are, or will be, responsible for, and have authority to engage in the relevant management functions and policy and decision making, indicating any limitations in their authority, for example, co-signature requirements and monetary limits).

a) Joint Venture cheque signing

……

……

……

b) Authority to enter into contracts on behalf of the Joint Venture

……

……

……

c) Signing, co-signing or collateralizing of loans

……

……

……

d) Acquisition of lines of credit

……

……
……

e) Acquisition of demand bonds

……

……

……

f) Negotiating and signing of labour agreements

……

……

……

9. Management of the performance of the Contract
(Fill in the name and firm of the responsible person)

a) Supervision of field operations ……

……

b) Major purchasing ……..

……

c) Estimating ……

……

d) Technical management ……

……

10. Management and control of the joint venture

a) Identify the managing partner

……

……

……

b) What authority does each partner have to commit or obligate the other to financial institutions, insurance companies, suppliers, subcontractors or other parties participating in the performance of the contemplated works:

Partner No. 1: ……

……

Partner No. 2: ……

……

Partner No. 3: ……

……

c) Describe the management structure for the joint venture's work under this Contract

Management Function/Designation	Name	Partner

11. Personnel

a) State the approximate number of operative personnel (by trade/function/discipline) needed to execute the Joint Venture contract.

Trade/function/discipline	Number

b) State the number of operative personnel to be employed on the Contract who are currently in the employ of partners:

……

c) State the number of operative personnel who are not currently in the employ of the respective partners and shall be engaged on the project by the Joint Venture:

……

d) State the name of the individual who shall be responsible for hiring Joint Venture employees:

……

e) State the name of the partner who shall be responsible for the preparation of Joint Venture payrolls:

……..……

……..

12. Services

List the firms who provide the following services:

Service	Name	Contact Person	Telephone No.
Accounting			
Auditing			
Banking			
Insurance			
Legal			

13. Control and structure of the Joint Venture

Briefly describe the manner in which the Joint Venture is structured and controlled.

……

……

……

The undersigned warrants that he/she is duly authorized to sign this Joint Venture disclosure form and affirms that the foregoing statements are correct and include all the material information necessary to identify and explain the terms and operations of the Joint Venture and the intended participation of each partner in the undertaking.

The undersigned further covenants and agrees to provide the Employer with complete and accurate information regarding actual joint venture work and the payment therefore, and any proposed changes in any provisions of the Joint Venture Agreement, and to permit the audit and examination of the books, records and files of the Joint Venture, or those of each partner relevant to the Joint Venture, by duly authorized representatives of the Employer.

Duly authorized to sign on behalf of: …….

…… (**the Joint Venture**)

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

Name: .....

Address: .....

.....

Telephone: .....

Date: .....

Duly authorized to sign on behalf of: ……

…….. (**Partner No. 1**)

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

Name: .....

Address: .....

.....

Telephone: .....

Date: .....

Duly authorized to sign on behalf of: ……

……..…… (**Partner No. 2**)

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

Name: .....

Address: .....

.....

Telephone: .....

Date: .....

Duly authorized to sign on behalf of: ……

……. (**Partner No. 3**)

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

Name: .....

Address: .....

.....

Telephone: .....

Date: .....

Compulsory Enterprise Questionnaire

The following particulars must be furnished. In the case of a joint venture, **separate** enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise: . . . .

Section 2: VAT registration number, if any: . .. .

Section 3: CIDB registration number, if any: . . . . . .

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

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

Section 5: Particulars of companies and close corporations

Company registration number . . . . . .

Close corporation number . . . . . .

Tax reference number . . . . . .

Section 6: Record in the service of the state

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

- ☐ a member of any municipal council
- ☐ a member of any provincial legislature
- ☐ a member of the National Assembly or the National Council of Province
- ☐ a member of the board of directors of any municipal entity
- ☐ an official of any municipality or municipal entity
- ☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- ☐ a member of an accounting authority of any national or provincial public entity
- ☐ an employee of Parliament or a provincial legislature

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

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

*insert separate page if necessary

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

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

□ a member of any municipal council □ a member of any provincial legislature □ a member of the National Assembly or the National Council of Province □ a member of the board of directors of any municipal entity □ an official of any municipality or municipal entity	□ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) □ a member of an accounting authority of any national or provincial public entity □ an employee of Parliament or a provincial legislature

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the enterprise:

i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;

ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;

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

iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and

v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed		Date	
Name		Position	
Enterprise name			

Record of Addenda to tender documents

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

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Attach additional pages if more space is required.

Signed		Date	
Name		Position	
Bidder			

Form of Intent to Provide a Demand Guarantee

If my/our tender is accepted, I/we will, when required and within the time stipulated, provide a guarantee of

(*) Insurance Company (name): ……...

(of address): …….

…….

(*) Commercial Bank (Name): ……...

(Branch): ……...

(of address): …….

……

to be approved by you, the Employer, for the amount stipulated.

(*): delete whichever is not applicable.

I/we understand that failure to produce an acceptable Demand Guarantee within the stipulated period is a fundamental breach of Contract, entitling the Employer to:

(i) withhold all payments which may be due to the Contractor pending compliance with the stipulated requirements to produce an acceptable Demand Guarantee.

(ii) instruct the Contractor to cease all work pending provision of the Demand Guarantee, and

(iii) cancel the Contract.

Signed	…….	Date	…….
Print Name	…….	Position	…….
Tenderer	…….		

Schedule of Proposed Subcontractors

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

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

We confirm that all Subcontractors who are contracted to construct a house are registered as home builders with the National Home Builders Registration Council.

	Name and address of proposed Subcontractor	**Nature and extent of work**	**Previous experience with Subcontractor.**
1.			
2.			
3.			
4.			
5.			

Signed		Date	
Name		Position	
Tenderer			

Schedule of Available Infrastructure, Resources and Experience

1. Bidder's List of Third-Party Design Engineers

In the event that the Bidder desires to design all or part of the Works or submit any alternative, he/she shall list here-following, the Design Engineers, accomplished in the specific field of practice, which he/she proposes to employ for the purpose of third-party certification of all works designed by the Bidder for the Works.

Notes: (i) All costs of third-party designs shall be borne solely by the Bidder.
(ii) This Schedule must be accurately completed. Phrases such as "to be advised" will not be accepted.

Section of Works	Name and Address of Registered Engineer				ECSA Registration No.

2. Bidder's Personnel Profile

Key Staff Permanently employed, of foreman level and above	Number of staff
Sub-Total	
Other Permanent Staff	**Number of staff**
Sub-Total	
Temporary Staff	**Number of staff**
Sub-Total	

3. List the Firms who provide the following services:

Service	Name	Contact Person	Telephone
Accounting			
Auditing			
Insurance			
Legal			

4. Identify any amounts of money loaned to your enterprise, indicating the loan source, date and amount

Loan Source	Address	Date of Loan	Loan Amount

5. List a maximum of five contract which your enterprise is engaged in and has not yet completed

Contract Description	Location	Client	Contract Amount	Expected Completion (month & year)

6. List the four largest assignments completed by your enterprise in the last three years

Nature of Work Performed	Client	Consultant Contact Person	Telephone No.	Contract Amount

7. Address of workshop facilities from where maintenance of works will be undertaken

……

……

8. Address of Branch Offices in the RSA

……

……

9. Address of Nearest Representative to Polokwane

……

……

10. Has work previously been performed for the Employer? YES/NO* - Specify

……

……

11. Tenderer's Financial Ability to execute and complete the Works

Provide the estimated cash flow on the project in terms of submissions of payment certificates or payment schedules of the Employer

NOTES APPLICABLE:

(i) Value added tax to be included in all amounts.

(ii) Assume for the purpose of this estimate, payment of certificates within 30 days after receipt by the Employer.

(iii) In calculation of the last column,

j	=	d	m	=	l + g
k	=	j + e	n	=	m + h
l	=	k + f	etc.		

(iv) Failure to detail the required information shall automatically signify that the Bidder lacks the infrastructure and resources necessary to execute and complete the Works.

Month No. in Contract Period	Estimated amount in Rands (VAT included)			
	a Received	b Payments made	a-b Net cash flow	Cumulative cash flow
1	-		d	j
2			e	k
3			f	l
4			g	m
5			h	n
6			etc.	etc.
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
Maximum negative cash flow. Take the largest negative number in the last column and write in here → → → → →				

Signed	……..	Date	…….
Print Name	…….	Position	…….
Tenderer	…….		

Financial Information of Bidder

This information sheet has to be filled in by the financier of the Bidder, duly signed and stamped on behalf of the financial institution he represents.

Bidder Details

Tender Description : …….

Contract Period : …….

Name of Bidder : …….

Bank Account Number : …….

Tendered Amount : …….

Demand Guarantee will be provided by this Bank: YES □ NO □

If yes, state amount of Demand Guarantee: R ……

Financial Institution

Name of Commercial Bank : …….

Branch : …….

Name of Bank Manager : …….

Telephone Number : …….

I / We acting on behalf of the above Commercial Bank confirm that

…… (Bidder)

has operated an account with us for the last ..... years.

We have been requested to provide a bank rating based in relation to the financial capability of the Tenderer, taking into account directives set out in the following two tables.

Financial Capability	
Maximum value of contract that the Bidder is considered capable of	Value on which Bank Rating must be used
up to R300 000	R24 000
R1 000 000	R78 000
R3 000 000	R240 000
R5 000 000	R480 000
R10 000 000	R900 000
R30 000 000	R2 400 000
R100 000 000	R7 800 000

The value on which our Bank Rating of the Bidder is based is R……..

(In words …… only)

The Bank Rating is code: …….....

ANNEXURE: B

Certificate for Municipal Services and Payments

TO: MUNICIPAL MANAGER, POLOKWANE MUNICIPALITY

FROM: _____ (Name of Bidder)

FURTHER DETAILS OF BIDDER(S); DIRECTORS/SHAREHOLDERS/PARTNERS, ETC.

Directors/share holders/Partner	Physical address of the Business	Municipal Account No.	Physical residential address of the Director/ Shareholder/ Partner	Municipal Account No.

NB: Please attach certified copy of ID document(s)

_____ _____

Signatory **Date**

Witnesses

1. _____ _____ _____
   Full Names **Signature** **Date**

2. _____ _____ _____
   Full Names **Signature** **Date**

ANNEXURE: C

Authorization for Deduction of Outstanding Amounts Owed to Council

TO: MUNICIPAL MANAGER, POLOKWANE MUNICIPALITY

FROM: _____ (Name of the Bidder or Consortium)

I, _____ the undersigned, hereby authorize the Polokwane Municipality to deduct the full amount outstanding by the business organization/Director/Shareholder/Partner, etc. from any payment due by us/me.

Signed at _____ Date_____ Month _____ 20_____

Print Name: _____

Signature: _____

Thus done and signed for and on behalf of the bidder/Contractor

_____ _____
Signatory **Date**

Witnesses

1. _____ _____ _____
Full Names **Signature** **Date**

2. _____ _____ _____
Full Names **Signature** **Date**

MBD 8

Declaration of Bidder's Past Supply Chain Management Practices

1. This Municipal Bidding Document must form part of all bids invited.
2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are to combat the abuse of the supply chain management system.
3. **The of any bidder may be rejected if the bidder, or any of its directors have:**
   a) Abused the Municipality's Supply Chain Management System or committed any improper conduct in relation to such system:
   b) Been convicted for fraud or corruption during the past five years:
   c) Wilfully neglected, reneged or failed to comply with any government, municipal or 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 Corruption 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 audi alteram partem rule was applied).**		
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 Corruption 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 (012 326 5445).**		
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?		
4.3.1	If so, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality/municipal entity, or any other municipality/municipal entity, that is in arrears for more than three months?		
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?		
4.5.1	If so, furnish particulars:		

CERTIFICATION

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

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

_____	_____
Signature	**Date**
_____	_____
Position	**Name of Bidder**

ANNEXURE C

MBD 4

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state[1].

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

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

3.1 Full Name of bidder or his or her representative: ……..

3.2 Identity Number: ……

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

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

3.5 Tax Reference Number: ……

3.6 VAT Registration Number: ……...……

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

3.8 Are you presently in the service of the state? …….. **YES / NO**

3.8.1 If yes, furnish particulars: ……

……..…….

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

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

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

3.9 Have you been in the service of the state for the past twelve months? ……**YES / NO**

3.9.1 If yes, furnish particulars: ……..……..

…….....……

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?…….....……**YES / NO**

3.10.1 If yes, furnish particulars: ……

…….....……

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? .....**YES / NO**

3.11.1 If yes, furnish particulars: ……

.....……..…….....

3.12 Are any of the company's directors, trustees, managers, Principle shareholders or stakeholders in service of the state? .....**YES / NO**

3.12.1 If yes, furnish particulars: …….

…….....……

3.13 Are any spouse, child or parent of the company's director's trustees, managers, principle shareholders or stakeholders in service of the state? .....**YES / NO**

3.13.1 If yes, furnish particulars: .....…….…….

.....……

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract? .....**YES / NO**

3.14.1 If yes, furnish particulars: ..……..

.....……..

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

Full Name	Identity Number	State Employee Number

…….. ……..
Signature **Date**

……. …….
Capacity **Name of Bidder**

This document must be signed and submitted together with your bid

THE NATIONAL INDUSTRIAL PARTICIPATION PROGRAMME

INTRODUCTION

The National Industrial Participation (NIP) Programme, which is applicable to all government procurement contracts that have an imported content, became effective on the 1 September 1996. The NIP policy and guidelines were fully endorsed by Cabinet on 30 April 1997. In terms of the Cabinet decision, all state and parastatal purchases / lease contracts (for goods, works and services) entered into after this date, are subject to the NIP requirements. NIP is obligatory and therefore must be complied with. The Industrial Participation Secretariat (IPS) of the Department of Trade and Industry (DTI) is charged with the responsibility of administering the programme.

1 PILLARS OF THE PROGRAMME

1.1 The NIP obligation is benchmarked on the imported content of the contract. Any contract having an imported content equal to or exceeding US$ 10 million or other currency equivalent to US$ 10 million will have a NIP obligation. This threshold of US$ 10 million can be reached as follows:

(a) Any single contract with imported content exceeding US$10 million. or
(b) Multiple contracts for the same goods, works or services each with imported content exceeding US$3 million awarded to one seller over a 2-year period which in total exceeds US$10 million. or
(c) A contract with a renewable option clause, where should the option be exercised the total value of the imported content will exceed US$10 million. or
(d) Multiple suppliers of the same goods, works or services under the same contract, where the value of the imported content of each allocation is equal to or exceeds US$ 3 million worth of goods, works or services to the same government institution, which in total over a two (2) year period exceeds US$10 million.

1.2 The NIP obligation applicable to suppliers in respect of sub-paragraphs 1.1 (a) to 1.1 (c) above will amount to 30 % of the imported content whilst suppliers in respect of paragraph 1.1 (d) shall incur 30% of the total NIP obligation on a *pro-rata* basis.

1.3 To satisfy the NIP obligation, the DTI would negotiate and conclude agreements such as investments, joint ventures, sub-contracting, licensee production, export promotion, sourcing arrangements and research and development (R&D) with partners or suppliers

A period of seven years has been identified as the time frame within which to discharge the obligation

2 REQUIREMENTS OF THE DEPARTMENT OF TRADE AND INDUSTRY

2.1 In order to ensure effective implementation of the programme, successful bidders (contractors) are required to, immediately after the award of a contract that is in excess of **R10 million** (ten million Rands), submit details of such a contract to the DTI for reporting purposes.

2.2 The purpose for reporting details of contracts in excess of the amount of R10 million (ten million Rands) is to cater for multiple contracts for the same goods, works or services; renewable contracts and multiple suppliers for the same goods, works or services under the same contract as provided for in paragraphs 1.1.(b) to 1.1. (d) above.

4. BID SUBMISSIONS AND CONTRACT REPORTING REQUIREMENTS OF BIDDERS AND SUCCESSFUL BIDDERS (CONTRACTORS)

4.1 Bidders are required to sign and submit this Standard Bidding Document (SBD 5) together with the bid on the closing date and time.

3.2 In order to accommodate multiple contracts for the same goods, works or services; renewable contracts and multiple suppliers for the same goods, works or services under the same contract as indicated in sub-paragraphs 1.1 (b) to 1.1 (d) above and to enable the DTI in determining the NIP obligation, successful bidders (contractors) are required, immediately after being officially notified about any successful bid with a value in excess of R10 million (ten million Rands), to contact and furnish the **DTI with the following information**:

- Bid / contract number.
- Description of the goods, works or services.
- Date on which the contract was accepted.
- Name, address and contact details of the government institution.
- Value of the contract.
- Imported content of the contract, if possible.

3.3 The information required in paragraph 3.2 above must be sent to the Department of Trade and Industry, Private Bag X 84, Pretoria, 0001 for the attention of Mr Elias Malapane within five (5) working days after award of the contract. Mr Malapane may be contacted on telephone (012) 394 1401, facsimile (012) 394 2401 or e-mail at Elias@thedti.gov.za for further details about the programme.

4 PROCESSES TO SATISFY THE NIP OBLIGATION

4.1 Once the successful bidder (contractor) has made contact with and furnished the DTI with the information required, the following steps will be followed:

a. the contractor and the DTI will determine the NIP obligation;
b. the contractor and the DTI will sign the NIP obligation agreement;
c. the contractor will submit a performance guarantee to the DTI;
d. the contractor will submit a business concept for consideration and approval by the DTI;
e. upon approval of the business concept by the DTI, the contractor will submit detailed business plans outlining the business concepts;
f. the contractor will implement the business plans; and
g. the contractor will submit bi-annual progress reports on approved plans to the DTI.

4.2 The NIP obligation agreement is between the DTI and the successful bidder (contractor) and, therefore, does not involve the purchasing institution

Bid number …….. Closing date:……

Name of bidder……

Postal address ……

……

Signature…….. Name (in print)……..

Date……

MBD 5

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED

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

1 Are you by law required to prepare annual financial statements for auditing?

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

……

……

3 Do you have any outstanding undisputed commitments for municipal services towards any Municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?

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

2.2 If yes, provide particulars.

……

……

……

……

* Delete if not applicable

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

YES / NO

3.1 If yes, 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 are expected to be transferred out of the Republic?

YES / NO

4.1 If yes, furnish particulars

……..

……

CERTIFICATION

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

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

.....	**…….....**
Signature	**Date**
.....	**…….....**
Position	**Name**

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

1 This Municipal Bidding Document (MBD) must form part of all bids[1] 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 MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

_____

(Bid Number and Description)

in response to the invitation for the bid made by:

_____

(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 consortium[3] will not be construed as collusive bidding.
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.

[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.

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**

Js9141w 4

Compliance with OHSA (Act 85 of 1993)

Bidders are required to satisfy the Employer and the Engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below.

1. Is the Contractor familiar with the OHSA (ACT 85 of 1993) and its Regulations?		**YES**	**/**	**NO**
2. Who will prepare the Contractor's Health and Safety Plan? (Provide a copy of the person/s curriculum vitae/s or company profile).				
3. Does the Contractor have a health and safety policy? (If yes, provide a copy). How is this policy communicated to all employees?		**YES**	**/**	**NO**
4. Does the Contractor keep records of safety aspects of each construction site? If yes, what records are kept?		**YES**	**/**	**NO**
5. Does the Contractor conduct monthly safety meetings? If yes, who is the chairperson of the meeting, and who attend these meetings?		**YES**	**/**	**NO**
6. Does the Contractor have a safety officer in his employment, responsible for the overall safety of his company? If yes, please explain his duties and provide a copy of his CV.		**YES**	**/**	**NO**
7. Does the Contractor have trained first aid employees? If yes, indicate, who.		**YES**	**/**	**NO**
8. Does the Contractor have a safety induction-training programme in place? (If yes, provide a copy)		**YES**	**/**	**NO**

Signature of Bidder: ……

Date: ……

Day work Schedule

This Day work Schedule shall be used for the valuation of any additional or substituted work which cannot conveniently be valued at the rates and prices submitted in the schedule of quantities.

In respect of labour and materials used in the additional or substituted work not covered in the Day work Schedule the Contractor shall be paid the actual cost plus the percentage allowance stated in the schedule of quantities.

The Tenderer shall quote hereunder rates which shall apply for payment purposes if the Engineer orders additional or substituted work to be carried out on a day work basis and shall therefore be in accordance with the requirements of clause 37(2) of the General Conditions of Contract.

1. LABOUR AND MATERIALS

Rates and prices entered in the schedule shall be held to allow for net cost of labour and materials delivered to site respectively with the percentage allowances stated in the schedule of quantities.

2. PLANT AND EQUIPMENT

The Tenderers shall list all major items of plant and equipment to be used on the works and which may be required for use on day works. The proposed hire rates of these items shall be entered against each type of machine, such rates to include for all relevant costs of plant hire inclusive of fuels and lubricants but exclusive of labour charges for the operators, which will be paid for under sub-clause (1) above.

The rates for plant items not listed in the schedule will be the ruling plant hire rates, inclusive of fuels and lubricants but exclusive of labour charges for the operators, inclusive of a 7,5% handling charge. It is therefore in the Tenderers interest to ensure that the list is complete.

Should there be insufficient space on the pages provided; the Bidder shall add further pages as required.

THE RATES FOR THE PLANT AND EQUIPMENT MENTIONED IN THE SCHEDULE SHALL BE FILLED IN FOR THE ITEMS REQUESTED. SHOULD AN ITEM BE OMITTED IT SHALL BE DEEMED TO HAVE BEEN INCLUDED IN THE OTHER DAYWORKS RATES.

A. LABOUR

DESIGNATION		RATE	
		R	C
Artisans	per hour		
Artisan Aid	per hour		
Plant Operators	per hour		
Truck Drivers	per hour		
Labour - unskilled	per hour		
- semi-skilled	per hour		
- skilled	per hour		

B. MATERIALS

DESIGNATION		RATE	
		R	C

C. TRANSPORT

DESIGNATION	RATE	
	R	C
LDV / kilometer		
8-ton Truck / kilometer		
Rock Drill / kilometer		
Aerial Platform / Cherry Picker		

D. PLANT AND EQUIPMENT

ITEM	DESCRIPTION	NON WORKING RATE*		OPERATING RATE		PER
		R	c	R	C	UNIT
	TLB					
	LDV					
	8-ton Truck					
	10-ton Truck					
	15-ton Truck					
	Rock Drill					
	Aerial Platform / Cherry Picker					
	Wacker					
	Walk Behind Roller					

*Only applicable on authority of the Engineer

POLOKWANE MUNICIPALITY

BID NUMBER: **PM23-25/26**
BID DESRIPTION: **THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS**

PART C1: AGREEMENTS AND CONTRACT DATA

C1.1: FORM OF OFFER AND ACCEPTANCE

C1.2: CONTRACT DATA

C1.3: FORM FOR PERFORMANCE GUARANTEE

C1.4: FORM FOR RETENTION MONEY GUARANTEE

C1.5: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993

C1.6: FORM FOR ADJUDICATORS AGREEMENT

BID NUMBER: PM23-25/26
BID DESRIPTION: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS

C1.1 Form of Offer and Acceptance

Offer

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

Project Description: **THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS**

Contract Number: PM23-25/26

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

By the representative of the Bidder, deemed to be duly authorized, signing this part 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

…….

……..……. (amount in words);

R……..…….. (amount 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 Tender Data, whereupon the Bidder becomes the party named as the Contractor in terms of the Conditions of Contract identified in the Contract Data.

Signature(s) ....

Print Name(s) ....

Capacity ....

For the Tenderer .....

.....
(Name and address of Tenderer Organization)

Signature of witness ..... Date: ……..…..

Print Name .....

Important Note

This page to be duly completed by the Bidder before submitting the Tender.

ACCEPTANCE

By signing this part of this Form of Offer and Acceptance, the Employer 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 1 : Agreements and Contract Data (which include this Agreement)

Part 2 : Pricing Data

Part 3 : Scope of Work

Part 4 : Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into parts 1 to 4 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto, as listed in the Tender 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 shall be signed by the authorized representative(s) of both parties.

The Bidder shall, within 7 days of 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 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 the 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 copy of this original document, including the Schedule of Deviations (if any). Such date should be confirmed in a manner that c and b read, copied and recorded and shall be accepted by the contracting parties as the Commencement Date. This agreement shall constitute a binding contract between the parties.

Signature(s) .....

Print Name(s) .....

Capacity .....

For the Tenderer .....

.....
(Name and address of Employer Organization)

Signature of witness ..... Date: …….….....

Print Name .....

SCHEDULE OF DEVIATIONS

The extent of deviations from the tender documents issued by the Employer before the tender closing date is limited to those permitted in terms of the Conditions of Tender.

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, be the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.

Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents, and which it is agreed by the Parties becomes an obligation of the contract, shall also be recorded here.

Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final Contract Document.

3.1 Subject ……...

Details ……...

3.2 Subject ……...

Details ……...

3.3 Subject ……...

Details .....

By the duly authorized representatives signing this Schedule of Deviations, the Employer and the Contractor agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Contractor and the Employer in concluding this process of offer and acceptance; in witness thereof the parties hereto have caused this agreement to be executed. It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Contractor of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

Signed by:	.....	Signed by:	.....
Print Name:	.....	Print Name:	.....
Address:	.....	Address:	.....
for and on behalf of the **Employer** in the presence of		For and on behalf of the **Contractor** in the presence of	
Witness:	.....	Witness:	.....
Print Name:	.....	Print Name:	.....
Date:	.....	Date:	.....

POLOKWANE MUNICIPALITY

BID NUMBER: **PM23-25/26**
BID DESRIPTION: **THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS**

C.1.2 Contract Data

CONTENTS

C.1.2.1 Part 1: Data provided by the Employer

C.1.2.1.1 Conditions of Contract

The Conditions of Contract are:

- the "General Conditions of Contract" as they appear in the commercially-available publication "General Conditions of Contract for Construction Works, Third Edition, 2015", hereinafter referred to as "GCC 2015"; and

- specific data as contained in this Contract Data.

Each party to the Contract shall purchase its own copy of the GCC 2015 that applies to this Contract, available from its publisher:

South African Institution of Civil Engineering
Private Bag X200
Halfway House
1685
South Africa

Tel +27 (0)11 805 5947

The following Notes apply:

Note 1

The GCC 2015 makes several references to the Contract Data.

Each item of data below is cross-referenced to the clause in the Conditions of Contract to which it applies. Notwithstanding anything specified to the contrary, the Contract Data shall take precedence in the interpretation of any ambiguity or inconsistency between it and the GCC 2015.

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

(a) the Form of Offer and Acceptance.
(b) amendments to the General Conditions of Contract within the Contract Data.
(c) additional conditions to the General Conditions of Contract within the Contract Data.
(d) corrigenda to the General Conditions of Contract.
(e) the General Conditions of Contract.
(f) the Specifications, Drawings, Schedules and other documents forming part of the Contract (in that order) contained in the Scope of Work and the Site Information.

If any ambiguity or discrepancy is found in the documents, the Engineer needs to be contacted to issue any necessary clarification or instruction.

Note 2

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

C.1.2.1.2 Contract-specific Data

The following contract-specific data, referring to the General Conditions of Contract, are applicable to this Contract:

C.1.2.1.2.1 Compulsory Data

Clause	Data
1.1.1.13	The Defects Liability Period is **12 months**
1.1.1.14	The time for achieving Practical Completion is **UPON PER PROJECT SCOPE**
1.1.1.15	The name of the Employer is Polokwane Municipality
1.1.1.26	The Pricing Strategy of a Re-measurement Contract shall apply
1.2.1.2	The address of the Employer is: Physical address: Civic Centre Landdros Mare Street Polokwane City Postal address: PO Box 111 Polokwane 0700 e-mail address: dennism@polokwane.gov.za Contact numbers: Corporate: 015 023 5112 Direct: 015 023 5271
1.1.1.16	The name of the Employer's Agent is: **TO BE CONFIRMED WITH APPOINTMENT**
1.2.1.2	The address of the Employer's Agent is: **Physical address:** _____ _____ _____ **Postal Address:** _____ _____ _____ _____ E-mail: _____ Contact numbers: Corporate: _____ Mobile: _____ Fax: _____

<table>
<tr><th>Clause</th><th>Data</th></tr>
<tr><td>3.1.3</td><td>The Engineer shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following table:
<table>
<tr><th>GCC Clause No</th><th>Description</th><th>Requires EWA*</th><th>Delegated to ER*</th></tr>
<tr><td>3.2.1</td><td>Employer’s Agent Representative's appointment and termination</td><td>Y</td><td></td></tr>
<tr><td>3.2.4</td><td>Employer’s Agent Representative acting on Employer’s Agent behalf</td><td>Y</td><td></td></tr>
<tr><td>4.5.4</td><td>Payment for notices and fees</td><td>Y</td><td></td></tr>
<tr><td>4.7.1</td><td>Fossils, etc. on Site</td><td>Y</td><td></td></tr>
<tr><td>5.7.2</td><td>Work at night</td><td>Y</td><td></td></tr>
<tr><td>5.7.3</td><td>Acceleration of rate of progress</td><td>Y</td><td></td></tr>
<tr><td>5.7.3</td><td>Payment for acceleration</td><td>Y</td><td></td></tr>
<tr><td>5.9.1</td><td>Instructions and drawings on Commencement Date</td><td></td><td>Y</td></tr>
<tr><td>5.11.1</td><td>Suspension of the Works</td><td></td><td>Y</td></tr>
<tr><td>5.11.3</td><td>Proceeding with Works after suspension</td><td>Y</td><td></td></tr>
<tr><td>5.12.4</td><td>Acceleration instead of extension of time</td><td>Y</td><td></td></tr>
<tr><td>5.13.2</td><td>Reduction of penalty</td><td></td><td>Y</td></tr>
<tr><td>6.3.1</td><td>Variation orders</td><td>Y</td><td></td></tr>
</table></td></tr>
<tr><td></td><td>
<table>
<tr><th>GCC Clause No</th><th>Description</th><th>Requires EWA*</th><th>Delegated to ER*</th></tr>
<tr><td>6.3.2.1</td><td>Confirmation of a Variation Order</td><td>Y</td><td></td></tr>
<tr><td>6.4.1.4</td><td>Day-works as a Variation Order</td><td>Y</td><td></td></tr>
<tr><td>6.5.2</td><td>Materials for day-works</td><td>Y</td><td></td></tr>
<tr><td>6.8.4</td><td>Costs due to changes in legislation</td><td>Y</td><td></td></tr>
<tr><td>6.11.1</td><td>Variations exceeding 20%</td><td></td><td>Y</td></tr>
<tr><td>8.2.2.2</td><td>Damage due to excepted risks</td><td></td><td>Y</td></tr>
<tr><td>10.1.5</td><td>Consultation on Contractor's claim</td><td>Y</td><td>Y</td></tr>
<tr><td>10.1.5</td><td>Ruling on Contractor's claim</td><td>Y</td><td>N</td></tr>
</table>
*The following abbreviations apply:
ER Employer’s Agent Representative
EWA Employer’s Agent Written Action
N No
NA Not Applicable
Y Yes</td></tr>
<tr><td>3.1.4</td><td>Delete this clause.</td></tr>
</table>

Clause	Data
4.9.1	The Contractor shall deliver to the Employer's Agent, on a monthly basis, a detailed inventory of Construction Equipment kept on Site, full particulars given for each day of the month. Distinction shall be made between Owned Equipment and Hired Equipment as well as Equipment in working order and Equipment out of order. Such inventory shall be submitted by the seventh day of the month following the month to be reported.
4.10.2	The Contractor shall deliver to the Employer's Agent, on a monthly basis, a return in detail of supervisory staff and the number of categorized classes of labour employed each day for the said period by the Contractor for execution of the Contract. Such return shall be submitted by the seventh day of the month following the month to be reported.
5.3.1	The documentation required before commencement with carrying Works execution are: • Health and Safety Plan (Refer to Clause 4.3) • A signed Agreement between the Employer and the Contractor for the Works to be completed by the Contractor in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act No.85 of 1993) and the Construction Regulations promulgated thereunder (Refer to Clause 4.3). • Proof of payment to the Employer, that the Contractor has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act, No 130 of 1993 (Refer to Clause 4.3). • Initial Programme of Works (Refer to Clause 5.6). • Security (Refer to Clause 6.2). • Insurance (Refer to Clause 8.6).
5.3.2	The time to submit the documentation required before commencement with Works execution is **14 Days.**
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but shall be as set out elsewhere in the Contract.
5.8.1	The non-working Days are Sundays. The special non-working Days are: Statutory public holidays; and All annual year-end shutdown periods as recommended by the South African Federation of Civil Engineering Contractors (SAFCEC), and which commence after the Commencement Date and which commence before the Due Completion Date.
5.13.1	The penalty for failing to complete the Works is **0,1** percent of contract price per calendar day.
5.16.3	The latent defect period is 10 years, commencing on the Day after the date of certification of Practical Completion.
6.5.1.2.3	The percentage allowance to cover overhead charges is: 50 per cent for labour; and 15 per cent for materials.

<table>
<tr><th>Clause</th><th>Data</th></tr>
<tr><td>6.8.2</td><td>Contract Price Adjustment: The contract shall be subject to Contract Price Adjustment.

The value of the certificates issued shall be adjusted in accordance with <u>consumer price index.</u>

Pa = ((90%*Pt)*(100%CPI)+(10%Pt))

Where

<table>
<tr><th>Symbol</th><th>Description</th></tr>
<tr><td></td><td></td></tr>
<tr><td>Pa</td><td>Contract Rate after adjustment.</td></tr>
<tr><td></td><td></td></tr>
<tr><td>Pt</td><td>Contract Rate before adjustment as stipulated in the Tender.</td></tr>
<tr><td></td><td></td></tr>
<tr><td>CPI</td><td>Cosnumer Price Index.</td></tr>
</table>

The province wherein the larger part of the Site is located is Polokwane. Limpopo Province.

The applicable industry for the Producer Price Index for material is Diesel.

The area for the Producer Price Index for fuel is Example Fuel index area

<u>Prices will be subject to adjustment in accordance with consumer price index.</u>

The base month is Month of appointment</td></tr>
<tr><td>6.10.1.5</td><td>The percentage advance on materials not yet built into the Permanent Works is 80%. Proof of ownership is required.</td></tr>
<tr><td>6.10.3</td><td>The limit of retention money is 10% of the value of the Contract Price.
A Retention Money Guarantee of 50% of the paid retention monies is compulsory at the completion of the project.
A penalty will be applied for non-delivery of the Retention Money Guarantee as required. The penalty will be 10% of the value of the completion Retention Money Amount per calendar month for late delivery of the said Retention Money Guarantee.</td></tr>
<tr><td>8.6.1.1.2</td><td>The value of Plant and materials supplied by the Employer to be included in the insurance sum is nil.</td></tr>
<tr><td>8.6.1.1.3</td><td>The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is a maximum of 5% (five percent) of the Contract Sum.</td></tr>
<tr><td>8.6.1.3</td><td>The limit of indemnity for liability insurance is equal to the contract amount.</td></tr>
<tr><td>10.5.1</td><td>Dispute resolution shall be by standing adjudication, use GCC 2015, Appendix 5.</td></tr>
<tr><td>10.7.1</td><td>The determination of disputes shall be by arbitration.</td></tr>
</table>

C.1.2.1.2.2 Variations to the General Conditions of Contract

Clause	Data
1.1.1.16	**Employer's Agent** Add the following after the first paragraph: "Employer's Agent shall have the same meaning and be synonymous with Engineer/engineer throughout the Contract document."
2.5.1	**Cession** *Amend Clause 2.5.1 as follows:* *Delete the words* "without the written consent of the other"
5.3.3	**Time to instruct commencement of the Works** Add the following to Clause 5.3.3 after the last sentence: "The Contractor shall not commence working until they have an approved project specific health and safety plan in terms of the Occupational Health and Safety Act, 1993: Construction Regulations, 2014 and complied with the initial requirements thereof."
5.14.1	**Practical Completion** Replace the last sentence of the second paragraph: "Should the Employer's Agent … on expiry of 14 days." with the following: "Should the Employer's Agent not issue such a list within 14 days, Practical Completion shall be deemed to have been achieved on the said fourteenth day."
5.14.2	**Issue of Certificate of Practical Completion** Replace "the Employer's Agent" in the second and third lines with the following: ", the Contractor shall notify the Employer's Agent, who shall inspect the Works and the Employer's Agent"
5.14.4	**Certificate of Completion** Replace "the Employer's Agent" in the third line of the first paragraph with: ", the Contractor shall notify the Employer's Agent, who shall inspect the works and the Employer's Agent"
5.14.5.1	**Consequences of Completion** *Amend Clause 5.14.5.1 as follows:* *In the second line, substitute the word* 'Guarantor' *with* 'Contractor'.

Clause	Data
6.2	**Security** *Replace Sub-Clauses 6.2.1 and 6.2.2 with:* "The Contractor shall deliver to the Employer within such time as may be stated in the Contract Data, a Demand Guarantee, of an Insurance Company registered in terms of the Short-term Insurance Act (Act 53 of 1998) or of a registered Commercial Bank, in a sum equal to the amount stated in the Contract Data. The Demand Guarantee shall be issued by an entity subject to the approved of the Employer, and shall conform in all respects to the format contained in the Contract Data. The security to be provided by the Contractor shall be a **Demand Guarantee** of **10%** of the Contract Sum. Wherever a joint venture constitutes the contracting party, the Demand Guarantee shall be issued on behalf of the joint venture. Failure to produce an acceptable Demand Guarantee within the period stated in the Contract Data, is a fundamental breach of Contract, entitling the Employer to cancel the Contract by due notice in terms of Clause 9.2 with specific reference to Sub-clause 9.2.2 as amended in the Contract Data."
6.3.1	**Variations** *Amend Clause 6.3.1, as follows:* *In the first paragraph, third line, after the words* "or for any reason appropriate"*, add the phrase* ", including the limiting of contract expenditure so as not to exceed the Employer's budgeted project funding, " *Add the following phrase to the last paragraph of Clause 6.3.1.6, after the words* "ascertaining the amount of the Contract Price": ", and no such variation shall give reason for consideration of any claim in terms of Clause 6.11."
6.3.2	**Orders for Variations to be in writing** Omit the words "Provided that" under Clause 6.3.2 and omit Clause 6.3.2.1.
6.9.2	**Definition of "materials"** *Amend Clause 6.9.2, as follows:* *Substitute the word* 'plant*' with* 'Plant'.
6.10.4	**Delivery, dissatisfaction with and payment of payment certificate** Replace "28 days" in the seventh line with "35 days".
6.10.5	**Payment of retention money** *Amend Clause 6.10.5 as follows:* *In the second line, add the words '*, if any,*' after the words '*Defects Liability Period'

Clause	Data
6.10.6	**Set-off and delayed payments** *Amend Clause 6.10.6.2 as follows:* *Delete the words* 'simple interest' *and substitute with the words* 'interest compounded monthly'. *Delete the words* 'Contractor's Bank' *and substitute with the words* 'Employer's Bank'
6.11	**Variations exceeding 15 per cent** *Replace the marginal heading with:* **"Variations exceeding 20 per cent"** *Replace* "**15 per cent**" *with* "20 per cent" *in the text of this Sub-Clause*
7.4.4	**Cost of test specimens and tests** *Amend Clause 7.4.4.2 as follows:* In the <u>second</u> line of paragraph two, add the words '*the requirements of*' before the words '*the Contract*'
8.1.3	**Excessive loads and traffic** In the third line, add a comma after the word 'Site' as follows: '…in the vicinity of the Site, from…'.
8.3.1	**Excepted risks** *Amend Clause 8.3.1.10 as follows:* *In the second line, delete the words* 'Employer or any of their' *and substitute with* 'or any of its'.
8.6.6	**Contractor to produce proof of payment** "The Contractor shall before commencement of the Works produce to the Employer's Agent: 8.6.6.1 The policies by which the insurances are affected, 8.6.6.2 Proof that due payment of all premiums there under, covering the full required period has been made, and 8.6.6.3 Proof of continuity of the policies for the required period. Should, during the currency of the Contract, the required period of insurance be extended for any reason, the Contractor shall timeously extend (so as to maintain) the said insurances for the full extended duration. The Employer's Agent shall be empowered to withhold all payment certificates until the Contractor has complied with his obligations in terms of this Clause 8.6.6."
8.6.7	**Remedy on Contractor's failure to insure** *Delete sub-clause 8.6.7 and substitute with:* "Failure on the part of the Contractor to effect and keep in force any of the insurances referred to in Clause 8.6.1 and its sub-clauses, is a fundamental breach of Contract, entitling the Employer to cancel the Contract by due notice in terms of Clause 9.2 and with specific reference to sub-clause 9.2.2, as amended in the Contract Data."

Clause	Data
9.1.2	**State of emergency** *In the <u>fourth</u> line, delete the words '*supply of*' and substitute with '*availability of*'.*
9.2	**Termination by Employer** *Delete the contents of Clause 9.2 and substitute with:* "9.2.1 The Employer may terminate the Contract by written notice to the Contractor if: 9.2.1.1 Sequestration of the Contractor's estate is ordered by a Court with due jurisdiction, or
	9.2.1.2 The Contractor publishes a notice of surrender or presents a petition for the surrender of his estate as insolvent, or makes a compromise with his creditors, or assigns in favour of his creditors, or agrees to carry out the Contract under the supervision of a committee representing his creditors, or (being a company) goes into liquidation, whether provisionally or finally (other than a voluntary liquidation for the purpose of amalgamation or reconstruction), or if the Contractor assigns the Contract without having first obtained the Employer's consent in writing, or if execution is levied on his goods, or
	9.2.1.3 The Contractor, or anyone on his behalf, or in his employ, offers to any person in the employ of the Employer or the Employer's Agent, a gratuity or reward or commission, or
	9.2.1.4 The Contractor furnished materially inaccurate information in his Tender, which had a bearing on the award of the Contract, or
	9.2.1.5 The Contractor has abandoned the Contract.
	9.2.2 If the Contractor: 9.2.2.1 Has failed to commence the Works in terms of Clause 10 hereof, or has suspended the progress of the Works for fourteen (14) days after receiving from the Engineer written notice to proceed, or
	9.2.2.2 Has failed to provide the Guarantee in terms of Clause 7 within the time stipulated in the Contract Data, or
	9.2.2.3 Has failed to proceed with the Works with due diligence, or
	9.2.2.4 Has failed to remove materials from the Site or to pull down and replace work within fourteen (14) days after receiving from the Employer's Agent written notice that the said materials or work have been condemned and rejected by the Employer's Agent in terms of these conditions, or
	9.2.2.5 Is not executing the Works in accordance with the Contract, or is neglecting to carry out his obligations under the Contract, or
	9.2.2.6 Has, to the detriment of good workmanship or in defiance of the Employer's Agent instructions to the contrary, sublet any part of the Contract, or

Clause	Data
	9.2.2.7 Has assigned the Contract or any part thereof without the Employer's consent in writing, then the Employer may give the Contractor 14 days' notice to rectify the default, and if the Contractor fails to rectify the default in said 14 days, then, without further notice, notify the Contractor in writing of the termination of the Contract and expel the Contractor and order the Contractor to vacate the site within 24 hours of issue of the Notice of Termination and to hand the Site over to the Employer, and the Employer may then enter upon the Site and the Works without affecting the rights and powers conferred on the Employer or the Employer's Agent by the Contract and the Employer may himself complete the Works or may employ another contractor to complete the Works, and the Employer or such other contractor may use for such completion so much of the Construction Equipment, Temporary Works and materials brought onto the Site by the Contractor as the Employer may think proper, and the Employer may at any time sell any of the said Construction Equipment, Temporary Works and unused materials and apply the proceeds of sale towards payment of any sums that may be due or become due to the Employer by the Contractor under the Contract. In such circumstances the Contractor shall forthwith vacate the Site and shall not be entitled to remain on the Site on the grounds that he is entitled to do so on a right of retention until amounts due to him have been paid, neither will the Contractor be entitled to any further payments in terms of this Contract.
	9.2.3 If the Contractor, having been given notice to rectify a default in terms of 9.2.2 above, rectifies said default, but later repeats the same or substantially the same default, then the Employer may notify the Contractor of the immediate termination of the Contract, and proceed as stated in the paragraph following the word 'writing' in Clause 9.2.2.7 above.
	9.2.4 Should the amounts that the Employer must pay to complete the Works, exceed the sum that would have been payable to the Contractor on due completion by him, then the Contractor shall upon demand pay to the Employer the difference, and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly. Provided that should the Contractor on demand not pay the amount of such excess to the Employer, such sum may be determined and deducted by the Employer from any sum due to or that may become due to the Contractor under this or any previous or subsequent contract between the Contractor and the Employer."

C.1.2.1.2.3 Additional clauses to the General Conditions of Contract:

Clause	Data
1.1	**Definitions** *Add the following at the end of Sub-Clause 1.1.1:* 1.1.1.35 "Client", as used in the Occupational Health and Safety Act - Construction Regulations, means Employer. 1.1.1.36 "Principal Contractor", as used in the Occupational Health and Safety Act - Construction Regulations, means Contractor.
4.12	**Contractor's superintendence** *Add the following sub-clause 4.12.4 to Clause 4.12:* "Where a form is included in the Contract Data for this purpose, the Tenderer shall fill in the name of the person he proposes to entrust with the post of Contractor's Site Agent on this Contract in the space provided therefore. Previous experience of this person on work of a similar nature during the past five (5) years is to be entered on the form. The Contractor's Site Agent shall be on Site at all times when work is being performed. The person shall be subject to approval of the Employer's Agent in writing and shall not be replaced or removed from Site without the written approval of the Employer's Agent."
5.6	**Programme** *Add the following sub-clause 5.6.6 to Clause 5.6:* "Failure on the part of the Contractor to deliver to the Engineer, the • programme of the Works in terms of Clause 5.6.1 and • supporting documents in terms of Clause 5.6.2 Within the period stated in the Contract Data, shall be sufficient cause for the Engineer to retain 25 per centum of the value of the Fixed Charge and Value-related items in assessment of amounts due to the Contractor, until the Contractor has submitted aforementioned first Programme of the Works and Supporting Documents".
5.9.7	**Employer's Agent to approve Contractor's Designs and Drawings** *Add the following sub-clause 5.6.6 to Clause 5.6:* "All designs, calculations, drawings and operation and maintenance manuals shall be fully endorsed by a third party registered engineer, accomplished in such specific field of practice and the cost thereof shall be borne solely by the Contractor. Once the alternative design has been approved, the Contractor shall indemnify and hold harmless the Employer's Agent, the Employer, their agents and assigns, against all claims howsoever arising out of the said design, whether in contract or delict".

Clause	Data
5.11	**Suspension of the Works** *Add the following sub-clause 5.11.4 to Clause 5.11:* "If the Contractor does not receive from the Employer the amount due under an Interim Payment Certificate within 28 days after expiry of the time stated in sub-clause 6.10.4 within which payment is to be made (except for deductions in accordance with sub-clauses 6.10.1.6 and 6.10.1.7), the Contractor may, after giving 14 days' notice to the Employer, suspend the progress of the Works. The Contractor's action shall not prejudice his entitlements to a claim in terms of Clause 10.1 and to cancellation of the Contract in terms of Clause 9.3. If the Contractor subsequently receives full payment of the amount due under such Interim Payment Certificate before giving a notice of cancellation of the Contract, the Contractor shall resume normal working as soon as is reasonably practicable."
5.12	**Extension of Time for Practical Completion** *Add the following at the end of Sub-Clause 5.12.2.2:* "The extension of time to be allowed due to abnormal rainfall shall be calculated separately for each calendar month or part thereof in accordance with the following formula: $V = (Nw - Nn) + \frac{Rw - Rn}{x}$ where V = Extension of time in calendar days for the calendar month under consideration Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded Nn = Average number of days for the calendar month on which a rainfall of 10 mm or more has been recorded, as derived from existing rainfall records Rw = Actual recorded rainfall for the calendar month Rn = Average rainfall for the calendar month, as derived from existing rainfall records x = 20
	The rainfall records which shall provisionally be accepted for calculation purposes are: Based on records taken at: **Rainfall Station: Polokwane** **Years of record: 2006 – 2016**

Clause	Data
	Table 1 – RAINFALL RECORDS FOR PERIOD: 2006 – 2016 *RAINFALL STATION: Polokwane Lat: 23.8570 Lon: 29.451 Height 1226m* *Average No of Days with Rainfall exceeding 10mm: 9.8 days/year* *Average Rainfall: 488.6mm/year station no: 0677802BX*

MON	AVE	ST	N DAY	NUM	1	5.1	10.1	20.1	50.1	100.1	MAX R	MAX RAIN
MON		DEV	RAIN	MON	5	10	20	50	100	900	DAY	DATE
MON	AVE	ST	N DAY	NUM	1	5.1	10.1	20.1	50.1	100.1	MAX R	MAX RAIN
MON		DEV	RAIN	MON	5	10	20	50	100	900	DAY	DATE
JAN	65.9	39.3	65.9	11	3.4	2.1	1.3	0.7	0	0	38	1/18/2013
FEB	47.3	49.7	47.3	11	1.6	0.9	1.1	0.6	0	0	49	2/26/2006
MAR	58.4	33.2	58.4	11	3	1.3	1.1	0.7	0.1	0	51.5	3/27/2006
APR	43.3	46.6	43.3	11	1.5	1	0.7	0.5	0.1	0	68	4/4/2011
MAY	10.4	14	10.4	11	0.5	0.4	0.3	0.1	0	0	29.2	5/8/2009
JUN	1.7	3.6	1.7	11	0.3	0	0.1	0	0	0	12	6/10/2009
JUL	2.4	4.3	2.4	11	0.3	0.1	0.1	0	0	0	12.1	7/4/2007
AUG	2.3	5.6	2.3	11	0.2	0	0.1	0	0	00	19.2	8/15/2011
SEP	6.6	8.2	6.6	11	0.4	0.4	0.1	0.1	0	0	22.5	9/4/2015
OCT	48.1	29.5	48.1	11	1.5	0.7	1.4	0.6	0	0	38.2	10/29/2009
NOV	97.7	40.5	97.7	11	3.1	2	1.3	1.5	0.2	0	65.5	11/12/2008
DEC	104.6	56.3	104.6	11	3.8	1	1.7	1.9	0.1	0	55	12/16/2014
YR	488.6		67.9		19.5	9.8	9.2	6.8	0.5	0	488.6	

The factor (Nw - Nn) shall be considered to represent a fair allowance for days during which rainfall exceeds 10 mm and the factor (Rw - Rn)/x shall be considered to represent a fair allowance for those days when rainfall does not exceed 10 mm but wet conditions prevent or disrupt work.

The total extension of time shall be the algebraic sum of all monthly totals for the contract period, but if the algebraic sum is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for a part of a month shall be calculated using pro rata values of Nn and Rn."

For this project the rainfall formula will only apply as background information, or dispute resolution. Extension of time for rainfall will only be granted on Actual Delays experienced; noted and agreed upon by the Employer's Agent.

6.10 **Payments**

Add the following at the end of Sub-Clause 6.10.1:

"The Contractor shall complete the 'Contractor's Monthly Report Schedule', which pro forma documentation is obtainable from the Employer's Agent. Pursuant to Sub-Clause (1), these, duly signed by all concerned, together with the Contractor's statement and a VAT invoice in original format are to be submitted to the Employer's Agent. Issue by the Employer's Agent to the Employer and Contractor of any signed payment certificate is conditional to this information being fully endorsed, accurately and timeously submitted to the Employer's Agent".

Clause	Data
	Add the following at the end of Sub-Clause 6.10.1.5: "All documentary evidence of such materials shall be unambiguous with respect to ownership having fully passed to the Contractor on or before the date of submittal of the Contractor's monthly statement. Should the Contractor fail to supply unambiguous documentary evidence, he shall, prior to submittal of his monthly statement, deliver to the Employer a Guarantor Guarantee in the form contained in the Appendices to the Contract Data."
9.3	**Termination by the Contractor** *Add the following at the end of Sub-Clause 9.3:* 9.3.5 "In addition to, or as an alternative to the rights to termination contained in this Clause 9.3, the Contractor may notify the default to the Employer, with a copy to the Engineer, and if the default is not rectified within 10 days the Contractor may suspend progress of the works until a date 7 days after the default is rectified. The Contractor shall be entitled to extension of time to the extent of delay caused by or resulting from such suspension, and to payment of additional costs caused by or resulting from the suspension. Such extension of time and additional costs shall be promptly ascertained by the Engineer, who shall then grant the extension of time and include the additional costs in all future payment certificates. Such suspension, extension of time and/or payment of additional costs, shall not prejudice the Contractor's rights to cancel the contract."
	Payment for labour-intensive component of the works Payment for works identified in the Scope of Works as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.
	Linkage of payment for labour-intensive component of works to submission of project data The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted.
	Applicable Labour Laws The current Ministerial Determination (also downloadable at www.epwp.gov.za), Expanded Public Works Programmes, issued in terms of the Basic Condition of Employment Act of 1997 by the Minister of Labour in Government Notice, shall apply to works described in the scope of work as being labour-intensive and which are undertaken by unskilled workers.

C.1.2.2 Part 2: Data provided by the Contractor

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

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

Clause	Data
1.1.1.9	The Name of the Contractor is: ....
1.2.1.2	The address of the Contractor is: Physical address: ....
1.2.1.2	Postal address: .... e-mail address: ..... Contact numbers: Corporate: ..... Direct: ..... Mobile: ..... Fax: .....

POLOKWANE MUNICIPALITY
(Not to be completed at tender stage)

C1.3 Performance Guarantee

In accordance with clause 6.2.1 of General Conditions of Contract, 3rd Edition 2015

Contract No: ……..

Description of Contract: ……

……

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: ……
(Please put name of Firm)

Physical Address: ……

……

Postal Address: ……

……

Tel: ……

Fax: ……

"Employer" means: **POLOKWANE MUNICIPALITY**

"Contractor" means: ……
(Please put name of Firm)

"Employer's Agent" means: ……
(Please put name of Firm)

"Works" means: Permanent works together with temporary works

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

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

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

Amount in words: ……

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

"Expiry Date" means: This Guarantee shall expire upon the issue of the **Completion Certificate** issued by Polokwane Municipality signed by the Director of Engineering Services, as such date is advised to the Guarantor in writing confirmed by the Employer.

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Employer's Agent of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3. The Guarantor hereby acknowledges that:

   3.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a surety ship;

   3.2 Its obligation under this Performance Guarantee is restricted to the payment of money.

4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

   4.1 A copy of a first written demand issues by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent and/ or Employer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

   4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address and / or postal address with a copy to the Contractor stating that period of seven (7) days has elapsed since the first written demand terms of 4.1 and the sum certificate has still not been paid;

   4.3 A copy of the aforesaid payment certificate which entails the Employer to receive payment in terms of the Contract sum in 4.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address and/ or postal address calling up this Performance Guarantee, such demand stating that:

   5.1 The contractor has been termination due to the Contractor's default and this performance Guarantee is called up in terms of 5; or

   5.2 A provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

   5.3 The aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional /final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the

Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the guarantor.

9. Payment by Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from his Performance Guarantee on account alleged to be prejudicial to the Guarantor.

11. The Guarantor chooses the physical address and postal address as stated above for the service of all notices for all purposes in connection herewith.

12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after on claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

14. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Court Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at: ……...

Date: ……...

Guarantor’s signatory (1): ……

Capacity: ……

Guarantor’s signatory (2): ……

Capacity: ……

Witness signatory (1): ……

Witness signatory (2): ……

POLOKWANE MUNICIPALITY
(Not to be completed at tender stage)

C1.4 Retention Guarantee

Contract No: ……..

Description of Contract: …….

……

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: …….
(Please put name of Firm)

Address: …….

…….

Postal Address: …….

…….

Tel: …….

Fax: …….

"Employer" means: **POLOKWANE MUNICIPALITY**

"Contractor" means: …….
(Please put name of Firm)

"Guarantee sum" means: 5% of the works done to date amount

"Employer's Agent" means: ……..
(Please put name of Firm)

"Works" means: Permanent works together with temporary works

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

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

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

Amount in words: ……..……

……..……

"Expiry Date" means: This Guarantee shall expire upon the issue of the **Final Completion Certificate** issued by Polokwane Municipality signed by the Director of Engineering Services, as such date is advised to the Guarantor in writing confirmed by the Employer.

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of Completion of the Work as defined in the Contract.

RETENTION GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2. “Expiry Date" This Guarantee shall expire upon the issue of the final completion certificate issued by Polokwane Municipality signed by the Director of Engineering Services, as such date is advised to the Guarantor in writing confirmed by the Employer

   The Employer’s Agent and/or the Employer shall advise the Guarantor in writing of the date on the Final Completion Certificate of the works has been issued.

3. The Guarantor hereby acknowledges that:

   3.1 Any reference in this performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a surety ship;

   3.2 Its obligation under this Performance Guarantee is restricted to the payment of money.

4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

   4.1 A copy of a first written demand issues by the Employer to the Contractor stating that payment of a sum certified by the Employer’s Agent and/ or Employer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

   4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address and *I* or postal address with a copy to the Contractor stating that period of seven (7) days has elapsed since the first written demand terms of 4.1 and the sum certificate has still not been paid;

   4.3 A copy of the aforesaid payment certificate which entails the Employer to receive payment in terms of the Contract sum in 4.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address and/ or postal address calling up this Performance Guarantee, such demand stating that:

   5.1 The contractor has been termination due to the Contractor's default and this performance Guarantee is called up in terms of 5; or

   5.2 A provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

   5.3 The aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional /final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the guarantor.

8. Payment by Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

9. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim

his release from his Performance Guarantee on account alleged to be prejudicial to the Guarantor.

10. The Guarantor chooses the physical address and postal address as stated above for the service of all notices for all purposes in connection herewith.

11. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after on claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

12. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

13. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Court Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at: ……...

Date: ……...

Guarantor’s signatory (1): ……

Capacity: ……

Guarantor’s signatory (2): ……

Capacity: ……

Witness signatory (1): ……

Witness signatory (2): ……

POLOKWANE MUNICIPALITY
(Not to be completed at tender stage)

C1.5 OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

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

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
AND
CONSTRUCTION REGULATIONS 2014

AGREEMENT WITH MANDATARY
In terms of Section 37(1) and (2) of the OHSACT
WRITTEN AGREEMENT ENTERED INTO AND BETWEEN

POLOKWANE MUNICIPALITY
(Client)

AND

……
(Principal Contractor or Contractor)

Compensation Commissioner Number: ……
(Attach a copy of the Registration Certificate to this agreement)

- **REQUIREMENTS:**

1. The Principal Contractor/Contractor's attention is drawn to "General Duties of Employers to their Employees" as required by Section 8 of the Act.

2. The Principal Contractor/Contractor is required to:

   2.1 Sign a written "Agreement with Mandatary" as required by Sect 37(1)(2) of the Act before commencing any work on site.

   2.2 Ensure that all your employees receive the necessary Induction Training and have proof thereof in their records.

   - Note: You must ensure that all employees under your control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences.

   2.3 Ensure the provision of Welfare Facilities for your employees as per Construction Regulation 30.

   2.4 Provide the Client/Principal Contractor with your SHE Plan and Specifications.

   2.5 Ensure that Method Statements, Risk Assessments and Safe Work Procedures are done and available.

   2.6 Provide the Client/Principal Contractor with written appointment of the person who is going to manage the Construction Work per Construction Regulation 8(1).

   2.7 Provide the Client/Principal Contractor with written designation of your nominated Health and Safety Representative as per Section 17(1).

   - Note: Your Health and Safety Representative will be expected to attend the Client/Principal Contractor safety meetings.

2.8 If you employ more than five (5) persons, you are required to provide your own First Aid Box (GSR 3(2)).

2.9 Where more than ten (10) persons are employed, the Principal Contractor/Contractor are required to provide your own qualified First Aider as per GSR 3(4).

- Note: Where the Principal Contractor/Contractor has difficulty in complying with items 2.7 and 2.8 above, you may arrange/come to an agreement with the Client/Principal Contractor to make use of his First Aid facilities in case of injury. You will be expected to communicate such an agreement to your employees.

2.10 When working with Hazardous Chemical Substances, comply with HCS Reg. 3.

- Note: Asbestos and Lead Regulations are separate.

2.11 When using a Materials Hoist, comply with the requirements of Construction Regulation 19.

2.12 When using Lifting Machines and Lifting Tackle, comply with DMR 19.

- Note: You may be required to appoint a Banks man to control Lifting/Slinging operations.

2.13 When erecting/using Scaffolding comply with the requirements of SANS 10085 “Access Scaffolding”.

2.14 When erecting/using Suspended Scaffolding comply with the requirements of Construction Regulation 17.

2.15 When doing Demolition Work, comply with Construction Regulation 14.

2.16 When doing blasting to comply with Explosives Regulations Chapter 10.

2.17 When doing Excavation Work, comply with Construction Regulation 13.

2.18 When doing Electrical Installations, comply with the requirements of Construction Regulation 24.

- Note: Electrician to provide a copy of registration as per Electrical Installations Regulation 9(3).

2.19 When using Construction Vehicles, comply with Construction Regulation 23.

2.20 When using/erecting Temporary Works, comply with Construction Regulation 12.

2.21 When working over or in close proximity to Water, comply with Construction Regulation 26.

2.22 Ensure that good Housekeeping, Stacking and Storage principles are applied on this project as per Construction Regulations 27 and 28.

2.23 Ensure that appropriate measures are taken to avoid the risk of Fire/Explosion and comply with requirements of Construction Regulation 29.

2.24 If you are going to work at heights a Fall Protection Plan must be submitted (roof work included) as per the requirements of Construction Regulation 10.

2.25 When using explosive actuated fastening devices, comply with Construction Regulation 21

2.26 When Welding, Flame Cutting/Soldering, comply with GSR 9.

2.27 When working in Confined Spaces, comply with GSR 5.

3. The Principal Contractor/Contractor is responsible for providing their own legal safety documents and registers to comply with the Act's requirements. A copy of the OHS Act of 1993 and the Construction Regulations 2014 will be available for perusal in the Principal Contractor's site office.

4. The Principal Contractor/Contractor is required to comply with General Safety Regulations 2 (1) to (7) and provide your employees with:

   Personal protective equipment which will allow them to carry out their work in a safe manner, e.g. hard hats, safety harnesses, gloves, safe footwear, eye protection, ear protection, waterproof clothing etc.

5. Reporting of Incidents of Occupational Diseases shall be done as per General Admin. Regulation 8 (Also see Sect 24 of the Act).

6. Compensation for Occupational Injuries and Diseases Act (No. 130 of 1993).

   You are required to provide the Client/Principal Contractor with proof of registration with the Compensation Commissioner/Federated Employer(s) Mutual when signing this agreement. If you are not registered, the Client/Principal Contractor may deduct the necessary amounts from your progress payments and pay it over to the Commissioner to ensure that you are insured. See Section 80 and 89 of the COID Act.

Thus done and signed at …….. on this …. day of …….. 20….

WITNESSES:

1. …… ……
   CONTRACTOR

2. …… ……
   CLIENT

POLOKWANE MUNICIPALITY
(Not to be completed at tender stage)

C1.6: ADJUDICATORS AGREEMENT

This agreement is made on the ..... day of ..... 20..... between

the Employer ……
(name of company / organisation)

of (address) ……

……

and the Contractor ……
(name of company / organisation)

of (address) ……

……

hereinafter called **the Parties**)

and

(Name) ……
(name of company / organisation)

of (address) ……

……

(hereinafter called **the Adjudicator**)

Disputes or differences may arise/have arisen* between the Parties under a Contract dated

……..... and known as Contract No: .....

(Contract title) .....

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

IT IS NOW AGREED as follows:

1. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.

2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.

3. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.

4. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.

5. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

SIGNED by:

(Signature):	(Signature):	(Signature): .....
Name: ..... who warrants that he/ she is duly authorised to sign for and on the behalf of the **First Party** in the presence of	**Name**: ..... who warrants that he/ she is duly authorised to sign for and on behalf of the **Second Party** in the presence of	**Name**: ..... the **Adjudicator** in the presence
Witness:	**Witness:**	**Witness:**
(Signature):	(Signature):	(Signature): .....
Name:	**Name**:	**Name**: .....
Address:	Address:	Address: .....
.....	.....	.....
Date:	Date:	Date: .....

PART C2: PRICING DATA

C2.1: PRICING INSTRUCTIONS

1. The General Conditions of Contract, the Contract Data and the Specifications (including the Project Specifications) shall be read in conjunction with the Schedule of Prices.

2. The Bill comprises items covering the Contractor's profit and costs of general liabilities and of the construction of Temporary (where applicable) 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.

3. Descriptions in the Schedule of Prices are abbreviated and may differ from those in the Project Specifications. No consideration will be given to any claim by the Contractor submitted on such a basis. Should any requirement of the measurement and payment clause of the appropriate Project Specification(s) be contrary to the terms of the Bill, the requirement of the appropriate Project Specification, shall prevail.

4. The BILL was put together on a scenario basis.

5. The amounts and rates to be inserted in the Schedule of Prices 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 Prices are only scenario based. 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. An amount or rate shall be entered against each item in the Schedule of Prices, whether or not quantities are stated.

NB: Bidder/s failing to enter an amount against any item WILL NOT BE CONSIDERED, therefore rejected for this bid.

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

NB Bidder/s shall not group a number of items together and bid one sum for such group of items. Bidders failing to comply WILL NOT BE CONSIDERED and therefore rejected for this bid.

The bidded rates and prices 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 Schedule of Prices, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Schedule of Prices and the quantities certified for payment.

9. For the purposes of this Schedule of Prices, the following words shall have the meanings hereby assigned to them:

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

10. The units of measurement indicated in the Schedule of Prices are metric units. The following abbreviations may appear in the Schedule of Prices:

%	=	per cent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kiloliter
m	=	meter
km	=	kilometer
km-pass	=	kilometer-pass
kW	=	kilowatt
l	=	liter
Linear m	=	length in meter
mm	=	millimeter
kN	=	kilonewton
MN	=	mega-newton
MN-m	=	mega-newton-meter
MPa	=	mega-Pascal
m^2	=	square meter
m^3	=	cubic meter
m^3-km	=	cubic meter-kilometer
m^2-pass	=	square meter-pass
no	=	number
PC sum	=	Prime Cost sum
Prov Sum	=	Provisional Sum
sum	=	lump sum
t	=	ton (1 000 kg)

11. It is the intension of Polokwane Local Municipality to award the bid to the first five highest scoring bidders, (See **Clauses 3.3.1.1** of the bid specification pertaining this contract as included in the bid document)

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

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

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

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

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

    a) The Contractor must price each item in the Bill of Quantities in **BLACK INK**. Reproduced computer printouts of the Bills of Quantities will not be acceptable.

    b) The rates and prices to be inserted in the Bill of Quantities shall cover all the services and incidentals for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Bidder is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

    c) Where the Contractor is required to furnish detailed drawings and designs or other information in terms of the Contract Data, all costs thereof shall be deemed to have been provided for and included in the unit rates and sum amounts contracted for the items scheduled in the Bill of Quantities. Separate additional payments will not be made.

    d) A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill. The Contractor will not be paid for items against which no rate or lump sum has been entered in the Bill of Quantities.

    e) Should the Contractor indicate against any item that compensation for such item is included in another item the rate for the item included in another item shall be deemed nil.

    f) A submission may be regarded as non-responsive if any rates or lump sums in the Bill of Quantities are, in the opinion of the Employer, unreasonable or out of proportion.

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

    If there is an error in the line item resulting from the product of the unit rate and the quantity, the rate shall be binding and the error of extension as entered in the Bidder offer will be corrected by the Employer in determining the Contract Price.

    Where there is an error in addition, either as a result of other corrections required by this checking process or in the Bidder's addition of prices, such error will be corrected by the Employer in determining the Contract Price.

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

C2.2

BILL OF QUANTITIES

BILL OF QUANTITIES FOR ELECTRIFICATION						
CONTRACT NUMBER: PM23-25/26						
SCHEDULE 1: PRELIMINARY & GENERAL						
ITEM	**REFERENCE SANS 1200A**	**DESCRIPTION**	**UNIT**	**QUANTITY**	**RATE**	**TOTAL**
1	8.3	**FIXED ITEMS**				
1.1	8.3.1	Compliance with all the contractual requirements of the contract, including project programming, outage management, weekly progress reporting, materials management, meetings and quality & environmental management.	Sum	1		
1.2	8.3.2	**Establish facilities on site. The Contractor shall provide a fenced space with fence at least 1.8m high with a lockable gate for a temporary Site Office and Stores where all drawings and Specifications will be kept, as well as the provision of safe and Facilities for Contractor:**				
1.3		Facilities for Contractor:				
		a) Offices & Storage Sheds	Sum	1		
		b) Establishment of staff accommodation, office accommodation on site for site meetings and a Clerk of Works including office furniture as specified and facilities.	Sum	1		
		c) Ablution & Latrine Ffacilities	Sum	1		
		d) Tools & Equipment	Sum	1		
		e) Water Supplies, Electric Power & Communications	Sum	1		
1.4	8.3.4	Removal of all items indicated above upon completion of construction and making good and restoring of the Site to the satisfaction of the Project Manager.	Sum	1		
1.5		Construction Name Board - The Contractor to procure and install Construction board as per drawing No……. Contractor to maintain same for the duration of the contract	Sum	1		
1.6		Provision of samples of materials to be used.	Sum	1		
1.7		Provision for the compilation of the Construction Programme, to be done in MS Project & PDF and updated on a fortnight basis and Quality Assurance Programme for the works.	Sum	1		
		OCCUPATIONAL HEALTH & SAFETY REQUIREMENTS				
1.8		Provision for Legal and Contractual Compliance.	Sum	1		
1.9		Provision of personal protective equipment and clothing for all the contractor's staff, including sub-contractors.	Sum	1		
1.10		Provision of safety measures, e.g. Fall arrest systems, shoring for safety purposes etc.	Sum	1		
1.11		Compliance with OH&S Act & Construction Regulations.	Sum	1		
1.12		Liaison with Polokwane Local Municipality's or Eskom contracted suppliers (i.e Meter Management, etc)	Sum	1		
1.13		Medical Surveilance (Enterance and Exit)	Sum	1		

1.14		Safety Signage	Sum	1		
1.15		Covid Safety Requirements Compliance	Sum	1		
1.16		As- Built drawings: allow for marking-up a full set of drawings to show the exact position of cables, joints road crossings ect.	Sum	1		
1.17		Allowance to attend to all site meetings and inspections, transport and time related to such meetings and inspections	Sum	1		
	8.4	**TIME-RELATED ITEMS**				
1.18		Operate and Maintain Facilities on Site	Month	1		
1.19		Facilities for Contractor:				
		a) Offices & Storage Sheds	Month	1		
		b) Ablution & Latrine Facilities	Month	1		
		c) Tools & Equipment	Month	1		
		d) Water Supplies, Electric Power & Ccommunications	Month	1		
		e) Safety Related Items	Month	1		
		Provision of office accommodation on site for site meetings and a Clerk of Works including office furniture as specified.	Month	1		
		Contract management and full time supervision of the works	Month	1		
1.20	8.4.1	Contractual Requirements time-related items	Month	1		
1.21	8.4.2	Operation & Maintenance of facilities	Month	1		
1.22	8.4.3	Supervision	Month	1		
1.23	8.4.4	Company & head office overhead costs	Month	1		
1.24	8.4.5	Site Security of material and personnel - The rates should make provision for an armed guard/s	Month	1		
		PROVISIONAL SUMS				
1.25		Compliance with the Requirements for the Expanded Public Works Programme (Note: The reports are to be submitted with the contractor's monthly invoice).	Sum	1		
1.26		Renumeration of CLO (@R4 500/month)	Prov. Sum	1	4 500.00	4 500.00
1.27		Renumeration of Student (@R4 500/month)	Prov. Sum	1	4 500.00	4 500.00
1.28		Renumeration of Safety Representative (@R4 500/month)	Prov. Sum	1	4 500.00	4 500.00
1.29		Renumeration of PSC Members (@R140/member/sitting maximum of 10)	Prov. Sum	1	140.00	140.00
1.30		Renumeration of PSC Members Induction Training	Prov. Sum	1	1 000.00	1 000.00
1.31		Renumeration for Live-Line Work (QTY determined with appointment) @ R45 000/point	Prov. Sum	1	45 000.00	45 000.00
1.32		Renumeration for Compensation of Land	Prov. Sum	1	20 000.00	20 000.00

1.33		Renumeration of Acredited Training	Prov. Sum	1	30 000.00	30 000.00
1.34		Provision of approval of wayleaves of existing services (Where Applicable)	Prov. Sum	1	50 000.00	50 000.00
1.35		MV Pegging by an approved external Professional Land Surveyor (Who mapped the area)	Prov. Sum	1	45 000.00	45 000.00
1.36		LV Pegging by an approved external Professional Land Surveyor (Who mapped the area)	Prov. Sum	1	85 000.00	85 000.00
1.37		As- Built drawings: allow for marking-up a full set of drawings to show the exact position of cables, joints road crossings etc. (Where Applicable)	Prov. Sum	1	90 000.00	90 000.00
1.38		% Profit over and above for Items 1.26 - 1.37 (Maximum of 10%)	%		379 640.00	
					SCHEDULE 1: SUB-TOTAL	

BILL OF QUANTITIES FOR ELECTRIFICATION

CONTRACT NUMBER: PM23-25/26

SCHEDULE 2: DIGGING OF HOLES

ITEM	DESCRIPTION	UNIT	QUANTITY	MATERIAL RATE	LABOUR RATE	TOTAL	DELIVERY PERIOD
2	**DIGGING OF HOLES**						
2.1	LV stay back-actor or hand	Each	1				
2.2	LV stay Rock Drill	Each	1				
2.3	LV stay Compressors	Each	1				
2.4	MV stay back-actor or hand	Each	1				
2.5	MV stay Rock Drill	Each	1				
2.6	MV stay Compressors	Each	1				
2.7	7m (1.1m Deep) Pole back-actor or hand	Each	1				
2.8	7m (1.1m Deep) Pole Rock Drill	Each	1				
2.9	7m (1.1m Deep) Pole Compressors	Each	1				
2.10	9m (1.5m Deep) Pole back-actor or hand	Each	1				
2.11	9m (1.5m Deep) Pole Rock Drill	Each	1				
2.12	9m (1.5m Deep) Pole Compressors	Each	1				

2.13	10m (1.6m Deep) Pole back-actor or hand	Each	1				
2.14	10m (1.6m Deep) Pole Rock Drill	Each	1				
2.15	10m (1.6m Deep) Pole Compressors	Each	1				
2.16	11m (1.8m Deep) Pole back-actor or hand	Each	1				
2.17	11m (1.8m Deep) Pole Rock Drill	Each	1				
2.18	11m (1.8m Deep) Pole Compressors	Each	1				
2.19	13m (2.1m Deep) Pole back-actor or hand	Each	1				
2.20	13m (2.1m Deep) Pole Rock Drill	Each	1				
2.21	13m (2.1m Deep) Pole Compressors	Each	1				
					SCHEDULE 2: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 3: PLANTING OF WOODEN POLES							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
3	**PLANTING OF POLES: SUPPLY, DELIVER AND INSTALL**						
3.1	7m Wood 120-140mm tops	Each	1				
3.2	9m Wood 140-160mm tops	Each	1				
3.3	9m Wood 160-180 mm tops	Each	1				
3.4	10m Wood 160-180mm tops	Each	1				
3.5	10m Wood 180-200mm tops	Each	1				
3.6	11m Wood 160-180mm tops	Each	1				
3.7	11m Wood 180-200mm tops	Each	1				
3.8	12m Wood 180-200mm tops	Each	1				
3.9	13m Wood 180-200mm tops	Each	1				
					SCHEDULE 3: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 4: MV STRUCTURES							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
4	**DUAL MV STRUCTURES: SUPPLY, DELIVER AND INSTALL**						
4.1	Int ass delta 0 deg	Each	1				
4.2	Int ass vertical (1-10 deg)	Each	1				
4.3	Int ass stag vertical (0 deg)	Each	1				
4.4	Strain ass delta (0-30 deg)	Each	1				
4.5	Strain ass delta (30-90 deg)	Each	1				
4.6	Terminal delta	Each	1				
4.7	T-off ass int-delta	Each	1				
4.8	T-off ass str-delta	Each	1				
4.9	T-off ass int vert	Each	1				
4.10	Susp ass vert (10-30 deg)	Each	1				
4.11	Strain ass vertical (30-90 deg)	Each	1				
4.12	Terminal ass vert	Each	1				
4.13	In-line strain vert	Each	1				
4.14	T-off ass strain vert	Each	1				
4.15	Int ass delta 0 deg	Each	1				
4.16	Int ass vertical (1-10 deg)	Each	1				
4.17	Int ass stag vertical (0-10 deg)3ph	Each	1				
4.18	Strain ass delta (10-30 deg)	Each	1				
4.19	Strain ass delta (30-90 deg)	Each	1				
4.20	T-off ass int-delta	Each	1				
4.21	T-off ass str-delta	Each	1				

4.22	T-off ass int vert	Each	1				
4.23	Susp ass vert (10-30 deg)	Each	1				
4.24	Strain ass vertical (30-90 deg)	Each	1				
4.25	Terminal ass vert	Each	1				
4.26	In-line strain vert	Each	1				
	MV STAYS: SUPPLY, DELIVER AND INSTALL						
4.27	1 Off conv anchor	Each	1				
4.28	1 Off flying stay	Each	1				
4.29	Strut Pole Bracket	Each	1				
4.30	1 Off strut pole 9m	Each	1				
4.31	Cable 11/11kV, PILC, 95mm² Three (3) Core, Copper Conductor, Table 18	m	1				
4.32	Cable 11/11kV, PILC, 185mm² Three (3) Core, Copper Conductor, Table 18	m	1				
4.33	Cable 11/11kV, PILC, 150mm² Three (3) Core, Aluminium Conductor, Table 18	m	1				
4.34	Cable 11/11kV, PILC, 300mm² Three (3) Core, Aluminium Conductor, Table 18	m	1				
	STRAIGHT THROUGH JOINT KITS FOR 11/11kV PILC CABLES: SUPPLY, DELIVER AND INSTALL						
4.35	Joints for 95mm² Three (3) Core Cu, with mechanical torque shear connector. (Heat Shrink)	Each	1				
4.36	Joints for 185mm² Three (3) Core Cu, with mechanical torque shear connector. (Heat Shrink)	Each	1				
4.37	Joints for 150mm² Three (3) Core Aluminium, with mechanical torque shear connector. (Heat Shrink)	Each	1				
4.38	Joints for 300mm² Three (3) Core Aluminium, with mechanical torque shear connector. (Heat Shrink)	Each	1				
4.39	Transition Joints for 95mm² Copper - 150mm² Aluminium Three (3) Core, with mechanical torque shear connector. (Heat Shrink)	Each	1				
4.40	Transition Joints for 185mm² Copper - 300mm² Aluminium Three (3) Core, with mechanical torque shear connector. (Heat Shrink)	Each	1				
	OUTDOOR TERMINATION KITS COMPLETE WITH EARTHING KIT FOR 11/11kV PILC CABLES: SUPPLY, DELIVER AND INSTALL						
4.41	Outdoor Termination Kit for 95mm² Copper Three (3) Core, Complete with Earthing Kit. (Heat Shrink)	Each	1				

4.42	Outdoor Termination Kit for 185mm² Copper Three (3) Core, Complete with Earthing Kit. (Heat Shrink)	Each	1				
4.43	Outdoor Termination Kit for 150mm² Aluminium Three (3) Core, Complete with Earthing Kit. (Heat Shrink)	Each	1				
4.44	Outdoor Termination Kit for 300mm² Aluminium Three (3) Core, Complete with Earthing Kit. (Heat Shrink)	Each	1				
	INDOOR TERMINATION KITS COMPLETE WITH EARTHING KIT FOR 11/11kV PILC CABLES: SUPPLY, DELIVER AND INSTALL						
4.45	Outdoor Termination Kit for 95mm² Copper Three (3) Core, Complete with Earthing Kit. (Heat Shrink)	Each	1				
4.46	Outdoor Termination Kit for 185mm² Copper Three (3) Core, Complete with Earthing Kit. (Heat Shrink)	Each	1				
4.47	Outdoor Termination Kit for 150mm² Aluminium Three (3) Core, Complete with Earthing Kit. (Heat Shrink)	Each	1				
4.48	Outdoor Termination Kit for 300mm² Aluminium Three (3) Core, Complete with Earthing Kit. (Heat Shrink)	Each	1				
					SCHEDULE 4: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 5: LOW VOLTAGE SCHEDULE							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
5	**LV STRUCTURES: SUPPLY, DELIVER AND INSTALL**						
5.1	Int / susp (0-30 deg)	Each	1				
5.2	Intermediate service	Each	1				
5.3	Strain (0-60 deg)	Each	1				
5.4	Strain (60-90 deg)	Each	1				
5.5	Terminal	Each	1				
5.6	T-off from interm	Each	1				
5.7	T-off from strain	Each	1				
5.8	Cross int-int ass	Each	1				
5.9	Cross int-strain ass	Each	1				

	LV STAYS: SUPPLY, DELIVER AND INSTALL						
5.10	1 Off conv anchor	Each	1				
5.11	1 Off flying stay	Each	1				
5.12	1 Off strut pole 7m	Each	1				
	LV CABLES COPPER: SUPPLY, DELIVER AND INSTALL						
5.13	Cable, 600/1000V, 6mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.14	Cable, 600/1000V, 16mm² x 2 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.15	Cable, 600/1000V, 16mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.16	Cable, 600/1000V, 25mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.17	Cable, 600/1000V, 35mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.18	Cable, 600/1000V, 50mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.19	Cable, 600/1000V, 70mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.20	Cable, 600/1000V, 95mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.21	Cable, 600/1000V, 120mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.22	Cable, 600/1000V, 150mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.23	Cable, 600/1000V, 185mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				

5.24	Cable, 600/1000V, 240mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.25	Cable, 600/1000V, 300mm² x 4 core stranded copper conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
	LV CABLES ALUMINIUM: SUPPLY, DELIVER AND INSTALL						
5.26	Cable, 600/1000V, 16mm² x 2 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.27	Cable, 600/1000V, 16mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.28	Cable, 600/1000V, 25mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.29	Cable, 600/1000V, 35mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.30	Cable, 600/1000V, 50mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.31	Cable, 600/1000V, 70mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.32	Cable, 600/1000V, 95mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.33	Cable, 600/1000V, 120mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.34	Cable, 600/1000V, 150mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.35	Cable, 600/1000V, 185mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.36	Cable, 600/1000V, 240mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				

5.37	Cable, 600/1000V, 300mm² x 4 core stranded aluminium conductor, PVC insulated, Bedded and Sheathed with Galvanized Steel Wire Armour + ECC.	m	1				
5.38	Supply and Install 24 fibre 10/125 corrugated steel tape armoured (single mode) cable	m	1				
	LV CABLE JOINTS: SUPPLY, DELIVER AND INSTALL						
5.39	Joint for 600/1000V 6mm² x 4 Core Armoured Cu Cable	Each	1				
5.40	Joint for 600/1000V 16mm² x 2 Core Armoured Cu/Al Cable	Each	1				
5.41	Joint for 600/1000V 25mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.42	Joint for 600/1000V 35mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.43	Joint for 600/1000V 50mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.44	Joint for 600/1000V 70mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.45	Joint for 600/1000V 95mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.46	Joint for 600/1000V 120mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.47	Joint for 600/1000V 150mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.48	Joint for 600/1000V 185mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.49	Joint for 600/1000V 240mm² x 4 Core Armoured Cu/Al Cable	Each	1				
5.50	Joint for 600/1000V 300mm² x 4 Core Armoured Cu/Al Cable	Each	1				
					SCHEDULE 5: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 6: SERVICE BOXES							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
6	**SERVICE BOXES: SUPPLY, DELIVER AND INSTALL**						
6.1	1 - 4 Way box: CoP Specification	Each	1				
6.2	5 - 8 Way box: CoP Specification	Each	1				
6.3	LLDPE 6 Way Pole Mount Box IP43 (Polokwane Municipality Specification with 1.2m Tails and Surge Arrestors (See Drawing))	Each	1				

6.4	LLDPE 12 Way Pole Mount Box IP43 (Polokwane Municipality Specification with 1.2m Tails and Surge Arrestors (FOR 6 BS FRAME METERS))	Each	1				
6.5	1PH3W Meter Box 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.6	1PH6W Meter Box 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.7	1PH9W Meter Box 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.8	1PH12W Meter Box 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.9	3PH2W Meter Box 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.10	3PH4W Meter Box 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.11	MD1W Meter Box 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.12	Pole Mounted Transformer Distribution Kiosk 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.13	Ground Mounted Transformer Distribution Kiosk 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
6.14	SLCS (Street Light Control Stubby) 3CR12 Light Pastel Grey Powder Coating (G69) Polokwane Municipality Specification	Each	1				
					SCHEDULE 6: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 7: STRINGING OF CONDUCTORS							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
7	**STRINGING OF CONDUCTORS: SUPPLY, DELIVER AND INSTALL**						
7.1	ACSR Squirrel 6/1/2.11mm conductor	m	1				
7.2	ACSR Fox 6/1/2.79mm conductor	m	1				
7.3	ACSR Mink 6/1/3.66mm conductor	m	1				
7.4	ACSR Hare 6/1/4.72mm conductor	m	1				

7.5	ACSR Bear 30/7/3.35mm conductor	m	1				
7.6	ACSR Goat 30/7/3.71mm conductor	m	1				
7.7	Cable, ABC, 1 x 25mm² Streetlighting Core plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated)	m	1				
7.8	Cable, ABC, 3 x 25mm² Phase Cores plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated)	m	1				
7.9	Cable, ABC, 3 x 25mm² Phase Cores plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated) plus 1 x 25mm² Streetlighting Core	m	1				
7.10	Cable, ABC, 1 x 35mm² Phase Core plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated)	m	1				
7.11	Cable, ABC, 2 x 35mm² Phase Core plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated)	m	1				
7.12	Cable, ABC, 3 x 35mm² Phase Core plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated)	m	1				
7.13	Cable, ABC, 3 x 35mm² Phase Cores plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated) plus 1 x 25mm² Streetlighting Core	m	1				
7.14	Cable, ABC, 1 x 70mm² Phase Core plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated)	m	1				
7.15	Cable, ABC, 2 x 70mm² Phase Core plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated)	m	1				
7.16	Cable, ABC, 3 x 70mm² Phase Core plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated)	m	1				
7.17	Cable, ABC, 3 x 70mm² Phase Cores plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated) plus 1 x 25mm² Streetlighting Core	m	1				
7.18	Cable, ABC, 3 x 95mm² Phase Cores plus 1 x 54.6 Neutral / Earth supporting Conductor (Aluminium Alloy & Insulated) plus 1 x 25mm² Streetlighting Core	m	1				
7.19	Cable, ABC, LV 25mm² Full Tension Joint	Each	1				
7.20	Cable, ABC, LV 35mm² Full Tension Joint	Each	1				
7.21	Cable, ABC, LV 50mm² Full Tension Joint	Each	1				
7.22	Cable, ABC, LV 70mm² Full Tension Joint	Each	1				
7.23	Cable, ABC, LV 95mm² Full Tension Joint	Each	1				
7.24	Supply and install 0°-30° intermediate ABC structure	Each	1				
7.25	Supply and install 30°-60° strain ABC structure	Each	1				

7.26	Supply and install 60°-90° strain ABC structure	Each	1				
7.27	Supply and install T-OFF from strain into ABC structure	Each	1				
7.28	Supply and install T-OFF from strain ABC structure	Each	1				
7.29	Supply and install 0° termination ABC structure	Each	1				
7.30	ACSR Squirrel 6/1/2.11mm Conductor Full Tension Splice	Each	1				
7.31	ACSR Fox 6/1/2.79mm Conductor Full Tension Splice	Each	1				
7.32	ACSR Mink 6/1/3.66mm Conductor Full Tension Splice	Each	1				
7.33	ACSR Hare 6/1/4.72mm Conductor Full Tension Splice	Each	1				
7.34	ACSR Bear 30/7/3.35mm Conductor Full Tension Splice	Each	1				
7.35	ACSR Goat 30/7/3.71mm Conductor Full Tension Splice	Each	1				
7.36	ACSR Squirrel 6/1/2.11mm Conductor Top Tie / Twin Tie. D-DT-3081	Each	1				
7.37	ACSR Fox 6/1/2.79mm Conductor Top Tie / Twin Tie. D-DT-3081	Each	1				
7.38	ACSR Mink 6/1/3.66mm Conductor Top Tie / Twin Tie. D-DT-3081	Each	1				
7.39	ACSR Hare 6/1/4.72mm Conductor Top Tie / Twin Tie. D-DT-3081	Each	1				
7.40	ACSR Bear 30/7/3.35mm Conductor Full Top Tie / Twin Tie. D-DT-3081	Each	1				
7.41	ACSR Goat 30/7/3.71mm Conductor Top Tie / Twin Tie. D-DT-3081	Each	1				
7.42	ACSR Squirrel 6/1/2.11mm Conductor Side Tie. D-DT-308D	Each	1				
7.43	ACSR Fox 6/1/2.79mm Conductor Side Tie. D-DT-308D	Each	1				
7.44	ACSR Mink 6/1/3.66mm Conductor Side Tie. D-DT-308D	Each	1				
7.45	ACSR Hare 6/1/4.72mm Conductor Side Tie. D-DT-308D	Each	1				
7.46	ACSR Bear 30/7/3.35mm Conductor Full Side Tie. D-DT-308D	Each	1				
7.47	ACSR Goat 30/7/3.71mm Conductor Top Side Tie. D-DT-308D	Each	1				
7.48	ACSR Squirrel 6/1/2.11mm Conductor Dead-End	Each	1				
7.49	ACSR Fox 6/1/2.79mm Conductor Dead-End	Each	1				
7.50	ACSR Mink 6/1/3.66mm Conductor Dead-End	Each	1				
7.51	ACSR Hare 6/1/4.72mm Conductor Dead-End	Each	1				

7.52	ACSR Bear 30/7/3.35mm Conductor Full Dead-End	Each	1				
7.53	ACSR Goat 30/7/3.71mm Conductor Dead-End	Each	1				
7.54	Surge Arreastor 11kV	Each	1				
7.55	Long Rod 11kV Clevis & tongue long rod insulator. Creepage distance 604mm. D-DT-3042	Each	1				
7.56	Pistol Grip	Each	1				
7.57	Cross Arm 3,5m (160-180mm)	Each	1				
7.58	Post Insolator 11kV 4kN, Line Post EP 472. D-DT-3017	Each	1				
7.59	Guy Strain Insulator Fibre glass / coated silicone D-DT-3144	Each	1				
7.60	PG Clamp	Each	1				
7.61	Cable, ABC, Strain clamp for insulated neutral and complies with D-DT3060	Each	1				
7.62	Neutral arrestor for transformers and complies with D-DT3088	Each	1				
7.63	Porcelain Cut-Out fuse link for overheadlines 320mm Creepage	Each	1				
7.64	Distribution Surge Arrestors of polymer housedgapless metal oxide type, S3D2 Option. IEC 60099-4 (10kA / Line Discharge Class 1)	Each	1				
7.65	Surge Arrestors 11kV Distribution Class. Silicone Rubber. D-DT-3100	Each	1				
7.66	Suspension Clamp for ABC and Airdac conductors and complies with D-DT3061 (Glass Fibre Reinforced Thermoplastic)	Each	1				
7.67	Suspension assembly bracket Cast Aluminium	Each	1				
7.68	Strain Clamp Airdac House Service Cable clamp and complies with D-DT3067	Each	1				
7.69	Eye Nut 40kN, Forged Steel (Hot Dipped Galvanised), M16. D-DT-3004	Each	1				
7.70	Eye Nut 70kN, Forged Steel (Hot Dipped Galvanised), M20. D-DT-3005	Each	1				
7.71	D Shackle 120kN, Forged Steel (Hot Dipped Galvanised). D-DT-7017	Each	1				
7.72	Clevis Thimble CAB100, Aluminium Alloy. Used with pre-formed dead end to insulator. D-DT-3007	Each	1				
7.73	PIGTAIL BOLT 10kN, Mild steel (hot dipped galvanised), M16x380mm. D-DT-3003	Each	1				
7.74	PIGTAIL BOLT 10kN, Mild steel (hot dipped galvanised), M10x280mm. D-DT-3004	Each	1				
7.75	Eyebolt 70kN, Mild steel (hot dipped galvanised), M20 x 250mm complete with nuts & washers. D-DT-3005	Each	1				

7.76	GUG Grip, Mild steel stranded (hot dip galvanised). For various stay wire sizes 7 / 4 & 3 / 3.35. D-DT-3069	Each	1				
					SCHEDULE 7: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 8: TRANSFORMER INSTALLATION							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
8	**11kV TRANSFORMER: SUPPLY, DELIVER AND INSTALL**						
8.1	315kVA x 3 Ph (1 off) - relocate	Each	1				
8.2	315kVA x 3 Ph (1 off) - new	Each	1				
8.3	200kVA x 3 Ph (1 off) - relocate	Each	1				
8.4	200kVA x 3 Ph (1 off) - new	Each	1				
8.5	100kVA x 3 Ph (2 off) - relocate	Each	1				
8.6	100kVA x 3 Ph (2 off) - new	Each	1				
8.7	50kVA x 3 Ph (0 off) - relocate	Each	1				
8.8	50kVA x 3 Ph (0 off) - new	Each	1				
8.9	32kVA x 2 Ph (0 off) - relocate	Each	1				
8.10	32kVA x 2 Ph (0 off) - new	Each	1				
8.11	25kVA x 3 Ph (0 off) - relocate	Each	1				
8.12	25kVA x 3 Ph (0 off) - new	Each	1				
8.13	16kVA x 1 Ph (1 off) - relocate	Each	1				
8.14	16kVA x 1 Ph (1 off) - new	Each	1				
					SCHEDULE 8: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 9: LV PROTECTION							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
9	**LV PROTECTION MORSDORF FUSES: SUPPLY, DELIVER AND INSTALL**						
9.1	63 A	Each	1				
9.2	80A Dual phase (32kVA)	Each	1				
9.3	80A Three phase (50kVA)	Each	1				
9.4	125A	Each	1				
9.5	160A (100kVA)	Each	1				
					SCHEDULE 9: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 10: INSTALLATION OF EARTHING							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
10	**EARTHING: SUPPLY, DELIVER AND INSTALL**						
10.1	MV Earthing (Type 1 crowfoot)	Each	1				
10.2	LV Earthing (Type 1 crowfoot)	Each	1				
10.3	Bonding	Each	1				
10.4	Bare Earth Wire 16mm²	m	1				
10.5	Bare Earth Wire 25mm²	m	1				
10.6	Bare Earth Wire 35mm²	m	1				
10.7	Bare Earth Wire 50mm²	m	1				
10.8	Bare Earth Wire 70mm²	m	1				
						SCHEDULE 10: SUB-TOTAL	

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 11: POLE NUMBERING							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
11	**POLE NUMBERING: SUPPLY, DELIVER AND INSTALL**						
11.1	MV pole number	Each	1				
11.2	LV pole number	Each	1				
					SCHEDULE 11: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 12: COMMISSIONING							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
12	**COMMISSIONING**						
12.1	Test & commission Transformer and MV equipment	Each	1				
					SCHEDULE 12: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 13: OTHER							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
13	**OTHER**						
13.1	Link assembly (On-load) per phase	Each	1				
13.2	Link assembly (Off load) per phase	Each	1				
13.3	Drop-out fuses three phases	Each	1				
13.4	Drop-out fuses dual phases	Each	1				

13.5	Recloser	Each	1				
13.6	Remove existing poles	Each	1				
13.7	Remove existing conductor	m	1				
13.8	Remove existing stay	Each	1				
13.9	Remove existing transformer	Each	1				
13.10	Upgrade Dual Phase fox MV to three phase fox line, include dressing and re-tension old dual phases.	m	1				
13.11	Remove existing dressing	Each	1				
13.12	Ant-climb device	Each	1				
13.13	Bush Clearing and Tree Felling	Each	1				
					SCHEDULE 13: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION							
CONTRACT NUMBER: PM23-25/26							
SCHEDULE 14: HOUSE CONNECTIONS							
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**	**DELIVERY PERIOD**
14	**HOUSE CONNECTIONS: SUPPLY, DELIVER AND INSTALL**						
14.1	Underground connection	Each	1				
14.2	Overhead connection	Each	1				
14.3	Supply ECU base, fixing rails and plug	Each	1				
14.4	Supply 20A ECU (internal ELPU)	Each	1				
14.5	Split Meter Din Rail 20A PLC with Keypad (Eskom Standard)	Each	1				
14.6	Split Meter Din Rail 60A PLC with Keypad (Eskom Standard)	Each	1				
14.7	Split Meter Din Rail with Keypad (Polokwane Municipality Standard)	Each	1				
14.8	Smart Split Meter with Keypad (Polokwane Municipality Standard)	Each	1				

14.9	Sealing of meters	Each	1				
14.10	COC certificates	Each	1				
14.11	COC certificates ECA Version	Each	1				
14.12	Supply Ready Board plus Rail (with build-in light & 3 x socket outlets)	Each	1				
14.13	Capture and upload of customer data new & Existing, incl. GPS co-ordinates and Supply of Data books	Each	1				
14.14	Termination of service connection in the ready board and inside the meter box, including all accessories for termination	Each	1				
					SCHEDULE 14: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION

CONTRACT NUMBER: PM23-25/26

SCHEDULE 15: EXCAVATE AND PLANT POLES FOR SERVICE CONNECTIONS

ITEM	DESCRIPTION	UNIT	QUANTITY	MATERIAL RATE	LABOUR RATE	TOTAL	DELIVERY PERIOD
15	**EXCAVATE, PLANT POLES FOR SERVICE CONNECTIONS: SUPPLY, DELIVER AND INSTALL**						
15.1	5m (0.8m Deep) Wood 80-100 mm tops (Hand Excavation and Planting of Pole)	m³	1				
15.2	5m (0.8m Deep) Wood Rock Drill	m³	1				
15.3	5m (0.8m Deep) Wood Compressors	m³	1				
15.4	7m (1.1m Deep) Wood 120-140 mm tops (Hand Excavation and Planting of Pole)	m³	1				
15.5	7m (1.1m Deep) Wood Rock Drill	m³	1				
15.6	7m (1.1m Deep) Wood Compressors	m³	1				
15.7	Hand Excavate Cable trench - House Connection (Road Reserve: 0.8m Deep, 0.5m Wide, 1m Length)	m	1				
15.8	Hand Excavate Cable trench - Road Crossing (1.2m Deep, 0.5m Wide, 1m Length)	m	1				
15.9	Supply and Install 6000mm x 25mm Galvanised Steel Kick Pipe	m	1				
15.10	Supply and Install 6000mm x 40mm Galvanised Steel Kick Pipe	m	1				
15.11	Supply and Install 6000mm x 50mm Galvanised Steel Kick Pipe	m	1				
15.12	Supply and Install 6000mm x 80mm Galvanised Steel Kick Pipe	m	1				

15.13	Supply and Install 6000mm x 100mm Galvanised Steel Kick Pipe	m	1				
15.14	Supply and Install 6000mm x 110mm Galvanised Steel Kick Pipe	m	1				
15.15	Supply and Install 6000mm x 160mm Galvanised Steel Kick Pipe	m	1				
15.16	Supply and Install Cable Flex Sleeves 110mm (LV)	m	1				
15.17	Supply and Install Cable Flex Sleeves 160mm (MV)	m	1				
					SCHEDULE 15: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION

CONTRACT NUMBER: PM23-25/26

SCHEDULE 16: SERVICE CONDUCTOR

ITEM	DESCRIPTION	UNIT	QUANTITY	MATERIAL RATE	LABOUR RATE	TOTAL	DELIVERY PERIOD
16	**SERVICE CONDUCTOR: SUPPLY, DELIVER AND INSTALL**						
16.1	Cable, SaferDac, 6mm² CNE (SANS 1507-6 and Eskom Distribution Specification 240-61704085)	m	1				
16.2	Cable, SaferDac, 16mm² Airdac SNE plus Pilot wires (CS LX 01-082019 and SANS 1507-6 as far as possible)	m	1				
16.3	Cable, Airdac, 10mm² Airdac SNE plus Pilot wires (Polokwane Municipality Standard)	m	1				
16.4	Cable, Airdac, 16mm² Airdac SNE plus Pilot wires (Polokwane Municipality Standard)	m	1				
					SCHEDULE 16: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION

CONTRACT NUMBER: PM23-25/26

SCHEDULE 17: MOULDED CASE CIRCUIT BREAKERS (MCCB)

ITEM	DESCRIPTION	UNIT	QUANTITY	MATERIAL RATE	LABOUR RATE	TOTAL	DELIVERY PERIOD
17	**MOULDED CASE CIRCUIT BREAKERS (MCCB): SUPPLY, DELIVER AND INSTALL**						
17.1	5A 2.5kA S/P Circuit Breaker for Streetlights	Each	1				
17.2	20A C1 S/P 6kA Circuit Breaker	Each	1				

17.3	40A C1 S/P 6kA Circuit Breaker	Each	1				
17.4	63A C1 S/P 6kA Circuit Breaker	Each	1				
17.5	80A C1 S/P 6kA Circuit Breaker	Each	1				
17.6	20A C1 T/P 6kA Circuit Breaker	Each	1				
17.7	40A C1 T/P 6kA Circuit Breaker	Each	1				
17.8	63A C1 T/P 6kA Circuit Breaker	Each	1				
17.9	80A C1 T/P 6kA Circuit Breaker	Each	1				
17.10	100A C1 T/P 6kA Circuit Breaker	Each	1				
17.11	80A T/P 15kA Circuit Breaker	Each	1				
17.12	100A T/P 15kA Circuit Breaker	Each	1				
17.13	125A T/P 15kA Circuit Breaker	Each	1				
17.14	150A T/P 15kA Circuit Breaker	Each	1				
17.15	175A T/P 15kA Circuit Breaker	Each	1				
17.16	200A T/P 15kA Circuit Breaker	Each	1				
17.17	100A T/P 25kA Circuit Breaker	Each	1				
17.18	125A T/P 25kA Circuit Breaker	Each	1				
17.19	150A T/P 25kA Circuit Breaker	Each	1				
17.20	175A T/P 25kA Circuit Breaker	Each	1				
17.21	200A T/P 25kA Circuit Breaker	Each	1				
17.22	250A T/P 25kA Circuit Breaker	Each	1				
17.23	275A T/P 25kA Circuit Breaker	Each	1				
17.24	300A T/P 25kA Circuit Breaker	Each	1				
17.25	325A T/P 25kA Circuit Breaker	Each	1				
17.26	350A T/P 25kA Circuit Breaker	Each	1				
17.27	400A T/P 25kA Circuit Breaker	Each	1				
					SCHEDULE 17: SUB-TOTAL		

BILL OF QUANTITIES FOR ELECTRIFICATION						
CONTRACT NUMBER: PM23-25/26						
SCHEDULE 18: ROAD CROSSING						
ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**	**MATERIAL RATE**	**LABOUR RATE**	**TOTAL**
18	**ROAD CROSSING - DIRECTIONAL DRILLING**					
18.1	Road Crossing - Directional Drilling	m	1			
18.2	Road Crossing - Gravel Road	m	1			
18.3	Road Crossing - Tar Road	m	1			
18.4	Road Crossing - Pavement Bricks	m	1			
18.5	Road Crossing - Pavement Concrete	m	1			
					SCHEDULE 18: SUB-TOTAL	

BILL OF QUANTITIES FOR ELECTRIFICATION		
CONTRACT NUMBER: PM23-25/26		
SUMMARY OF TOTAL		
SCHEDULE	**DESCRIPTION**	**AMOUNT**
SCHEDULE 1	PRELIMINARY & GENERAL	
SCHEDULE 2	DIGGING OF HOLES	
SCHEDULE 3	PLANTING OF WOODEN POLES	
SCHEDULE 4	MV STRUCTURES	
SCHEDULE 5	LV STRUCTURES	
SCHEDULE 6	SERVICE BOXES	
SCHEDULE 7	STRINGING OF CONDUCTORS	
SCHEDULE 8	TRANSFORMER INSTALLATION	
SCHEDULE 9	LV PROTECTION	
SCHEDULE 10	INSTALLATION OF EARTHING	
SCHEDULE 11	POLE NUMBERING	
SCHEDULE 12	COMMISSIONING	
SCHEDULE 13	OTHER	
SCHEDULE 14	HOUSE CONNECTIONS	
SCHEDULE 15	EXCAVATE AND PLANT POLES FOR SERVICE CONNECTIONS	
SCHEDULE 16	SERVICE CONDUCTOR	
SCHEDULE 17	MOULDED CASE CIRCUIT BREAKERS (MCCB)	
SCHEDULE 18	ROAD CROSSING	
SUB TOTAL 1		
CONTINGENCIES 5% (The sum provided here is under the SOLE control of the Employer and may be deducted in whole or in part)		
SUB TOTAL 2		
15% VAT		
TOTAL PRICE		

NB: PLEASE NOTE:

- **THAT ESTIMATED QUANTITIES ARE FOR EVALUATION PURPOSES ONLY.**
- **ALL PRODUCTS UNDER LOCAL CONTENT MATERIAL SHOULD BE SOURCED FROM LOCAL MANUFACTURES/ SUPPLIERS.**

Any rise or fall in the cost of labour, materials and transport subsequent to the tender closing date shall be for the Employer's account.

The Contract Price Adjustment to be applied to the various rates of the Bills of Quantities shall be calculated in accordance with the formula designated opposite each rate in the Bills of Quantities.

"Base Month": for this contract, shall mean: **Months prior the closing date**

Prices will be subject to adjustment in accordance with consumer price index.
The value of work done, valued at the tendered rates, which is certified on each successive certificate for the period following each previous certificate, will be adjusted by means of the following formulae:

Pa = ((90%*Pt)*(100%CPI)+(10%Pt))	
Where:	
Symbol	**Description**
Pa	Contract Rate after Adjustment
Pt	Contract Rate Before Adjustment as Stipulated in the Tender
CPI	Consumer Price Index

PREFERENTIAL PROCUREMENT REGULATIONS (PPR) 2017 DEFINATION OF PRICE APPLICATION
The price used for evaluation of tenders is the price inclusive of all applicable taxes as per regulation 6(1) and 7(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.

QUOTED PRICE:

If any portion of the bid contains imported goods, that portion must be indicated (%) and based on a rate of exchange of **R15.00 per $1.00 (US dollar),** for evaluation purposes.

Bidders must note that the final rate of exchange will be the rate applicable on date of order.

PLEASE NOTE:

As this bid is estimated to exceed a rand value of R10 million (VAT, escalation and contingencies included), all bidders are required to furnish, -

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

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

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

(4) If the bidder only commenced business within the past three years, the bidder is required to submit annual financial statements in compliance with the provisions of (1) and (2) above for each of its financial years since commencing business.

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

_____
Signature of person authorised to sign bid documents

_____
Name in block letters

_____ _____
Designation Date

POLOKWANE MUNICIPALITY

DEPARTMENT NAME: **ENERGY**

CONTRACT NO: **PM23-25/26**

FOR: **THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS**

C3 Scope of Work

CONTENTS

C3.6.4 Traffic control on roads

C3.6.5 Measures against disease and epidemics

C3.6.6 Aids awareness

MINIMUM REQUIREMENT

The Energy Department requires the services of electrical contractors for the Electrification projects. The department requires these contractors to meet the required bulk capacity within the area to provide the newly built houses with electricity, street lighting (where applicable), high mast (where applicable) and new developments and at the same time promote issues of safety and security within Polokwane Local Municipality. In order to determine the bidder's capabilities to execute the contract, the minimum requirements as detailed below, will be required to ensure that well experienced and knowledgeable bidders are considered for this contract.

REQUIRED DOCUMENTS

BIDDERS MUST SUBMIT THE FOLLOWING DOCUMENTS WITH THE BID:

- (Provide Registration documents of crane trucks and cherry-picker trucks/Hydraulic platform in the name of Bidding entity or Director/s or Proof from the leasing company confirming the intent
- Provide valid operator's certificate/s for the operators.
- Provide Statement of account in the name of Bidding entity or Director/s name or Proof of the lease agreement or intent to lease (completed and signed by the lessor) for minimum 500m² Storage space.
- CVs clearly indicating previously completed electrification projects with contactable references for Project Manager.
- National Diploma (NQF level 6) in Electrical Engineering (Provide Certificate) (SAQA accreditation for foreign nationals).
- Submit Electrical Trade Test Certificate issued by the Department of Labour or Department of Higher Education) (SAQA accreditation for foreign nationals).
- Valid Operating Regulation for High Voltage Systems (ORHVS) for electricians.
- Provide a Wiremen License Card or Certificate. (SAQA accreditation for foreign nationals).
- **OEM letters from the Manufacture for the following Items: Medium Voltages Cables, Low Voltage Cables, Medium Voltage Accessories (Termination and Joints), Streetlight Luminaires**

STATUS

In the event of any discrepancy between the Scope of Works and a part or parts of the SABS 1200 Standardized Specifications, the Bill of Quantities or the Drawings, the Project Specifications shall take precedence and prevail in the Contract.

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 CITY OF POLOKWANE OBJECTIVES

The employer's objectives under this contract are to establish new electrical infrastructure for low-cost housing, service stands, informal settlements and projects within City of Polokwane and any other similar work as identified by the Employer relating to this contract.

C3.1.2 OVERVIEW OF THE WORKS

Provide a project solution for the Electrification projects. To supply, install, commission and handover to City of Polokwane / Eskom, as per specification, MV & LV infrastructure for new connections depending on specific number of low-cost houses, service stands in the township within various areas in City of Polokwane. The bills of quantities should be priced on its own merit. It is City of Polokwane intention to appoint a panel of contractor's **maximum of 10 (3EP or higher)** Contractors/Service providers for electrification projects in the various areas within City of Polokwane from date of appointment for a period of 3-years.

C3.1.3 EXTENT OF WORKS

The Works to be carried out by the Contractor under this Contract comprise mainly the following:

Provide a project solution for the Electrification projects and any other reticulation related works. Supply, install and commission MV cable and LV cable ABC and associated structures, as well as service connections for the low-cost housing, service stands and informal settlements in the City of Polokwane townships within various areas.

The hybrid installation network consists of the following:

C3.1.3.1 Underground / Overhead MV cable and lines.
C3.1.3.2 Overhead aerial bundle conductor (ABC) supported on the wooden poles.
C3.1.3.3 Pole and ground mounted (where applicable) protective structure meter boxes.
C3.1.3.4 Underground service cables / overhead service cables.
C3.1.3.5 Correction of all defects in the works in accordance with the requirements specified in the contract document before the project handover.
C3.1.3.6 Split prepaid metering system will be used. All the split prepaid meters and customer interface units (keypads) will be supplied by the Contractor / Service Provider where required and installed by the contractor. The Bidder shall provide a supply rate in the Bill of Quantity in case CITY OF POLOKWANE requires the bidder to supply the same.
C3.1.3.7 Main supply cable / line to the areas will be determined by the design and cable / line to be installed will be specified.
C3.1.3.8 The Contractor shall provide adequate security measures to prevent the risk of theft.
C3.1.3.9 The contractor shall take full responsibility for theft or loss of materials supplied to him by City of Polokwane, where applicable, and shall ensure that adequate insurance is in place to cover this risk.
C3.1.3.10 Proof of valid Risk insurance coverage to be supplied to City of Polokwane (as and when required during implementation of the project) to cover the specific risk for the duration of the contract.
C3.1.3.11 The City of Polokwane reserves the right to supply certain or all the required quantities of material on the Municipality's current annual contract, such as: MV cable, meters, protective structure pole mounted boxes, protective structure ground meter kiosk, ready boards, etc.
C3.1.3.12 This description of the Works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract. The unit rate on the bill of quantities must therefore be inclusive of all the materials and labour required although not necessary specified individually.
C3.1.3.13 The Municipality shall appoint a consultant to design, monitor and hand-over the project to the City of Polokwane / Eskom, the consultants fee shall be calculated at ECSA rates.

C3.1.3.14 Labour-intensive works comprise the activities described in SANS 1921-5/Earthworks activities which are to be performed but hand/Labour-intensive Specification and its associated specification data. Such work shall be constructed using local workers who are temporarily employed in terms of this scope of work.

C3.1.3.15 Approximate quantities of each type of work are given in the Schedule of Quantities.

C3.1.3.16 City of Polokwane reserve the right to supply certain material if required. The contractor shall provide Guarantee of equipment's and installation against all defects for a period of twelve (12) months after handover.

C3.1.4 CLOSE PROXIMITY OF ELECTRICAL ENERGIZED EQUIPMENT

Only competent personnel, as defined in the Occupational Health and Safety Act, may be used for jointing cables / lines which are in close proximity of electrically energized equipment. This work must be carried out in compliance with the relevant section of the Occupational Health and Safety Act and the City of Polokwane General Instructions. Jointing and terminating must be carried out strictly in accordance with the "jointing and terminating instructions" issued by the material manufacturer and the Municipality's specific requirements.

The contractor must ensure that the cable tests clear before making any joints in the event of any possible further cable faults. The additional fault/faults must first be located before jointing is carried out.

C3.1.5 REQUIREMENTS FOR JOINTING AND TERMINATING OF CABLES / LINES

Contractor to provide proof of qualifications and experience of all Linesmen as and when required during the implementation of various projects.
To work on the City of Polokwane or Eskom electrical distribution network as part of this contact verification of the contractor's experience and training is needed by City of Polokwane and Eskom to grant authorization to work on the network.

C3.1.6 LOCATION OF THE WORKS

Various areas within boundaries of City of Polokwane.

C3.1.7 TEMPORARY WORKS

The only temporary works envisaged are those associated with contractor's site camp, which is to be dismantled upon of the works and all rubble removed after the project is completed. Site operational support facilities for scope of the site camp associated and conditions with the services to be provided.

C3.2 ENGINEERING

3.2.1 DESIGN

Permanent electrical works – MV, LV and service connection	-	Employer/Contractor
Temporary work	-	Contractor
Preparation of as-built drawings	-	Contractor
Construction Designs	-	Contractor/Employer

C3.2.1.1 The Employer and/or Contractor shall be responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.

C3.2.1.2 The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.

C3.2.1.3 The Contractor shall supply all details necessary to assist the Engineer in the compilation of the as- built drawings.

C3.1.2.4 The contractor shall where required provide a projects solution, in such cases the contractor shall appoint a consultant to design, plan and oversee the implementation of the project, through the employer approval.

C3.1.2.5 The Employer / Employer's Agent shall provide the overhaul Project Management. The Drawing shall be approved by the Employer / Employer's Agent.

C3.2.2 CITY OF POLOKWANE's DESIGN

CITY OF POLOKWANE's design shall be a layout and placement of electrical services. The approved drawings will be given to the Contractor upon the commencement of the project.

C3.2.3 CONTRACTOR'S DESIGN

The Contractor may be required to carry out any design work.

C3.2.4 DRAWINGS

C3.2.4.1 The contractor shall only use the dimension stated in figures on the Drawing in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Employer's Representative / Employer's Agent. The Employer's Representative / Employer's Agent will, on the request of the Contractor in accordance with the provisions of the Condition of the Contractor, provide such dimensions as may have been omitted from the Drawings.

C3.2.4.2 The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of services crossings and all other underground infrastructure the positions of which not originally provided might be given by either coordinates or stake value and offset. Where necessary, levels might also be given.

C3.2.4.3 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.

C3.2.4.4 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.

C3.2.5 DESIGN PROCEDURES

C3.2.5.1 Any documents and drawings must be accompanied by document transmittal forms.
C3.2.5.2 Contractor shall be responsible to get permission of all aspects of the temporary works.

C3.3 Requirements

IMPORTANT NOTE:

i. The successful contractor will begin work on the date of written appointment via Instruction to Perform Work (IPW) signed off by the Divisional Head.
ii. Bidders will be considered from the highest total number of points scoring bidder to the lowest when work is to be allocate in order to benefit the recommended bidders fairly and in-line with the procurement points calculation sequence, on the first round of allocation. Thereafter they will be subjected to Performance based approach.
iii. No new work shall be issued within the last 6 months of the contract, unless such projects can be concluded within 6 months of that period.
iv. The fact that the service providers are in a panel does not guarantee any work allocation during the contract period – as this is an as and when required basis contract.

C3.3.1 Resource standard pertaining to targeted procurement

Local Unemployed labour

C3.3.2 SUBCONTRACTING

C3.3.2.1 Scope of mandatory subcontract works

In terms of section 5 of the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000), Preferential Procurement Regulations, 2017. The successful tenderer must subcontract in compliance with section 5 (clause 9) of the Preferential Policy Framework Act, 2000 (Act No. 5 of 2000) a minimum of 10% of the contract value to-

C3.3.2.2 Preferred subcontractors/suppliers

None

C3.3.2.3 Subcontracting procedures

None

C3.3.2.4 Attendance on subcontractors

None

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 AB	:	Engineer's office
SABS 1200 C	:	Site clearance
SABS 1200 D	:	Earthworks
SABS 1200 LB	:	Bedding (pipes)
SABS 1200 LC	:	Cable ducts

The term "project specification" must be replaced by "scope of works" wherever it appears in these standardized specifications.

C3.4.1.2 Particular Specifications

None

C3.4.1.3 National and International Standards

City of Polokwane Standards

- Meter Box Specifications
- City of Polokwane Wireless Single Phase Pre-Paid Meter Specification
- City of Polokwane Wireless Three Phase Pre-Paid Meter Specification
- Table 18 Paper Insulated Cables

Although not listed in this section, references may be made to Eskom standards and specifications within this document. Though not listed, further SANS and City of Polokwane standards are applicable for all material and installations.

NRS user specifications

005:1990	Distribution transformers: Preferred requirements for application in the ESI
008:1991	Enclosures for cable terminations in air - Clearances for 7,2 kV to 36 kV
013:1991	Electric power cables form 1 kV to 36 kV
016:1995	Code of Practice for earthing of low-voltage distribution systems
017 Series	Single-phase cable for aerial service connections
018 Series	Fittings and connectors for LV overhead power lines using aerial bundled conductors
018-1:1995	Part 1: Strain and suspension fittings for self-supporting conductors
018-2:1995	Part 2: Strain and suspension fittings for insulated supporting conductors
018-3:1995	Part 3: Strain and suspension fittings for bare supporting conductors
018-4:1996	Part 4: Strain and suspension fittings for service cables
018-5:1995	Part 5: Current-carrying connectors and joints
020:1991	Aerial bundled conductor - Cable ties
022:1996	Stays and associated components (second edition)
025:1991	Photo-electric control units (PECUs) for lighting

027:1994	Electricity distribution - Distribution transformers - Completely self-protecting type
028:1993	Cable lugs and ferrules
032:1993	Electricity distribution - Service distribution boxes - Pole-mounted (at 230 V)
033:1996	Guidelines for the application design, planning and construction of MV wooden pole overhead power lines above 1 kV and up to and including 22 kV
034 series	Guidelines for the provision of electrical distribution networks in residential areas
034-0:1998	Part 0:1998: Glossary of terms (in course of publication)
034-1:1997	Part 1: Planning and design of distribution systems
034-2-3:1997	Part 2-3: Preferred methods and materials for overhead lines
035:1994	Outdoor distribution cut-outs (drop-out fuses) - Pole-mounted type up to 22 kV
936-1:1994	Part 1: Programmable protection and remote control
041:1995	Code of practice for overhead power lines for RSA
042:1996	Guide for the protection of electronic equipment against damaging transients
046:1997	Pole-mounted load switch disconnectors
048 series	Quality of supply

SANS standards

97:1991	Electric cables - Impregnated-paper-insulated metal-sheathed cables for rated voltages from 3,3/3,3 kV up to 19/33 kV
156:1977	Moulded-case circuit-breakers
172:1994	Low-voltage fuses
754:1994	Eucalyptus poles, cross-arms and spacers for power distribution and telephone systems
780:1998	Distribution transformers
1180	(in 3 parts) Electrical distribution boards
1411	Materials of insulated electric cables and flexible cords 1418 (in 2 parts) Aerial bundled conductor systems
1473	Low-voltage switchgear and control gear assemblies
1619:1995	Small power distribution units (ready boards) for single-phase 230 V service connections
SANS 10142	Wiring of premises
SANS 1574	Electric flexible cores, cords and cables with solid extruded dielectric insulation
SANS 1885	ANNEX A Rules for application of standard wire numbering
SANS 1507	Electric cables with extruded solid dielectric insulation for fixed installations (all parts)
SANS 10198	The selection, handling and installation of electric power cables of rating not exceeding 33 kV (all parts)
SANS 121:2011	Hot dip galvanized coatings on fabricated iron and steel articles

C3.4.1.4 Variations and Additions to the SABS 1200 Standardized Specifications

None

C3.4.2 SITE ESTABLISHMENT

C3.4.2.1 Services and facilities provided by the Employer

C3.4.2.1.1 Water sources

Should the Contractor, in complying with his obligations: wish to utilize such water supply, he shall himself be responsible for making his own arrangements with the responsible water supply authority for the supply of all water that he may require from such reticulation network for construction purposes as well as for domestic consumption.

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.

All charges as may be levied by the responsible water supply authority in respect of water consumed by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall, be deemed to be included in the sums bidded by the Contractor for the various Preliminary and General items listed in the Schedule of Quantities, as well as in the rates bidded by the Contractor for the various other items listed in the Schedule of Quantities which require the consumption of water.

C3.4.2.1.2 Electricity supply

Should the Contractor, in complying with his obligations wish to avail himself of such supply, he shall, 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.

All charges as may be levied by the responsible electricity supply authority in respect of electrical power consumed by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall be deemed to be included in the sums bidded by the Contractor for the various Preliminary and General items listed in the Schedule of Quantities, as well as in the rates bidded by the Contractor for the various other items listed in the Schedule of Quantities which require the consumption of electricity.
The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts as may have become due and payable by the Contractor to the responsible electricity supply authority have been promptly paid in full.

C3.4.2.1.3 Excrement disposal

Should the Contractor, in complying with his obligations wish to avail himself of such facility, he shall, 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.

All charges as may be levied by the responsible sewage disposal authority in respect of the disposal of sewage generated by the Contractor shall be for the Contractor's account and payment to the Contractor in respect thereof shall, be deemed to be included in the sums bidded by the Contractor for the various Preliminary and General items listed in the Schedule of Quantities.

The Contractor shall, when reasonably required by the Engineer, produce documentary proof that all amounts that may have become due and payable by the Contractor to the responsible sewage disposal authority have been promptly paid in full.

C3.4.2.2. Facilities provided by the Contractor

C3.4.2.2.1 Facilities for the Engineer

The Contractor shall provide on the Site, for the duration of the Contract and for the exclusive use of the Engineer and/or his Representative (as applicable), the various facilities described hereunder. All such facilities shall be provided promptly on the commencement of the Contract and failure on the part of the Contractor to provide any facility required in terms of this specification shall constitute grounds for the Engineer to withhold payment of the Contractor's bidded Preliminary and General items until the facility has been provided or restored as the case may be.

C3.4.2.2.2 Office accommodation

The Contractor shall provide on the Site 1 site office(s) 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.

(i) Carports

The Contractor shall provide on Site 1 carport for the exclusive use of the Engineer, in accordance with the requirements of sub-clause PSAB 3.3 of section C3.4.6 of the scope of Works.

(ii) Meeting Venue

The Contractor shall provide within his own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of six (6) persons at site meetings.
The Engineer shall be allowed free use of such venue for conducting any other meetings concerning the Contract at all reasonable times.

(iii) Contract name boards

The Contractor shall provide, erect and maintain1 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 order 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.

(iv) Survey equipment and assistants

a. Survey equipment

None

b. 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 make cell phone available for the CLO for the duration of the contract and carry all the cost.

(vi) Computer facilities

None

(vii) Fax facilities

None

(viii) Electricity supply for the Engineer

All electricity supply to the Engineer's 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 - 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.

(ix) Site instruction book

The Contractor shall keep a triplicate book for site instructions on the Site at all times.

(x) Housing for Engineer's Representative

None

C3.4.2.2.3 Water

The Contractor shall, at his own expense, be responsible for obtaining and providing all water as may be required for the purposes of executing the Contract, including water for both construction purposes and domestic use, as well as for making all arrangements in connection therewith. The Contractor shall further, at his own expense, be responsible for providing all necessaries for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith.

The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.
The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Engineer, produce proof of such compliance. The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract. The Contractor shall, whenever reasonably required by the Engineer, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

No separate payment will be made to the Contractor for the obtainment, providing and consumption of water, the costs of which will be deemed to be included in the Contractor's bidded rates.

C3.4.2.2.4 Electricity

The Contractor shall, at his own expense, be responsible for obtaining and providing all electricity as he may require for the purposes of executing the Contract, including electricity for both construction purposes and domestic use, as well as for making all arrangements in connection therewith.

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

No separate payment will be made to the Contractor for the obtainment, providing and consumption of electricity, the costs of which will be deemed to be in the Contractor's bidded rates and prices.

C3.4.2.2.4 Excrement disposal

Disposal on site not allowed

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 sub clause and the costs thereof shall be deemed to be included within the Contractor's bidded Preliminary and General items.

C3.4.2.3 Site usage

None

C3.4.2.4 Permits and wayleaves

The Contractor shall be responsible to obtain all the wayleave required under this Contract. A separate payment item has been included under the Schedule of Quantities to compensate the Contractor for all his expenses to obtain the wayleave.

C3.4.2.5 Features requiring special attention

(a) Site maintenance

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

(b) Testing and quality control

N/A

(c) 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.

(d) Opening up and closing down of designated borrow pits

N/A

(e) Access to properties

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. In this respect the Contractor's attention is drawn to Clause 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 aforegoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times.

Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

(f) Existing residential areas

Electricity and water supply interruptions in existing residential areas shall be kept to a minimum. The Engineer's approval shall be obtained prior to such interruptions and residents shall be notified in writing at least 24 hours but not more than 48 hours in advance. Supplies shall be normalised by 16:00 on the same day.

(g) Employment of unskilled and semi-skilled workers in labour- intensive works

(i) Requirements for the sourcing and engagement of labour

1) Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.
2) The rate of pay set for the EPWP is as per Department of Labour.

2.1. The EPWP daily labour rate as set out by City of Polokwane.

2.2. The EPWP labour rate for the customer liaison officer (CLO) is set a minimum rate of R 4 500 p/month as set out by City of Polokwane.

2.3. The EPWP labour rate for the Safety Representative (SHE REP) is set a minimum rate of R 4 500 p/month as set out by City of Polokwane.

2.4. The EPWP labour rate for the student is set a minimum rate of R 4 500 p/month as set out by City of Polokwane.

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.

(3) Tasks established by the contractor must be such that:

(aa) the average worker completes 5 tasks per week in 40 hours or less; and

(bb) the weakest worker completes 5 tasks per week in 55 hours or less.

(4) 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.

(5) The Contractor shall, through all available community structures, inform the local community of the labour-intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and/or who come from households:

(aa) where the head of the household has less than a primary school education;

(bb) that have less than one full-time person earning an income;

(cc) where subsistence agriculture is the source of income;

(dd) those who are not in receipt of any social security pension income.

NB: The contractor must provide monthly statistics to the City of Polokwane 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

(aa) There is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.

(bb) The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task- rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

(3) Terms and conditions for the engagement of targeted labour

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

14(4) Variations to SANS 1914-5

(aa) The definition for net amount shall be amended as follows:

Financial value of the contract upon completion, exclusive of any value-added tax or sales tax which the law requires the employer to pay the contractor.

(bb) The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

(iii) Training of targeted labour

(1) The Contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.

(2) The cost of the formal training of targeted labour, will be funded by the provincial office of the Department of Labour. This training will take place as close to the project site as practically possible. The Contractor must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The Employer must be furnished with a copy of this request.

(3) A copy of this training request made by the contractor to the DOL provincial office must also be faxed to the EPWP Training Director in the Department of Public Works – Cinderella Makunike, Fax: 012 328 6820 or email cinderella.makunike@dpw.gov.za, Tel: +27 83 677 4026.

(4) The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he/she is employed for 4 months or more.

(5) The Contractor shall do nothing to dissuade targeted labour from participating in training programmes.

(6) An allowance equal to 100% of the task rate or daily rate shall be paid by the Contractor to workers who attend formal training, in terms of 1.3.4 above.

(7) Proof of compliance with the requirements of 1.3.2 to 1.3.6 must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

(h) 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

(i) Monthly statements and payment certificates (Compulsory)

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 Sub clause 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.

(j) Construction in restricted areas (Compulsory)

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 bidded 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.

(k) Notices, signs, barricades and advertisements (Compulsory)

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 bidded 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.

(l) Workmanship and quality control (Compulsory)

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 bidded 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:

$$V = (Nw - Nn) + (Rw - Rn)/X$$

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 04/6399 Johannesburg Int WO for the period 1989 to 2006 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 48 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 42.2 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.

RAINFALL TABLE

Table 1 – RAINFALL RECORDS FOR PERIOD: 2006 – 2016

RAINFALL STATION: Polokwane Lat: 23.8570 Lon: 29.451 Height 1226m

Average No of Days with Rainfall exceeding 10mm: 9.8 days/year

Average Rainfall: 488.6mm/year station no: 0677802BX

MON	AVE	ST	N DAY	NUM	1	5.1	10.1	20.1	50.1	100.1	MAX R	MAX RAIN
MON		DEV	RAIN	MON	5	10	20	50	100	900	DAY	DATE
MON	AVE	ST	N DAY	NUM	1	5.1	10.1	20.1	50.1	100.1	MAX R	MAX RAIN
MON		DEV	RAIN	MON	5	10	20	50	100	900	DAY	DATE
JAN	65.9	39.3	65.9	11	3.4	2.1	1.3	0.7	0	0	38	1/18/2013
FEB	47.3	49.7	47.3	11	1.6	0.9	1.1	0.6	0	0	49	2/26/2006
MAR	58.4	33.2	58.4	11	3	1.3	1.1	0.7	0.1	0	51.5	3/27/2006
APR	43.3	46.6	43.3	11	1.5	1	0.7	0.5	0.1	0	68	4/4/2011
MAY	10.4	14	10.4	11	0.5	0.4	0.3	0.1	0	0	29.2	5/8/2009

JUN	1.7	3.6	1.7	11	0.3	0	0.1	0	0	0	12	6/10/2009
JUL	2.4	4.3	2.4	11	0.3	0.1	0.1	0	0	0	12.1	7/4/2007
AUG	2.3	5.6	2.3	11	0.2	0	0.1	0	0	00	19.2	8/15/2011
SEP	6.6	8.2	6.6	11	0.4	0.4	0.1	0.1	0	0	22.5	9/4/2015
OCT	48.1	29.5	48.1	11	1.5	0.7	1.4	0.6	0	0	38.2	10/29/2009
NOV	97.7	40.5	97.7	11	3.1	2	1.3	1.5	0.2	0	65.5	11/12/2008
DEC	104.6	56.3	104.6	11	3.8	1	1.7	1.9	0.1	0	55	12/16/2014
YR	488.6		67.9		19.5	9.8	9.2	6.8	0.5	0	488.6	

C3.4.3 PLANT AND MATERIALS

C3.4.3.1 Plant and materials supplied by the employer

CITY OF POLOKWANE RESERVES THE RIGHT TO SUPPLY ANY MATERIAL IF AND WHEN REQUIRED

C3.4.3.2 Materials, samples and shop drawings

(a) Samples

Materials or works which do not conform to the approved samples submitted in terms of Sub clause 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 Sub clause 23.7 of the Conditions of Contract, be for the Contractor's account.

C3.4.4 CONSTRUCTION EQUIPMENT

C3.4.4.1 Requirements for equipment

All equipment used must be fit for purpose and must be in an excellent working condition and should not pose a danger to workers. Any equipment requiring calibration must be calibrated prior to site establishment and the certification be kept on site at all times.

C3.4.4.2 Equipment provided by the employer

None

C3.4.5 EXISTING SERVICES

C3.4.5.1 Known services

There is existing water services and sewer services in the area that construction will take place. Maps will be provided during wayleave application indicating the services. The position of the services cannot be guaranteed, and the contractor must excavate with caution.

C3.4.5.2 Treatment of existing services

Existing services should be exposed by hand.

C3.4.5.3 Use of detection equipment for the location of underground services

None

C3.4.5.4 Damage to services

Damages to the existing services must be reported immediately to the relevant City of Polokwane departments. The contractor must have emergency numbers of water and sewer on hand before site establishment. If the existing services are going to be crossing by any electrical cables, the contractor must install precast concrete blocks to protect the cables.

C3.4.5.5 Reinstatement of services and structures damaged during construction

If damages to the existing services have occurred the contractor must inform the relevant department immediately and proceed to reinstate the services to the same as the original quality. The cost of reinstatement of services will be for the contractor's account.

C3.5 MANAGEMENT OF THE WORKS - GENERIC SPECIFICATIONS

C3.5.1 GENERIC SPECIFICATION.

C3.5.1.1 EXCAVATIONS

C3.5.1.1.1 Classification of Excavation Material

"Pickable" is defined as soil which can be easily excavated and does not contain any "rock" or "hard material", e.g. gravel, earth, turf, scale, sand, silt and clay, which may contain loose rocks with a nominal diameter of up to 300 mm.

"Rock" is defined as material that can only be excavated with the aid of pneumatic tools or mechanical ripper, including soil containing loose boulders with a nominal diameter of between 300 mm and 1000 mm.

"Hard Rock" is defined as material consisting of boulders with a nominal diameter of more than 1000 mm, including solid rock in bulk or banks or ledges, the practical excavation of which would necessitate the use of explosives and/or drilling and wedging.

The Engineer shall do classification of excavation material, but should the contractor disagree with the representative's decision, an independent third party acceptable to both the engineer and the contractor, shall be called in to do a classification. The decision of this third party shall be accepted as final.

The contractor shall acquaint him with the nature of the material to be excavated for the works prior to submitting his tender. Submission of a tender shall be deemed to be an acknowledgement that he has done so.

C3.5.1.1.2 New Cable Trenches

Cable trenches shall be excavated at distances from the stand boundaries as indicated on the trench cross section drawings.

Trenches shall be absolutely straight and excavated to a depth of 1200 mm measured from the final sidewalk level or natural ground level, in the absence of a sidewalk. The depth of the cables shall be not less than 1200 mm deep for MV cables and 800 mm deep for LV cables. The centerline of the trench shall be 1025mm away from the stand boundary.

Where cables have to be installed across a road or street, which has yet to be built, a cable sleeve shall be installed at least 1200 mm below the final street surface, in order to ensure that the cables are not damaged during subsequent road construction activities.

The bottom of the excavated trench shall be level and has to follow the natural contour of the surrounding area.

Trenches shall be cleaned and any loose rocks and sharp edges, which may cause damage to the cables during and after installation, shall be removed prior to commencing with the installation of cables.

A trench inspection shall be conducted by the CoW prior to any cables being laid. Measurement of trenching shall be based on a linear meter measurement of the dimensions

provided. However, in the event of an exceptionally large excavation being necessary due to unforeseen circumstances, the linear meter measurement will be replaced by a cubic meter measurement, and shall be decided upon by the City of Polokwane's Engineer or his representative.

All backfilling for trenches shall be done in layers of approximately 250mm, each layer dampened and compacted mechanically.

All backfilling for trenches along trafficable areas (roads and property entrances) shall be done using stabilised material in layers of 250mm, each layer dampened and compacted mechanically. A soil lab test shall be furnished for excavations at road crossings to prove compliance with this requirement.

Trenches accommodating medium voltage or main low voltage or service cables are to be initially backfilled with a layer of selected backfill covering the cables to a depth of 200mm, of which 75mm shall be below the cables. This will be done by hand so as not to damage the cables. The remaining backfill is to be done with the previously excavated material of which all the rock has been removed.

C3.5.1.1.3 Maintenance of Excavations

The contractor shall be responsible for maintaining excavations in good order, free from storm or rain water, seepage water, mud, loose ground, rock, stone, gravel or any other strange matter that may find their way into open trenches.

The contractor shall further take all the necessary precautions to prevent any loose rock, stone or unwanted material that has been dumped alongside cable trenches, from entering open trenches.

Should large rocky or difficult areas be encountered, jackhammers or explosives may be utilised, as necessary. Due care and attention shall be given to the correct use of such methods to ensure the minimum danger to people and surrounding property. If explosives are to be used, the Engineer shall be notified at least 3 days in advance. It is the contractors' responsibility to get permission for blasting.

All excess large stones and rocks are to be removed and transported from the site, and only dumped at a facility licensed to accept it.

C3.5.1.1.4 Storage of Excavated Material

No excavated material shall be placed on top of any surveyor's pegs or stand beacons.

Excavated material shall not be dumped closer than 300 mm from the side of any cable trenches.

The contractor must make provision for the risk of collapse.

Excavated material shall also not be placed where it may endanger human life.

All excavated material shall be dumped in such a manner that it will cause the minimum inconvenience to pedestrians and traffic. Under difficult circumstances the representative may instruct the contractor to remove some or all of the excavated material to a remote storage position.

Unusable excavated material should only be dumped at a licensed facility.

Contractors are to take note of and comply with the provisions of the Occupational Health and Safety Act: 1993 regarding excavations. Refer to the Safety Specification accompanying this document, and make proper allowance to comply with all its provisions.

Excavations, cable laying and backfilling operations shall be programmed to minimise damage and inconvenience to people due to open trenches, holes, dumped soil and stones.

The amount of trenching to be carried out on a day shall be carefully assessed taking the availability of cable and workforce into account. No cable trenches may be open for more than two consecutive days.

It is a requirement of this contract that written notice to occupants of properties where the entrance needs to be closed off for excavations for cables be given at least two working days in advance after arranging suitable times for such closures that will cause the least inconvenience to the people affected. Any such excavation must be backfilled to a trafficable condition before 17h00 on the day that it was opened.

Furthermore, all vehicle access driveways shall be closed as soon as possible. Where necessary, temporary bridges of braced steel plates shall be placed over open trenches, where vehicles have to cross whilst the trench is open. The design of this temporary bridge is the responsibility of the contractor.

C3.5.1.1.5 Barricading of Trenches

Trenches left open or with no supervision shall be barricaded at all times in accordance with OHS Act. This includes trenches left open overnight or weekends.

It is an explicit requirement of this contract that all open trenches be barricaded with steel stakes 1,2m high placed no more than 12m apart and plastic warning mesh at all times to alert people of the danger. At night these measures shall be supplemented by placing rechargeable battery powered stroboscopic flashing red lanterns at intervals of no more than 20m at the top of the barricade stakes. These trenches shall be patrolled at night by watchmen, deploying at least one person per 100m of open trench.

The contractor's insurance on this contract shall, apart from other requirements, specifically cover the risks attached to excavations and open trenches.

The barricading shall be an appropriate physical barrier as is required by the OSH Act.

The contractor is responsible to maintain the barrier until the cable is installed and backfilled.

The contractor will be held responsible for all damages and claims against City of Polokwane should injures or damages been incurred by the public.

C3.5.1.1.6 Cable Route Markers

Cable route markers will be made of concrete.

Cable route markers will be installed in the center of the trench.

Cable markers are to be installed at an approximate spacing of 150m on long cable runs. On the rest of the route, it will be installed at all deviations and at all MV joints. These shall be clearly marked to indicate a joint, route change or straight run. All road crossings shall also be marked with a cable marker.

Cable marking tape shall be of orange or yellow PVC material with 70mm black lettering, 450mm wide minimum 200 microns thick. Embossing referring to the presence of cables is required.

C3.5.1.1.7 Road Crossings

An application for wayleave must be submitted to Roads & Stormwater Directorate for approval before a road be crossed.

The trenching depth shall be as per BoQ.

Cable sleeves shall be installed at all road crossings.

Unless otherwise specified, two additional sleeves shall be installed for future use at each road crossing.

All existing tarred roads shall be drilled. Where drilling cannot be done, City of Polokwane's representative must approve of breaking of tar and trenching.

Sleeves shall be installed up to 1m beyond tarred surfaces.

Where tar roads need to be excavated, the tar shall be broken not wider than 450mm.

Cable sleeves installed in road or service crossings shall be straight and free from damage. No crooked or deformed sleeves shall be installed.

The contractor shall obtain the services of an approved test laboratory to verify the grade of compaction at road crossings, if instructed to do so by the Engineer. The contractor shall bear the cost of any tests that prove that compaction has not been carried out according to the specification. All test certificates shall be handed to the Engineer before final acceptance of the installation.

A galvanized draw wire shall be installed in every sleeve, which is not used. The draw wire shall be at least 1 000 mm longer than the sleeve and 500 mm shall be rolled together at each end and left just inside the sleeve end. The spare sleeve ends shall be sealed by means of tight-fitting PVC ends caps.

After the installation of the sleeves, the sleeves shall be meticulously backfilled so that no air pockets are left. The trench shall thereafter be backfilled in layers of 150 mm and compacted with mechanical vibrators to 95% modified AASHTO density.

Backfilling on a road that has already been compacted must be done as per the civil engineer's specifications.

Where cable sleeves have to be installed to cross a road, which still has to be constructed, the sleeves shall be installed at least 1,2 m below the surface of the natural ground level, in order to prevent damage to the sleeves during road construction works.

C3.5.1.1.8 Survey of cable routes

The contractor might be instructed to acquire the services of a professional land surveyor to replace missing stand pegs. The following is required:

- Be a registered professional land surveyor in terms of the Professional Land Surveyor and Technical Surveyors Act 1984.
- Obtain from City of Polokwane or such other sources as may be available, all relevant information on the current location of roads and servitudes (including the latest data on widening of roads) required to accurately peg all the cable routes as required for this contract.
- Place a 12mm diameter steel peg 300mm long protruding 100mm above the surface with a white 20mm diameter conduit marker 500mm long over it filled with sand (for visibility to pedestrians, vehicle drivers etc.) at least at 50m intervals on straight routes and at all deviations, at a standard off-set of 1,0m from the center line of the cable route towards the road center, which cable route shall be a standard distance from the stand boundary (to be advised upon commencement of contract works)
- Peg the boundaries of any new servitudes required for the purposes of this contract and furnish servitude diagrams to City of Polokwane who will arrange for the servitudes to be registered.

C3.5.1.2 Poles

- All poles shall be installed perfectly upright and where applicable in an absolutely straight line. Any part of the network not conforming to this requirement will be corrected at the cost of the contractor. The contractor shall be responsible for the survey of the line routes.

- The contractor shall inform the engineer, in writing, where deviations from the planned routes are deemed necessary because of physical or other obstructions.

- Excavations must be cleared of loose soil so that the butt end of the poles will be resting on undisturbed soil. After planting, the poles shall be plumbed vertically.

- All pole holes shall be back-filled and compacted thoroughly. Should any compaction not pass it will be rectified to the satisfaction of the engineer the cost of which will be for the contractors' account

- All poles must be stacked strictly in accordance with the manufacturers' recommendations.

- All poles must be stacked in a safe way out of each of the general public so as not to cause harm or damage. Any damaged poles will be rejected.

- The contractor must provide his own lifting and compaction equipment.

- Wooden Pole Structures:

    - The different types of wood pole structures, i.e.

        - Vertical Staggered intermediate (single pole) with stand-off insulator configuration

        - Vertical strain, terminal and angle strain shall be designed to carry all conductor, insulators and other equipment under the specified operating conductions.

        - The wooden poles shall be planted according to the depths as shown on the drawings and base plates, kicking blocks or baulks shall be provided as required to ensure a rigid structure. Suitable care shall be taken that cross-arms are level and the poles shall be matched, care being taken with regard to pairing poles with similar diameter, length and appearance. The poles shall be the class 55MPa and shall conform to SANS 573-1982 in all respects.

        - Wooden poles shall be used. Wooden poles will be designed to withstand OTM and other forces arising from ABC terminations, change in direction, mass of Meter Boards, amongst others.

- All poles must be SABS approved.

- The Contractor shall submit details of the stays and stay anchors to be used to the Engineer for this approval prior to the installation of the stays. Stay guards shall be fitted to all stays. Stays insulators shall be provided on all stays.

- 20mm x 0.72mm stainless steel bandit strapping shall be used for fixing of kick pipes against poles.

- 20mm x 0.72mm stainless steel bandit strapping shall be used for fixing of cables against poles.

- The contractor shall inform the engineer, in writing, where deviations from the planned routes are deemed necessary because of physical or other obstructions.

- Excavations must be cleared of loose soil so that the butt end of the poles will be resting on undisturbed soil. After planting, the poles shall be plumbed vertically.

- All pole holes shall be back-filled and compacted thoroughly. Should any compaction not pass, it will be rectified to the satisfaction of the engineer the cost of which will be for the contractors' account

C3.5.1.3 Medium Voltage & Low Voltage Conductors - Installation of Cables

- The cable trench shall be excavated along the routes indicated on the relevant drawings.

- The excavation of the trench shall be undertaken in sections, normally not exceeding 400 meters each in length. Each section shall be completed i.e., excavated, cable installed and backfilled, before work on the following section shall be commenced with.

- If any obstacle or interference should be encountered which may require alterations to the trench or routes, such alterations shall be approved in writing by the engineer. If the bottom of the cable trench is solid rock or rocky in some places the contractor must install soft loam bedding soil free of any rocks and debris.

- The soil that will be used for the covering layer shall be available next to the cable trench when cables are being inspected and shall be sufficient to cover the cables with a layer of at least 200 mm thickness.

- Medium and low voltage cables shall be laid in the same direction on the complete cable route between termination points, in order to maintain a consistent core rotation throughout.

- All LV cables shall be laid on the same horizontal level and as straight as possible along straight sections of the cable route. The spacing between cables shall be 150 mm between centers, except for secondary low voltage cables, which may be laid against each other.

- The sequence of LV cables in the trench as seen from the stand boundary shall be as follows:

    - Service cables to stands on the same side of the street as the cable trench;

    - Service cables to stands on the opposite side of the street as the cable trench

    - In case of only one cable, the cable shall be installed 1000 mm from the boundary to the center of the trench

    - MV & LV cables in the same trench will be installed.

    - Should the excavated soil not be suitable for the covering layers, the contractor shall firstly run it through a screen of which the hole diameter shall not exceed 10 mm, or else if the soil is unusable import suitable soil as per the BOQ.

- The soil used to backfill the cable trench shall not contain more than 40% rock or scale and has to be able to pass through a screen with 100 mm diameter holes. Should the excavated soil not be suitable for backfilling, the contractor shall import the necessary backfilling material as per the BOQ.

- Backfilling shall be done in layers of +- 250mm, each of which shall be compacted before the next layer is backfilled. The contractor shall be responsible for providing top up soil should any of the trenches subside at any stage until expiry of the retention period.

- The contractor shall install along the complete cable route, 450mm wide yellow PVC cable protection sheet with red wording as required by law.

- The sidewalk or ground level along the cable trench shall be levelled off and left tidy and clean after completion of the backfilling process. The contractor shall remove all surplus material from site. Cost thereof shall be included in his rates.

- Cables shall be hauled into the cable trench on cable rollers that are positioned such that the cable will not touch the side or bottom of the trench anywhere. The cable rollers shall not have any sharp edges that may cause damage to the cables. Under no circumstances will any cables be dragged on the ground.

- All cable supplied in terms of this specification shall carry the SANS mark on the outer sheath at regular intervals.

- If the contractor intends using a winch to draw the cable into the trench, a cable sock shall be used or the draw wires shall be soldered to the cable so that the tension is exerted on all the cores, lead sheath and/or steel wire armouring at the same time.

- The maximum tension on a cable during laying operations shall not exceed the value specified by the manufacturer.

- Should the engineer not be satisfied with the manner or method employed to lay the cable he shall have the authority to instruct the contractor to lay the cable by hand or in accordance with approved standards.

- The cables shall be laid in such a manner that the beginning of a drum shall be laid from the end of the previous drum to ensure that the lay of the cores remain the same. Cables shall overlap by at least 1 m, but not more than 1,5 m at joints.

- Sufficient lengths of cable shall be left at the beginning and end of the cable routes to allow for the termination of the cables. Where necessary the engineer shall decide on what length of cable is to be left. The contractor shall take the necessary precautions to protect the cable ends until they are terminated. The cable ends shall be sealed at all times by means of lead or heat shrink sealing caps to ensure that the cable is waterproof.

- Where cables are drawn through sleeves, care shall be taken that they are not kinked or excessively bent.

- All cables are to be transported, stored, handled and laid in accordance with the manufacturer's recommendations. Suitable cable drum handling vehicles, lifting apparatus and unreeling equipment is to be provided and utilised in the execution of these works and must be included for in the unit rates.

- Cognisance must be taken of the cable manufacturer's recommended minimum bending radius and no cable may be bent beyond this limit.

- All switching, spiking and phasing of cables will be done by the City of Polokwane personnel (relevant to that particular project).

- Manufacturer's instructions for clamping, jointing, connecting onto and capping will strictly be adhered to.

- Conductor damage shall immediately be brought to the attention of the Engineer for a decision on the correct remedial action the cost which of will be for the contractors' account.

- Non-conforming material shall immediately be removed from site.

- As-built drawings shall be kept up to date and drum numbers shall be shown on the drawings, together with the joints separating drum lengths.

- Short lengths of conductor between joints will not be accepted and joints will only be permitted at coil ends and where construction methods require the conductor to be jointed.

- Where cables have to be taken down poles it shall be placed in a galvanized steel pipe extending from 2.5 m above ground to 0,5 m below ground. It will be strapped to the pole at intervals of 1 m with 19 mm stainless steel strapping. Inside diameter of pipe to be sufficient to accommodate cables as specified.

- The contractor shall keep accurate records of each length of cable laid. The following information shall be recorded:

    - Cable drum number

    - Size of cable

    - Laid from where to where

    - Length of cable

    - Date installed.

- Every cable shall be marked by means of an aluminium or lead label on which the size of cable and its source or destination and cable number is punched. The label shall be installed around the inner PVC sheath immediately above the cable gland.

C3.5.1.4 Storage and handling of cable drums

- Cables shall at all times remain on the original factory provided cable drums when stored for any length of time. Drums will remain in the vertical position (with the shaft in the horizontal position) while being stored.

- When cables are cut, the cable ends shall immediately be capped by means of waterproof heat shrink caps.

- When lifting, suitable spacer bars will be used with slings to prevent damage to drums and cables.

- Any material damaged due to bad housekeeping or storage will be rejected and will be replaced by the contractor at his own cost.

C3.5.1.5 Cabling (Medium Voltage Cable)

- The MV cable network shall be fully underground. All MV cables shall be 11/11kV PILCDSTA belted 3 core copper (or aluminium, where applicable) conductor type with polymeric serving to SABS 97:1991 Table 18, black PVC sheathed, and shall bear the SABS mark. Cable routes are as indicated in the network design layout. The following cables are applicable:

- Table 3: Applicable Cables and design spacing

CABLE TYPE	DESIGN SPACING
185mm² 3 core Cu PILC Cable 11/11kV 300mm² 3 core Al PILC Cable 11/11kV 95mm² 3 core Cu PILC Cable 11/11kV 150mm² 3 core Al PILC Cable 11/11kV	1,2 m depth, 50mm from either side of trench wall and spaced 300mm from other cables (i.e., 1.2m depth and 600mm wide) Road crossings – inside 160mm PVC cable flex pipe, 1,5 m depth, 50mm from either side of trench wall and PVC pipe spaced 300mm from other pipes. Set in 75 mm surround 15 MPA (min) concrete Cables installation under national road shall be by horizontal directional drilling. Residential roads may be excavated – in particular where untarred

- MV cables shall be terminated using air insulated dry type terminations, suitable for terminating into gas insulated switchgear. The contractor shall supply such termination materials.

- MV cables shall be phased out before terminating onto the terminals of MV switchgear.

- All MV joints shall be labelled by means of a plastic or non-corrosive metallic tag which shall be wrapped and secured around the cable at the location of the joint. The identification label shall clearly state the Contractor's name, the jointer's initials and the date the joint was made. This shall be left visible for the Engineer to inspect and approve.

- The cores of the cables shall be jointed number to number or colour to colour. Phase conductors shall be terminated to correspond with the associated switchgear phase labelling as directed by the Engineer.

- The direction of laying cable shall be such that jointing of the cables, number to number or colour to colour, is facilitated to eliminate cross-overs within the joint.

- Where it is necessary for any reason necessary to cut a MV cable, both ends are to be capped immediately with a waterproof heat-shrink boot, which the contractor shall supply.

- Jointing shall not be carried out during inclement weather. Where unexpected rain is imminent when a jointing operation is incomplete, the joint bay shall be adequately covered by tents of waterproof material suitably supported. Where necessary a trench shall be excavated around the bays to prevent the ingress of moisture.

- The earth continuity conductor bridging the armouring at the joint shall be adequate to carry the prospective earth faults and shall not be less than 70mm² cross section.

- Joints shall not impair the anti-electrolysis characteristics of the cables. The insulation between the various parts of the cable shall be preserved intact at joints. In view of the possibility of electrolysis damage, the entire joint shall be fully insulated from earth, to the same level as the insulation to earth of the cable armouring, by methods approved by the Engineer.

- The Contractor will be required to furnish proof that his cable terminating/jointing staff is competent in the execution of this work. A Certificate of Competence, issued by the manufacturer of the termination or joint type to be used, is required with respect to each person that will be executing terminations or jointing of MV cable, dated no more than 2 years earlier than the commencement date of this contract.

C3.5.1.6 Cabling Low Voltage Cable

- The Low Voltage network will be a Hybrid network as follows:

    - From the miniature substation, there will be underground cable (as per design specification) to the nearest pole. A galvanized steel pipe of minimum 6m length shall be planted next to the pole as a kicker pipe to connect to the overhead Aerial Bundled Conductor (ABC).

    - Overhead Aerial Bundled Conductor (ABC) will be used as distributors to each pole mounted kiosk. ABC-aerial bundled conductors (supporting) complying with SANS 1418 shall be provided. The standard aluminium conductor sizes will be specified per project. These conductors will be protected by circuit breakers mounted inside mini substations and/or polemounted distribution kiosks and/or morsdorf fuses, as the design require, and they shall include an additional street lighting core where applicable and per design specific.

    - Airdac service connections from pole mounted kiosks shall be secured down the inside of the pole and an underground connection into each stand provided. Airdac cables to be used are as per design specific for split pre-paid metering connections.

    - The proposed ABC conductor route and the equipment placement kiosk locations shall be verified via survey and pegging prior to construction. The final detailed information (i.e., pole positions, spans and strains) will be based on a survey and pegging report.

    - Cable routes are as indicated in the network design layout.

- Provision shall be made for reinstatement of any road crossings, pavements and stoeps after installation.

C3.5.1.7 Inspection of cables before backfilling and recording progress

- The contractor shall be kept solely responsible for any costs incurred if the procedure outlined below has not been followed.

- The engineer and the representative of the City of Polokwane shall inspect all cable trenches before backfilling to ensure that the laying of cables complies with the specification.

- During this inspection the representative of both the contractor and the engineer shall record the lengths for all cables and all such records shall be signed by both representatives as the final quantities. The contractor shall be responsible to keep the records as proof of progress and as basis for claims for payment.

C3.5.1.8 Crossing of other services

- Where a cable crosses over other services, the cable shall not be installed at a depth less than 800 mm below ground level and if this is not possible the cable shall be installed underneath the other service and shall be protected in the prescribed manner by means of concrete slabs. The depth of the cable shall be maintained for 1m on either side of the crossing.

- If it is not possible to cross over or underneath a service in the prescribed manner, the matter shall be referred to the engineer for a decision.

- The following minimum clearances shall be maintained between electrical cables and other services:

	Vertical	-	Horizontal
GPO Cables	0,3 m	-	0,3 m
Water pipes	0,3 m	-	0,3 m
Sewer pipes	0,3 m	-	0,8 m
Storm water pipes	0,3 m	-	0,6 m
Other electrical cables	0,15 m	-	0,15 m (Other than LV cables in same route)
LV cables on same route	0,10 m		One cable diameter of larger cable

C3.5.1.9 MV Joint Bays

Joint bays shall be 1,3 m deep, 1.5 m wide and 2.5 m long. Each bay shall be adequately covered to prevent, as far as practicable, dust and moisture from entering it and it shall be provided with adequate lighting, drainage, and ventilation for use during jointing operations. The sides of the hole shall be draped with a small tarpaulin or plastic sheeting to prevent loose earth from falling into the joint bay during jointing operations.

C3.5.1.10 MV Joints

All cable accessories shall be according to the cable manufacturer's recommendation.

- Cable lugs and ferrules shall be crimped with hydraulic crimping tools with hexagon dies on copper cables and indent on aluminium cables. City of Polokwane must approve crimping tools prior to usage.

- All joints and terminations shall be fully watertight and airtight and shall be free of voids and air-pockets. The crossing of cores in joints will not be permitted under any circumstances.

- Joints, other than those at the end of cable runs will not be allowed unless authorised by City of Polokwane.

- The joint shall not impair the antielectrolysis characteristics of the cable.

- The Contractor shall notify the City of Polokwane timeously of the day on which the jointing is to be carried out in order that an inspection may be arranged if so required.

- The contractor shall provide the engineer with documentary proof that he has qualified, experienced and competent cable jointers in his employ to execute the work to the satisfaction of City of Polokwane.

- The contractor's jointer(s) shall thereafter demonstrate to the engineer or his representative that he/they are completely conversant with the standard jointing methods of City of Polokwane by doing a test joint for each type of cable to be installed on the contract if so required.

- The test joint may at the discretion of the engineer be a joint which is to be made in the execution of the contract. The jointer(s) shall be permitted to proceed with the jointing should the engineer be satisfied with the test joint and the test joint withstands a medium- voltage test. Notwithstanding the aforementioned, the engineer may at his discretion require that any one of the joints completed be opened and inspected to determine whether the joints comply with the requirements before the contractor shall be allowed to proceed with the jointing.

- The requirements in these clauses shall also apply to all new cable jointers employed during the duration of the contract to do cable jointing on the contract.

- No jointing or terminating shall commence in rainy or in-climate weather without the prior approval of the engineer. When the jointer commences with a joint, he shall complete the joint before he leaves the site.

- The contractor is responsible to ensure that the requirements are carried out by his jointer.

- The standard phase arrangement shall be observed when connecting up cables in the end boxes. The contractor shall ensure that the prescribed phase arrangement is at all times maintained on the external terminals of the end boxes.

- The jointer shall ensure before commencement that:

    - He has sufficient and suitable material to properly and efficiently complete the joint;

    - The joint chamber is dry;

    - All stones, loose ground, sticks, leaves etc. is removed from the joint chamber;

    - The walls and sides of the joint chamber is firm and free of loose ground, stones, gravel etc. which could fall into the chamber;

    - The necessary barriers are in place to keep water out of the joint chamber;

    - The necessary cover is provided over the joint chamber to keep unexpected rain out of the chamber and that enough light and ventilation is provided under the cover;

    - He has the necessary material to seal off the joint or termination when he has to discontinue jointing or terminating the cable due to unexpected storms or flooding of the chamber which makes it impossible to continue jointing or terminating the cable, irrespective of how far the work has commenced;

    - He has the necessary ground sheets to line the floor of the joint chamber;

    - The cable and other materials are dry, undamaged and in all respects suitable for jointing or terminating;

- His equipment and tools are at all times dry, clean and absolutely free of ground.

- The contractor shall supply such small termination materials that are not included in the termination or joint kits, such as crimping ferrules, yellow passivated steel nuts, bolts and washers.

- MV cables shall be phased before terminating onto the terminals of MV switchgear.

- All MV joints shall be labelled by means of a plastic or non-corrosive metallic tag which shall be wrapped and secured around the cable at the location of the joint. The identification label shall clearly state the Contractor's name, the jointer's initials and the date the joint was made. This shall be left visible for the Engineer to inspect and approve.

- The cores of the cables shall be jointed number to number or colour to colour. Phase conductors shall be terminated to correspond with the associated switchgear phase labelling as directed by the Engineer.

C3.5.1.11 Connection of Cable Conductors

- Only Stone-Stamcor or equivalent specification compression type lugs shall be used to terminate copper conductors. Lugs shall be crimped, using mechanical or pneumatic tools designed for this purpose, on condition that evidence is submitted that the method used complies with the performance requirements of BS 4579.

- Contact surfaces shall be thoroughly cleaned and smoothed and fixing bolts shall match the hole size of the lug.

- Cables that are connected to clamp type terminals where the clamping screws are not in direct contact with the conductor need not be lugged but the correct terminal size shall be used.

- Ferrules shall be used as far as possible where cable conductors are connected directly to equipment with screws against the conductor strands. When cutting away insulation from cable conductors to fit into lugs, care shall be taken not leave any strands exposed. Under no circumstances may any of the conductor strands be cut away to fit into lugs.

- All cables intended for future extensions, e.g., consumer connections and at township boundaries, shall be sealed with the aid of heat shrink type cable end caps, marked as per specification and properly indicated on the as built.

- The correct size end-cap shall be used for each cable and fitting shall be carried out strictly in accordance with the manufacturer's instructions.

C3.5.1.12 LV Cable Terminations

- All cable accessories shall be according to the cable manufacturer's recommendation.

- In the miniature substation and the distribution/metering kiosk, the armouring shall be bent back over the outer PVC sheath and a K-clamp shall clamp the cable and earth wire to a "unistrut" channel to support the cable end. Or in the case where a lead-in tube be used, the armouring shall be bent back over the outer diameter of the lead-in tube and a "hose-clamp" shall be used to fasten the armouring to the lead-in tube.

- For cables with copper earth conductors jointed to the armouring, special glands adhering to SABS 150 – 1970 shall be used.

- All cable glands shall be screwed and fixed to the gland-plate. A Neoprene or PVC shroud shall be used to seal the gland and sheath watertight. Glands shall be fitted according to gland manufacturer's specification. Only Pratley type glands and shrouds are acceptable or equivalent specification.

- Stone-Stamcor or equivalent specification compression type lugs shall be used to connect the cable cores to the equipment or busbars.

- Where cable cores are connected to terminals, the contact surfaces shall be clean and dry.

- Only compression type lugs shall be used where cables are connected directly to equipment.

- To ensure correct compression ratios the correct size of lugs shall be used for each size of conductor. Over or under crimped terminations shall be re-done for the cost of the contractor. Specially designed shaped dies with hydraulic crimping tools shall be used.

- Heat-shrink phase-coloured tubes shall be used to insulate all LV terminations. PVC tape shall not be accepted. The cost thereof must be included for in the unit rates for terminations.

- Termination shall mean all material and labour required to terminate conductors including but not limited to lugs, ferrules, clamps, glands etc.

C3.5.1.13 MV Cable Testing

- The following should be carried out, as required by City of Polokwane, strictly in accordance with SANS 6281- 4:2007:

    - Qualitative test for the presence of moisture in impregnated paper insulation;

    - Phasing test;

    - Voltage test on the cable sheath;

    - Insulation resistance test;

    - Conductor resistance test;

    - Capacitance test;

    - High-voltage test on the complete installation;

    - The engineer shall have the right to call for or to carry out any additional tests which may be necessary to prove that the requirements of the specification have been met. The contractor shall without delay assist with the conducting of these tests.

- All tests shall be conducted in the presence of the engineer and the costs thereof shall be included in the installation rates of the cables, joints and terminations.

- All tests shall be carried out in the presence of the City of Polokwane representative and sufficient notice shall be given prior to any tests being carried out.

- The contractor shall provide all the necessary test equipment and instruments required for the proper testing and commissioning of the complete installation, as specified elsewhere in this document.

- Calibration certificates of all the test instruments shall be made available on site and shall remain valid for the duration of the project.

C3.5.1.14 LV cable tests

- The following test should be carried out as required by City of Polokwane:

    - Continuity tests on all cable’s cores.

    - Continuity tests on all cables to prove the earthing of cable armouring, screening and earth conductors.

- All low voltage cables shall be megger-tested with the aid of a 500 V insulation-resistance tester to ensure a clean system, prior to commissioning. All circuit breakers shall be closed for the purpose of this test.

- Where parallel cables have been installed, or where ring feeds exist, the phase colours shall be verified to ensure correct connections.

- Underground service connection cables shall be positively identified by means of a megger test, prior to commissioning of the low voltage system.

C3.5.2 As-built Documentation

- The contractor shall submit the as-built documentation which, has been certified as correct by both the contractor and the engineer, on which complete information of the installation, as installed, is indicated after the completion of the installation and before the installation is handed over to the employer. This will include as-built drawings, all test certificates and site hand over certificates.

- The as-built drawings shall include dimensions from permanent reference points such as a road reserve center line or a stand boundary. The dimensions shown shall clearly indicate joints and capped cables relative to these reference points.

- Punch lists will be compiled and rectified before the handover certificate shall be issued.

- Upon handing-over of the network, all “as built” drawings (4 x hard copies and 1 x electronic copy in a geo-referenced DWG format and 1 x electronic copy in PDF format) must be submitted to City of Polokwane.

- City of Polokwane require the submission of a coordinate list for ALL electrical services and a priced bills of quantities for Polokwane Municipality’s asset register. The coordinates of the cables must be for all turning points.

- Upon handing-over of the network to City of Polokwane, where the network connects to the City’s electrical network, all as-built drawings, PCS file, and hand over certificates, shall be in the format required by City of Polokwane.

- Upon handing-over of the network, where the network connects to Eskom’s network, all as-built drawings, PCS file, and hand over certificates, shall be in the format required by Eskom.

C3.5.3 Aerial Bundle Conductors

- Low voltage overhead infrastructure shall be as specified in the pricing schedule for different size of cables three phase ABC with bare neutral as well as a 25mm² auxiliary streetlight core as per design specific.

- The LV network will be constructed street front on wooden poles that will be self-supporting, except where the design is for Eskom area. Then Eskom’s specifications and procedures will adhere.

- The ABC networks will be supplied from the mini substations by means of Cu cables. The ABC of this mixed technology feeder will be protected by means of a suitable sized circuit breaker mounted in the main LV compartment of the mini substation as per design specific.

- Overhead Aerial Bundled Conductor (ABC) will be used as distributors to each pole-mounted kiosk. ABC-aerial bundled conductors (supporting) complying with SANS 1418 shall be provided. The standard aluminium conductor sizes will be specified per project. These conductors will be protected by circuit breakers mounted inside mini substations and/or polemounted distribution kiosks and/or morsdorf fuses, as the design require, and they shall include an additional street lighting core where applicable as per design specific.

- The installation of the ABC will conform exactly to the manufacturer's requirements. The contractor must furthermore ensure that all prescribed installation equipment is in place before stringing commences.

- No through joints will be allowed in the conductor runs unless previously approved by the engineer. The contractor must optimize the installation of the material.

- Where any conductors are mounted against poles they must be firmly attached thereto with stainless steel strapping and protected against damage from the strap by a PVC sleeve.

- The stringing tension and/or sag required during tensioning must be as stipulated by the manufacturers and shall under no circumstances be exceeded.

- Where a cable connects onto the ABC where dissimilar metals are present, these terminations should be performed with the correct bimetal connectors.

- Strain and suspension hardware shall be secured to the structures in accordance with arrangements shown on the drawings and pigtail bolts and eye nuts shall be used throughout.

- Conductors shall be secured with PVC cable ties at each point of attachment as per the design.

- All split pins, security clips, locknuts or other locking devices shall be applied in their intended manner of use, so as to prevent uncoupling of the items in service due to vibration or any untoward reason.

- The workers shall plan and measure the LV ABC spans as such that no mid-span joints will be required.

- All left-overs on drums shall be measured and such drums shall be marked with length of unused conductors. This information shall then be used in the planning of ensuing work.

- Conductors shall be run out and tensioned in such a manner as to reduce contact with the ground or other obstruction to an absolute minimum. In particular, under no circumstances shall a conductor be allowed to touch or be dragged across stony ground, fences or other objects liable to damage the conductor insulation. This is especially important for ABC where mechanical damage of the insulation is unacceptable. The conductor shall not be allowed to rub on any part of the structure, but shall be placed in suitable aluminium jockey pulleys which shall be designed to impose the smallest possible restraint on the free movement of the conductor.

- An appropriate pulling sock and swivel shall be used during the erection process of ABC for pulling the cable bundle through the pulleys and appropriate come-along and lever hoists shall be used.

- Tensioning and sagging of conductors shall be made by means of suitable dynamometers, which shall be recalibrated if so directed and shall be used for the final regulation of the conductors to the correct sag.

- The necessary stringing/sag charts or data for aerial bundled conductors shall be applied to the conductor.

- End-caps shall be placed on all exposed ends of the ABC.

- The incorrect positioning of IPC's will not be accepted. Corrective action as a result thereof will be for the contractor's account and will be ruled on by the engineer. The contractor must make sure that the IPC is in the correct place and phase before the insulation is pierced.

C3.5.4 Service connection cable

- All service connections shall be done underground with 6mm² or 16mm² split concentric Saferdac or Airdac (where applicable) with two communication cores, for any changes City of Polokwane will inform the contractor.

- All service connections, in Eskom's area of supply, shall be done according to Eskom's standards and specifications.

- All service connections shall be installed against the wooden pole from the point where it exits the split meter box in a galvanised steel pipe, to below NGL.

- Service connections shall be by 16mm² airdac with 2 x pilot cores for split pre-paid metering connections, complying with NRS 062/1998. The cables will be protected by circuit breakers mounted inside meter boxes. Service connections are shown in the network design layout.

- The service cable shall be routed from the pole mounted protective structure, strapped down the wooden pole and into the ground. The cable will be planted at a depth of 800mm underground and routed into each stand. PVC cable sleeves shall be used for road crossings and paved driveways.

- A 2m galvanised steel kicker pipe, shall be planted at 800mm depth directly against the house. The kicker pipe shall be used for entry of the service cable into the building. The kicker pipe shall be grounded and isolated from any other building metal parts as per SANS 034 and SANS 10142.

- All LV cables shall be to SABS 1507 specification, bearing the SABS mark.

- Service connections shall be strapped in 4 X 50mm diameter galvanised steel protective pipes protruding 5 metres above ground, to the poles and buried in trenches from the poles to the respective residences.

C3.5.5 Service Connections & Metering

C3.5.5.1 Split Metering Box

- The split metering boxes will be supplied, installed, connected and earthed by contractor. The boxes will typically consist of but not limited to the following:

    - Earth bar;

    - Neutral bar bonded to the earth bar;

    - Circuit breakers;

    - All internal wiring including tails to connect to the ABC;

    - Pre-drilled gland holes fitted with compression glands;

    - Pole mounting brackets;

    - All electronic measures as is required by City of Polokwane.

- City of Polokwane reserve the right to supply the DIN rail split meters which must be installed by the contractor including any wiring required to complete the installation. The connection and balancing of the service connections must be as per the design. The contractor must make provision in the appropriate unit costs for all material and labour for a complete installation as per specification.

- All the service cable feeders from a split meter box shall be terminated and secured by means of compression glands supplied with the box.

- All unused holes in the gland plate of the box must be sealed off.

- All circuit breakers shall be marked with engraved, or as otherwise specified, labels mounted on the inside of the box above the corresponding circuit breaker bearing the stand number for identification.

- Split prepayment electricity meters with appropriate tamper proof seals will be used. Provision will be made for the supply of the Energy Management Unit (kWh) and the Customer Interface Unit (key pad / display unit) as well as ancillary fittings and connections.

- The Energy Management Unit (EMU) shall be installed inside the pole mounted meter box and the Customer Interface Unit (CIU) shall be installed inside the customers dwelling in the living room or as specified by design.

- The CIU shall be mounted on a meter plate and attached to the wall via DIN rails as. All cable and duct entries into house walls shall be restored after installation.

C3.5.5.2 Service Connection

- The contractor shall connect the consumers to the phase as indicated on the design drawing.

- Installation depth for the service cable shall be 800mm underground or overhead, as per design specific, and care shall be taken to ensure that sharp stones in the trench or backfill do not damage the cable. Should the presence of rock pose a danger to the said cable, a bedding layer shall be installed as described elsewhere.

- Service cables shall share cable trenches as far as possible.

- For houses already tubed and wired.

    - Owners of houses that are already tubed and wired must provide a valid COC before they will be connected to the supply.

    - The keypad and ready board may only be installed on an outside wall. It must be installed 1,5m above finished floor level and connected to the existing distribution board via the conduit and sleeves provided. Only expanding bolts may be used.

- Houses not wired internally.

- The keypad and ready board shall be installed at 1,5m above finished floor level with the service cable terminating directly onto the ready board and the communication cores onto the keypad. Only expanding bolts may be used.

- The service connection cable will be installed to a point on the outside wall ensuring the shortest possible cable length from there to the wooden pole. The cable shall, on the outside of the house, be installed in a 25mm galvanized steel conduit, fixed to the outside wall of the house with a minimum of three steel saddles. The conduit shall be provided with a 15-20° bend on the bottom section to easily facilitate the entry of the cable. The bend shall be made with fit for purpose equipment ensuring the diameter stays constant through the entire bend. Where the cable enters and exits the steel conduit it shall be protected with an appropriate protection preventing the cable from mechanical damage. In case of service connection in Eskom's area of supply, Eskom's standards and specifications shall apply.

- A neat hole, not exceeding 20mm diameter shall be drilled through the wall of the building. Chasing through walls shall not be allowed. Care must be taken not to damage any existing pipes in the wall. The service connection cable tail shall be pushed through the outside wall, with sufficient slack to terminate the cable on the terminals of the ready board. All drilled holes must be sealed on the in and outside after the installation of the cable to prevent the ingress of water, dust and insects.

- Expandable wall plugs shall be used to install the saddles.

- Horizontal running of the service cable on the outside of the building will not be allowed.
- The contractor will be responsible for the commissioning and issuing of a COC after connecting the supply cable to the ready board. The ready board should be supplied with:
    - 1 x 40A Earth leakage switch;
    - 1 x 20 A Single pole circuit breaker (5kA curve 2);
    - 1 X 10A Single pole circuit breaker (5 kA curve 2);
    - 2 x 16A Plug outlets;
    - 1 X 5A Plug outlet for light circuit;
    - 1 x Light switch;
    - 1 x Bulkhead luminaries and lamp;
    - Mounting material like rails and expandable wall plugs.
- The contractor shall make every effort to ensure that co-operation is achieved with locals to ensure that houses will be available and accessible on the intended day of installation of the service connection. The dates of installation will be communicated to the residents through the appointed CLO.
- The contractor shall provide all equipment, leads, apparatus and everything needed to test and commission the entire installation.
- Ready boards with test certificates from the manufacturer need not be tested except for functional testing, except in Polokwane Municipality's area of supply. The certificate of compliance shall be used for service connections in Polokwane Municipality's area of supply. Provision shall be made available for this in bills of quantities.
- All tests shall be properly documented by contractor and copies of which will be provided to the engineer.
- The contractor shall be responsible for making good of all items that were disturbed by the construction process i.e.:
    - Drilled lead-in holes in buildings;
    - Damages to fences, enclosures, road surfaces etc. brought about by the erection of structures and conductors;
    - The workers shall not be allowed to flatten fences temporarily;
    - The terrain of the site camp;
    - Excavations.
- The contractor shall be responsible for gathering the customer info in the electronic format required by City of Polokwane and submit it to be uploaded. The exact for the submission of the following particulars to City of Polokwane:
    - Latitude;
    - Longitude;
    - Name and Surname of occupant;
    - ID number occupant;
    - Cell number of occupant;

- Address of occupant;
- Name of village;
- Serial number of meter;
- Date of commissioning;
- CoC Date.

- The contractor shall be responsible for gathering the customer info in the electronic format required by Eskom and submit it to be uploaded. The exact for the submission of the following particulars to City of Polokwane:
  - Latitude;
  - Longitude;
  - Surname of occupant;
  - ID number occupant;
  - Address of occupant;
  - Name of village;
  - App. date;
  - Conn. date;
  - COC Date;
  - Start date;
  - Meter Badge number;
  - Transformer;
  - Pole number;
  - Language;
  - Township code;
  - Cell number;
  - EBC.

C3.5.6 Earthing

- The complete electrical distribution system shall be earthed in accordance with the specific requirements indicated in SANS 10292:2001.

- All earth resistance measurements specified, shall apply to dry weather conditions and where considered necessary; they shall be verified during the 12month retention period. The earth resistance in such cases shall not exceed 5 ohms. If this cannot be reached the earthing design must be adopted as specified in SANS 10292:2001.

- The contractor shall ensure that the neutral on the low voltage or secondary side of the transformer is connected to the earth busbar in the miniature substation by means of a 70mm² BCEW with the correct lugs and also that all metal framework including the metal enclosure of the ring main unit, is properly bonded.

- The neutral conductor of all low voltage primary feeder cables shall be bonded to earth at all distribution and/or meter boxes, etc.

- The contractor shall ensure that the framework and components of any metal enclosure as well as the armouring of low voltage cables is properly bonded to the earth terminal.

- Earthing will be done as follows:

    - Minisub earthing shall be done in accordance with City of Polokwane minisub specifications. The required earthing resistance reading of 5 Ω or less. The earthmat shall be connected by means of Cadweld or the molten welding process.

    - The Contractor shall before the trench is backfilled, conduct an earth resistivity test at the minisub location where representatives of City of Polokwane and the engineer are present. This shall be arranged at least 3 days in advance. The earth resistivity shall be measured, by way of the 20– 40m method on either side of the minisub.

    - Additional earthing will be installed at the ends of each ABC feeder as well as each house respectively.

    - Earthing tests for the final readings must be done in attendance and witnessed by both representatives of the City of Polokwane and engineer.

- Where called upon to provide earthing to a minisub transformer, the minisub shall be earthed by means of earth rods in addition to any earthmat present.

    - The earth rods and method of installation shall comply with the following requirements:

        - The earth rods shall be copper clad steel or stainless steel.

        - Copper clad earth rods shall comprise one piece, 16mm nominal diameter, 1,2m long copper welded rods made by the molten welding process with a steel core covered by a thick layer of copper thoroughly welded thereto so that an interlocking crystalline union bonds the two metals.

        - The copper coating shall be continuous over the cylindrical portion of the rods except that the ends need not be covered with copper. The thickness of the copper on the cylindrical portion of the rod shall average not less than 0,5mm. The rod when broken by successive bending shall show no seam, pits, slithers or separation of the copper from the steel.

        - The electrodes shall be supplied complete with a driving bolt for protecting the ends of the coupling whilst the electrode is being driven into the ground.

        - The rod driving technique shall follow accepted good practice eliminating excessive vibration and whipping.

        - As a provisional requirement, six (6) pegs 1,2m deep, 3 pegs on either side of the minisub, spaced 5m from each other, shall be installed at the minisub. They shall be installed as soon as the MV-trench is completed. Before the trench is backfilled, the earth resistivity shall be measured, and extra pegs shall be installed 5m apart until the required earthing resistance reading of 5 Ω or less is reached.

        - No payment will be made for extra excavations due to pegs having to be installed after closing of the trench.

        - The top end of these pegs shall be 800mm below ground level, and connected to the minisub earth bar by means of dedicated 70mm² stranded bare copper earth wires.

        - Connection at the rod shall be by means of the “Cadweld” process or by brazing.

- The neutral busbar of the minisub shall be bonded to the minisub earth bar by means of 70 mm² stranded copper.

- The Contractor shall conduct an earth resistivity test at the minisub location where representatives of the Local Supply Authority and the Engineer are present upon completion of all earthing. This shall be arranged at least 3 days in advance.

- An earlier test shall be conducted in the presence of the Engineer to indicate that the reading is acceptable.

- This reading should not exceed 5 Ω average measured 20 - 40m on either side of the minisub.

C3.5.7 Aerial Bundle Conductor Earthing

- Earth electrodes are to be installed as follows:
  - At the first pole of a branch from the minisub or pole mounted transformer;
  - At the last pole of the branch.
- The earth electrode is to be installed 5 m from the base of the pole and the top of the earth electrode is to be at least 800 mm below final ground level. A 35mm² Cu, black sheathed, conductor is to connect the earth electrode to the neutral of the ABC.

C3.5.8 Service Connection Earthing

- Each house must be provided with an earth electrode to achieve the target value independently from the system earth. The earth electrode must be connected to the ready board with a suitably rated earth conductor.

C3.5.9 General

- All earthing shall generally be done in accordance with City of Polokwane Specification.
- All earth conductors connected to earthing terminals shall be connected using lugs. The lugs shall be the correct size and shall properly soldered or crimped to the conductor ends.
- The non-current carrying metal parts of all electrical equipment (including kicker pipes) shall be earthed in accordance with the regulations.
- The Electrical Contractor shall perform earth resistance tests and should the measured earth resistance be greater than the values listed hereunder additional earthing shall be installed at the discretion and direction of the City of Polokwane.

  ABC Earth : 10 ohms

- These values refer to the individual earth connections at the various locations before interconnection to the rest of the earthing system by means of separated neutral and earth for City of Polokwane area of supply (SNE), and combined neutral and earth for Eskom area of supply (CNE).
- The Electrical Contractor shall submit with his Tender details of the proposed method of measurement of the earth resistance.
- The Electrical Contractor shall supply test certificates for all earth resistance values measured.
- The armouring of all cables shall be electrically bonded at one end only by means of cable glands.

C3.5.10 Stays

- LV stay rod to have a minimum failing load of 33kN.
- Holes for conventional stays may be dug by hand, augured by machine or dug with a back- actor.
- No stays shall be planted without the relevant stay plates fitted onto the stay rod.
- Steel stay wire shall be in accordance with IEC 60888:1987: Zinc-coated steel for stranded conductors supported by SABS 182-5: 1979: Conductors for overhead transmission lines. Zinc-coated steel wires for conductors and stays.
- Stay hole and stay to be assembled.
- Once the hole is dug, the front face of the lower step shall be undercut to accommodate the stay plate. An 80mm wide slot shall be cut in the steps at 45° to allow for the stay rod. This is absolutely essential as without this the stay rod will cut into the ground when tensioning or with a good rain and cause the pole to lean or possibly break.
- The stay plate shall be placed up against undisturbed soil on the pole side of the hole. The hole shall be backfilled and compacted/rammed in maximum 150mm layers.
- Stay rod to protrude 150mm above ground level.
- Stay rod diameter to be 12mm with a length of 1 500mm.
- Stay plate to be 300mm x 300mm and 6mm thick.
- Stay wire to be 3 x 3.35mm galvanized steel wire.
- Stay rods shall be install complete with the adjustable turnbuckles, thimbles and base plates provided therefore.
- Under no circumstances shall the stay rod be bent.
- Stay wires shall have attached to poles by means of stay grips or other approved means and the grip shall be prevented from sliding down the pole with tension bolts. The cross-arm shall not be used to prevent the stay grip from sliding down.
- All stays shall be finished off at stay wire terminations with (Band-it) metal straps to prevent loosening of such ends by hand.

C3.5.11 Strut poles

- The strut pole will match the length of the structure it supports.
- A fit for purpose strut bracket will be installed to connect the strut pole to the structure and should not jeopardize the integrity thereof.
- Strut pole to be assembled. The required soil anchors and stay plates must be included into the installation
- The strut pole must be provided with a danger sign and must be 3m above ground.
- The installing of a strut pole should not be restrictive on the movement of the home owners.
- Anti-Climbing Devices
    - Barbed two-strand double spiked wire shall be wrapped round the structures approximately 3m from the ground to prevent the climbing of poles where so required. The barbed wire shall be fixed in an approved manner and shall stretch over at least 1m pole length.

- Approved arrangements shall also be made on stays to prevent climbing.

C3.5.12 LV Aerial Bundled Conductor and Accessories

- ABC shall be the Supporting five (5) Core System with bare neutral to SABS 1418-1 and SABS 1418-2. The minimum clearance of ABC above road surfaces and residential driveways shall be 6 meters. Cable routes are as indicated in the network design layout.

- ABC shall be the Supporting five (4) Core System with bare neutral to SABS 1418-1 and SABS 1418-2. The minimum clearance of ABC above road surfaces and residential driveways shall be 6 meters. Cable routes are as indicated in the network design layout.

- Application of IPC:

  - Correct and manufacturer approved procedures as well as tools shall be used in the application of IPC's. Contractors are to pay particular attention to the use of appropriate clamps for Aluminium-to-Aluminium connections vs. bimetal connections. Duplicate connectors are required for the neutral conductor. A Technical Bulletin 00TB-036 has been attached to this document in Appendix I to indicate the correct procedure for the application of IPC's. The Eskom bulletin must be used as a guide with the procedure of the local supply authority taking precedence / higher priority.

- Fittings

  - All fittings shall be of the type approved by the bundle manufacturer for use with the cable. Strain clamps for ABC distribution cables shall allow for a maximum load of 15 kN.

  - Suspension clamps for aerial bundled conductor shall comply with NRS 018 and shall allow a maximum vertical load of 7 kN and shall be bolted to the poles using eye bolt assembly.

- Terminations

  - The insulation piercing connectors are to be as per City of Polokwane requirements (Amp type). Connections to pole mounted distribution boxes shall be made using 16mm² Cu XLPE insulated cables. The cables shall be connected to the cores of the ABC using insulation piercing connectors. Two separate insulation piercing connectors shall be used for the neutral dropper connection to the neutral conductor of the aerial bundled conductor.

  - The exposed ends of ABC shall be capped to effectively insulate them and protect the cable against ingress of moisture.

- Joints

  - No joints shall be allowed on ABC. Each branch shall consist of a single run of cable from the first to the last branch. Tee – off points are allowed.

- Labels

  - All cables terminated shall be labelled to designate the location of the other end of each cable, and its size and length, by means of 3,5mm lettering engraved onto a "Trafolite" label strapped to the cable with cable ties in a secure manner.

  - Where cables are laid before the equipment to be connected to it is erected, temporary labels are to be used. These temporary labels shall be mild steel corrosion proof metal or plastic labels, secured to the cable with cable ties. The information shall not be lost due to moisture or handling of the cable.

- Installation

    - The ABC shall be installed in accordance with the specifications and the manufacturer's recommendations.

    - The Contractor shall provide all the necessary tools and fittings for the installation and the installation shall be performed by qualified personnel using the specialised equipment recommended by the manufacturer.

    - The minimum bend radius of the bundle is to be respected at all times. Running-out blocks of adequate diameter shall be used to ensure this during installation.

    - The bundle is to be tensioned in accordance with the bundle manufacturer's tension and sag tables. Stay and tension tables to be included from manufacturer.

    - The Contractor shall state his experience in the installation of ABC. Should his experience in the opinion of City of Polokwane, be inadequate, the contractor shall employ an experienced ABC installation specialist to equip his crew with the necessary skills at no additional cost to the employer - City of Polokwane.

- Testing after Installation

    - A physical inspection of the installation shall be carried out to ensure compliance with the specification.

    - The following electrical tests shall be performed and the results submitted to the City of Polokwane:

    - A 500V (DC) Megger test shall be done between conductors and between each conductor and the earthed surroundings of the cable. The voltage shall be increased to the above value and maintained at this value for 2 minutes.

    - Checking of the phase connections to ensure that consistency of phase rotation is maintained.

    - The engineer will be given ample notice to arrange to witness the tests.

    - All cables to be installed by the Contractor shall be installed to the designated substation or outdoor kiosk location, with sufficient length of cable left coiled up and buried to permit subsequent termination by the municipal staff to the switchgear.

C3.5.13 Protective Structures / Kiosks

- The Electrical Contractor shall make provision to supply and pole mounted service boxes in accordance with NRS 032: 1993 - Service Distribution Boxes: Pole Mounted Types, should the employer choose not to supply from City of Polokwane stores. In the case that the employer supplies this equipment, the contractor shall be expected to provide rates for collection from City of Polokwane stores, temporary storage and installation only.

- The kiosks will be installed and connected by the appointed City of Polokwane supplier/contractor as necessary.

- The kiosks will be 3-, 6-, 9-, and 12-way electronic and tamper proof kiosks for root mounted meter kiosks. Dimensions for the 6-way pole mounted protective structure shall be 470mm height and 370 mm width, suitable for mounting on a pole as per manufacturer’s custom design for City of Polokwane specifications (POLE TOP ENCLOUSURES). The pole supplier shall be a City of Polokwane approved supplier.

- The meter boards shall be supplied by City of Polokwane, and installed by the contractor. Rates for the collection, temporary storage and installation must be provided. Additional rates for supply of City of Polokwane specification split pre-paid metering must be provided should the employer choose to procure them through the contractor.

- The distribution boxes shall be constructed from 3CR12 Stainless Steel and suited for outdoor use with a minimum IP54 rating for 3-, 6-, 9-, and 12-way meter kiosks and pole mounted distribution boxes.

- The pole mounted service boxes shall be constructed as follows:

    - Shall be manufactured from a light versatile synthetic durable thermoplastic with variable crystalline structure FIRE RETARDENT Polyethylene (LLDPE) using rotational moulding;

    - Enclosures to have and IP43 protective rating;

    - The design of the unit to be such that all external surfaces are “rounded” to prevent buckling;

    - Shall be rigidly moulded and have high impact resistance and dielectric strength;

    - LLDPE used must be chemically resistant and resistant to deterioration from prolonged contact with soil and/or moisture;

    - Must be resistant to abrasion and heat and specifically treated with stabilising additives to provide enhanced UV breakdown resistance;

    - Materials used must be free from blowholes and defects;

    - Two (2) x Stainless steel pole-mounting brackets shall be fitted;

    - Colouring:

        - Uv25L/G.

    - Doors & Hinges:

        - Doors to have a 20 x 20mm internal perimeter stiffener;
        - Danger labels on the door;
        - Doors must open at least 90 degrees where it can be “stay put” in the open position. Hinges will be an integral part of the moulding process;
        - No piano hinges will be accepted;
        - Stainless steel locking mechanism to be provided for locking;
        - All rivets, bolts, nuts, washers and set screws must be Stainless Steel.:

    - Bus-bars

        - Separate Earth & Neutral bars (linked) consisting of 6 x 6 mm copper including applicable amount of fitsels suited to enclosure size.

    - Din Rail:

        - Two lengths of 35mm perforated din rail to be fitted the width of the box.

    - Back Board:

        - 19 mm Shutter ply to be installed as backboard for mounting equipment.

    - A 40A, 5kA, curve 1 single phase MCB for each domestic consumer

    - Neutral and earth bars connected to each other by means of a removable 16mm² copper flexible strap bolted to both bars.

    - Mounting brackets

- Holes and glands in the base plate for the cable from the bundle, or the bundle as the case may be, and holes for the service cables. The service cable holes are each to be provided with removable blanks.

- All circuit breaker terminals are to be brass.

- All mounting screws, washers etc., to be brass or stainless steel. Neutral and earth bars are to be brass or tinned copper.

- Droppers from the aerial bundled conductor to the circuit breakers are to be black PVC insulated 16mm² copper conductor. Four single core droppers (3 phases and a neutral) are to be provided from the ABC to each distribution box. Droppers shall be colour coded with UV resistant heat shrink sleeving at both ends.

- Electronic functional capabilities of the kiosk must be such as to enable City of Polokwane to integrate the kiosks into a fully electronic system to be controlled from a control centre.

- Labelling

  - Each distribution box shall be labelled externally in 100mm high-stenciled black letters. The number shall be designated as per drawing.

  - All service cables shall be provided with plastic coloured tags or approved equal, fitted over the insulation of the live conductor below the circuit breaker showing the erf number in 6mm high letters. The colour of the tags shall be red, white or blue denoting, the phase of the service cable.

- Ready Boards

  - Fully wired and tested 40A Ready Board with meter mounting plate shall be supplied for each dwelling. The ready board shall be as per City of Polokwane specifications, and include provision for the following:

    - Lighting with E27 Light Socket mounted on top of ready board;

    - Earth Leakage main switch;

    - 2 x 40A MCB's;

    - Space for additional 4 x MCB's;

    - 2 x10 A Low Load Plugs;

    - 1 x 20 A High Load Plug;

    - 4 Rocker switches;

    - Security Lock-Pin;

    - The ready boards and prepayment meter's CUI will be fitted to the dwelling wall using Hilti screws.

- All dwellings will be issued with a Certificate of Compliance.

C3.5.14 Excavation

- The Electrical Contractor's rates for excavation shall include for the following:

  - Any shoring which may be required to prevent the collapse of trench walls before cable and conductor laying and danger tape laying are completed;

  - Any pumping which may be required to remove water from the trenches before cable and conductor laying and marker tape laying are complete;

- Topsoil shall be saved on excavation and replaced as topsoil after backfilling.

- The Electrical Contractor shall exercise care so as not to damage existing underground services. The Engineer will provide the Contractor with available drawings of existing underground services. Any damage caused by the Electrical Contractor shall be repaired by the Electrical Contractor at his own cost.

- Before the cables are laid, the bottom of the trench shall be covered with 50mm layer of earth which shall have been passed through a sieve and maximum mesh of 12mm. The Electrical Contractor shall lay the cables on the prepared bed carefully to avoid cuts and damage. Cable rollers shall be used.

- The trench shall be backfilled with clean builder's sand to provide 250mm (LV) or 350mm (MV) of cover as soon as possible after the cable has been laid. To prevent theft and possible damage, long lengths of cable shall not be left exposed in an open trench overnight. The trench shall be backfilled and compacted in layers to achieve 100% compaction.

- Water shall not be allowed to accumulate at any part of the works. The Electrical Contractor will therefor ensure that no cable laying is carried out until the trenches are free from water.

- All side channels, sumps or temporary excavations for de-watering purposes shall be filled in after use.

- Excavation of trenches shall be either by mechanical or manual means. Various trench widths and depths will be necessary.

- For any deviation from these depths, written permission shall be obtained from the Engineer before backfilling commences.

- Should large rocky or difficult areas be encountered, jackhammers or explosives may be utilised, as necessary. Due care and attention shall be given to the correct use of such methods to ensure the minimum danger to people and surrounding property. If explosives are to be used, the Engineer shall be notified at least 3 days in advance.

- Measurement of trenching executed shall be based on a linear meter measurement only. However, in the event of an exceptionally large excavation being necessary, the linear meter measurement will be replaced by a cubic meter measurement, and shall be decided upon by the Engineer.

- Trenches accommodating medium voltage, main low voltage and service cables are to be initially backfilled with a layer of selected backfill covering the cables to a depth of 200mm, of which 75mm shall be below the cables, remaining backfill is to be the previously excavated material.

- All excess large stones and rocks are to be removed and transported from the site, and dumped at a location to be indicated, which will be within a distance from the excavation site as stated in the Bill of Quantities.

- Cable marker tape is to be supplied and laid with all high voltage and main low voltage cables as part of this contract at a depth of 500mm below the surface. Cable marking tape shall be of yellow polyester material, 90mm wide, 25 microns thick, with a minimum tensile strength of 350N/100mm² longitudinally and 500N/100mm² laterally. Embossing referring to the presence of cables is required.

- Cable markers are to be supplied and placed along all MV cable routes at an approximate spacing of 50m, and, in any event, at all deviations in route, and at all MV joints. These shall be clearly marked to indicate a joint, route change or straight run. All road crossings shall also be marked with a cable marker.

- Contractors are to take note of and comply with the provisions of the Occupational Health and Safety Act: 1993 regarding excavations. Refer to the Safety Specification

accompanying this document and make proper allowance to comply with all its provisions.

- Excavations, cable laying and backfilling operations shall be programmed to minimise damage and inconvenience to people due to open trenches, holes, dumped soil and stones.

- All backfilling for trenches along sidewalks (pedestrian areas) shall be done in layers of 250mm, each layer dampened and compacted mechanically so as to achieve a 93 % MOD AASHTO density.

- All backfilling for trenches along trafficable areas (roads and property entrances) shall be done using stabilised C4 material in layers of 250mm, each layer dampened and compacted mechanically so as to achieve a 95 % MOD AASHTO density. A soil lab test shall be furnished for excavations at road crossings to prove compliance with this requirement.

- The amount of trenching to be carried out on a day shall be carefully assessed taking the availability of cable and workforce into account. No cable trenches may be open for more than two consecutive days.

- Furthermore, all vehicle access driveways shall be closed as soon as possible. Where necessary, temporary bridges of braced steel plates shall be placed over open trenches, where vehicles have to cross whilst the trench is open.

- It is a prime requirement of this contract that all open trenches be barricaded with steel stakes 1,2m high placed no more than 12m apart and plastic warning mesh/tape at all times to alert people of the danger. At night these measures shall be supplemented by placing rechargeable battery powered stroboscopic flashing red lanterns at intervals of no more than 20m at the top of the barricade stakes. These trenches shall be patrolled at night by guards / security guards, deploying at least one person per 100m of open trench.

- The Contractor's insurance on this contract shall, apart from other requirements, specifically cover the risks attached to excavations and open trenches.

- Due to the presence of services subject to damage through excavations, all excavations in built-up areas where a road is present or where services are known to exist, shall be carried out by hand. Where the risk to services is small (open veld, rudimentary roads) machine trenching may be employed.

C3.5.15 Backfill, Compaction and Surface Reinstatement

Underground cables shall be laid at a covered depth of 850mm below finished sidewalk level on a 50mm layer of soft bedding material and covered by another 100mm to 150mm bedding material, which will be hand tamped. Yellow PVC danger marking tape shall then be laid in the trenches. Backfilling, compaction and surface reinstatement shall be carried out by the Electrical Contractor.

C3.5.16 Sleeves

All cable sleeves for electrical cables shall be supplied by the electrical contractor (i.e. not by the municipality) and delivered and off-loaded on site. Sleeves shall be from heavy duty polyethylene and shall be SABS approved as complying with SANS 6138524. The conduit shall be rated for maximum cable operating temperatures of 70º C for PILC cables as per City of Polokwane cable criterion.

The number of sleeves per crossing shall be one per cable plus one additional as a spare. The following types of sleeves shall be supplied:

- All sleeves for road crossings shall be corrugated polyethylene type, 110mm diameter. Sleeves shall comply with SANS

- All sleeves for accommodation of pilot cables shall be 110mm diameter.

- Non-ferrous sleeves for single core cables

C3.5.17 Tests, Records and As-Built Drawings

The Engineer reserves the right to inspect any equipment being manufactured in terms of the Contract, and to require that up to 5% of such equipment be subjected to such tests as may be defined in writing by the Engineer prior to delivery to site of the said equipment. All such tests shall be carried out in the presence of the Engineer. Any waiving of this right does not relieve the Contractor of supplying and installing equipment in full accordance with the Contract and to the approval of the Engineer. In the event of inspection and testing being required the detail of this requirement will be conveyed in writing.

C3.5.18 Definitions

- **Commissioning procedures:** The documented method whereby the Electrical Contractor shall ensure that the installation is constructed in accordance with the requirements of the applicable manufacturers' specifications, the Engineer's specification and design, regulations and codes of practice.

- **Performance tests:** The physical testing in the manufacturing works or on site of the equipment or systems as needed to demonstrate the ability to reach the performance levels specified or required.

- **Acceptance tests:** The physical testing and inspection on site of the system or sub-system to show that it is supplied installed and operates generally in accordance with the specifications, design and regulations.

- **Ground:** Shall mean ground that can be removed by hand tools and shall include lose ground, clay, made-up ground, lose or soft, loose ouklip and any boulders less than 75mm in diameter.

- **Pick-able ground:** Shall mean rock that can be loosened by hand pick or crowbar and include hard shale, compact ouklip, stone of similar hardness and boulders exceeding 75mm in diameter but not exceeding 0.03m³ in volume.

- **Hard rock:** Shall mean granite, quartzitic sand stone, solid shale, slate and rock of similar or greater hardness and boulders exceeding 0.03m³ volume.

C3.5.19 Commissioning

- The Electrical Contractor shall supply, as part of the contract documentation and for approval before implementation, the commissioning procedures to be used on the project.

- The commissioning procedure will cover in detail all the major items of equipment and sub-systems of the works.

- The procedures must allow for the recording in writing and the signing off by a qualified person in terms of applicable regulations for any inspections or tests made in accordance with the procedures. The records and signed documents will form part of the as-built records.

C3.5.20 Performance Tests

- Where required in terms of the commissioning procedure, specification or an instruction, a supplier or Contractor shall carry out on site or at the manufacturer's premises, performance tests on selected equipment or portions of the works. Type test certificates in accordance with appropriate standard specifications will be accepted as performance tests unless otherwise specified.

- On-site performance tests will always be carried out on the following:

    - Voltage-withstand tests of all cabling, wiring and distribution boards.

- The mechanical operation and tripping and control of all LV circuit breakers and all HV switchgear.
- Earth continuity and resistance.
- The operating threshold of all earth leakage units.
- Polarity and phase rotation of three phase circuits.
- Rigidity of all fastenings.

- The results of all tests shall be recorded in writing by the Electrical Contractor and approved by the Engineer.
- Only a representative sample of performance tests on site will be witnessed.

C3.5.21 Acceptance Tests

Acceptance tests will be carried out in terms of the commissioning procedure and in particular the following:

- All switching procedures.
- Repetition of selected performance tests on a random basis.
- Operation of the most important control, protection and emergency systems.

On completion of acceptance tests, a test certificate shall be signed by the Contractor and taking- over authority to the effect that the tests specified on the certificate have been completed successfully.

A physical inspection of LV feeder installation shall be carried out to ensure compliance with the specification.

The following LV feeder electrical tests shall be performed and the results submitted to the engineer:

- A 500 V (DC) megger test shall be done between conductors and between each conductor and the earthed surroundings of the cable. The voltage shall be increased to the above value and maintained at this value for 2 minutes.
- Check the phase connections to ensure that consistency of phase rotation is maintained.

The engineer will be given ample notice to arrange to witness the tests.

C3.5.22 Responsibility of Electrical Contractor

- The Electrical Contractor shall provide not less than seven-days-notice in writing of all performance and acceptance tests so that they may be witnessed if considered necessary.
- Notwithstanding the attendance at or failure to attend performance or acceptance tests by any witness, the Electrical Contractor is responsible for the correctness of the installation in terms of the manufacturers' requirements, the design and specification and applicable regulations and for the preparation of a written record of the tests and test results.

C3.5.23 As-Built Records

- The Contractor shall supply, after approval of the works, three bound sets of operating instructions, parts lists and maintenance manuals covering all items of equipment forming part of the contract.

- The Contractor shall supply two bound copies of the records of all inspections and tests carried out in accordance with the commissioning procedures, performance tests and acceptance tests, not later than two weeks after completion of the acceptance tests.

- Upon handing-over of the network, all “as built” drawings (4 x hard copies and 1 x electronic copy in a geo-referenced DWG format and 1 x electronic copy in PDF format) must be submitted to City of Polokwane.

- City of Polokwane require the submission of a coordinate list for ALL electrical services and a priced bills of quantities for Polokwane Municipality’s asset register. The coordinates of the cables must be for all turning points.

C3.5.24 Protection of Natural Vegetation

The Contractor shall exercise proper care not to destroy, damage remove any natural trees and vegetation, except where he is instructed or given permission to do so in cases where it is unavoidable. No trunks or plants shall be allowed to run over areas not specifically set aside for this purpose.

Contractor shall take care not to have veld fire developing from his site. He shall be responsible for any losses and claim which could arise from veld fires starting due to his negligence. In the case of any veld fires threatening the site, he shall give all assistance to protect the site against such fires from elsewhere. The Contractor shall at his own expense do all the protection as described and shall not be specially paid for any fencing or fire breaks, etc.

- Ebony (Diospyros mespilformis)
- Baobab (Adansonia digitate)
- Wild Fig (Ficus Capensis)
- Cape Ash (Ekebergia Capensis)

C3.5.25 Power Line Structure Materials (Additional Information)

C3.5.25.1 Intermediate (0) as per City of Polokwane

ITEM	MV INTERMEDIATE ASSENBLY STAGGERED VERTICAL 0		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	11.5
2	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	0.25
3	BUCKLE-STRAP 12MM S/ST C254	ea	1
4	STRAPPING ALMN 7.6 X 1.30MM THK	ea	0.03
5	CLIP BONDING 22D HOLE GALV	ea	3
6	INSUL LINE POST 22KV 4KN 22mm/kV CAPPED HVH	ea	3
7	SPINDLE PIN INSUL LONG M20X300. 2.5-6 REGULAR SHANK	ea	3
8	WRAPLOCK TIE /TIE-SIDE GROOVE BARE MINK M/NECK	ea	3
9	12M WOODEN POLE	ea	1
10	RODS THREADED 600MM FOR FOX EARTHWIRE	ea	1
11	EYE, NUTS	ea	2
12	NUTS 20MM	ea	2

C3.5.25.2 T-Off from Intermediate Structure

ITEM	MV T-OFF ASSEMBLY FROM INTERMEDIATE VERTICAL		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	11.5
2	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	0.25
3	BUCKLE-STRAP 12MM S/ST C254	ea	1
4	SHACKLE-D STRAIGHT H/BACK PIN 70KN	ea	3
5	BOLT-EYE GALV M29X250MM	ea	3
6	INSUL L/ROD 22KV 40KN 450C/L 22C LM	ea	3
7	TAP CONN-T-OFF MAIN 9.0-15.0 TAP 9.0-15.0	ea	3
8	CLAMP STRAIN PISTOL 3B 70KN 6-15MM	ea	3
9	DEAD END P/FORM AL/ALLOY MINK COND	ea	3
10	STRAPPING ALMN 7.6 X 1.30MM THK	m	0.03
11	12M WOODEN POLE	ea	1
12	BOLT-EYE GALV M29X250MM FOR EARTH CONDUCTOR	ea	1
13	TAP CONN-T-OFF MAIN 9.0-15.0 TAP 9.0-15.0	ea	2

C3.5.25.3 MEDIUM ANGLE STRUCTURE VERTICAL 1-30

ITEM	MV STRAIN ASSEMBLY VERTICAL 1-30		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	11.5
2	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	2
3	CLIP BONDING 22D HOLE GALV	ea	3
4	SHACKLE-D STRAIGHT H/BACK PIN 70KN	ea	6
5	BOLT-EYE GALV M29X250MM	ea	3
6	NUT-EYE 70KN M20X 2-5-6H BOLT	ea	3
7	INSUL LINE POST 22KV 4KN 22mm/kV CAPPED HVH	ea	3
8	INSUL L/ROD 22KV 40KN 450C/L 22C LM	ea	6
9	CLAMP THIMBLE CLEVIS A/ALLOY 4OKN	ea	6
10	SPINDLE PIN INSUL LONG M20X300. 2.5-6 REGULAR SHANK	ea	3
12	JOINT NON-TEN AL 9.0-15.0 D I/C	ea	3
13	CLAMP STRAIN PISTOL 3B 70KN 6-15 MM	ea	6
14	DEAD END P/FORM AL/ALLOY MINK COND	ea	6
15	WRAPLOCK TIE/TIE-SIDE GROOVE BARE MINK M/NECK	ea	3
16	12M WOODEN POLE	ea	1

C3.5.25.4 LARGE ANGLE STRUCTURE

ITEM	MV STRAIN ASSEMBLY VERTICAL 30-90		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	11.5
2	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	2
3	CLIP BONDING 22D HOLE GALV	ea	3
4	SHACKLE-D STRAIGHT H/BACK PIN 70KN	ea	6
5	BOLT-EYE GALV M29X250MM	ea	3
6	INSUL L/ROD 22KV 40KN 450C/L 22C LM	ea	6
7	CLAMP THIMBLE CLEVIS A/ALLOY 4OKN	ea	6
8	JOINT NON-TEN AL 9.0-15.0 D I/C	ea	3
9	CLAMP STRAIN PISTOL 3B 70KN 6-15 MM	ea	6
10	DEAD END P/FORM AL/ALLOY MINK COND	ea	6

C3.5.25.5 TERMINAL STRUCTURE

ITEM	MV TERMINAL ASSEMBLY STRAIN VERTICAL		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	11.5
2	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	2
3	CLIP BONDING 22D HOLE GALV	ea	3
4	SHACKLE-D STRAIGHT H/BACK PIN 70KN	ea	3
5	BOLT-EYE GALV M29X250MM	ea	3
6	INSUL L/ROD 22KV 40KN 450C/L 22C LM	ea	3
7	CLAMP STRAIN PISTOL 3B 70KN 6-15 MM	ea	3
8	DEAD END P/FORM AL/ALLOY MINK COND	ea	3
9	12M WOODEN POLE	ea	1
10	BOLT-EYE GALV M29X250MM	ea	1
11	PIGTAIL BOLT	ea	1
12	WADGE CLAMP	ea	1

C3.5.25.6 DISTRIBUTION TRANSFORMER STAR POINT EARTHING

ITEM	DISTRIBUTION TRANSFORMER EARTHING HT AND LT STAR POINT		
1	LINE TAP DIST TRANSFORMER BRASS TINNED M12	ea	4
2	STAPLE GALV WIRE 40MM LG X 4MM W	ea	0.4
3	CLAMP EARTHROD 16MM ROD PH/BRONZE	ea	8
4	LUG CRIMP CU 16-0SQ X 12-0 F/H N/I	ea	4
5	FERRULE CRIMP CU 70.0 SQ ROND	ea	2
7	EARTH ROD CU 1.5M X 16MM DIA THREADLESS	ea	8
	CONDUCTOR CU ELECTRICAL EARTH 7/2.12 SQ BARE	m	50
8	CONDUCTOR CU ELECTRICAL EARTH 7/2.12 SQ BARE	m	40

C3.5.25.7 DISTRIBUTION TRANSFORMER FUSE ASSEMBLY STRUCTURE

ITEM	11-22KV 200A FUSE LINKS 2.5M WOODEN CROSSARM		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	2.5
2	ROD THREADED GALV M20XM350 WASH+NUT	ea	6
3	ROD THREADED GALV M20XM450 WASH+NUT	ea	1
4	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	0.03
5	BRACKET-L 22KV FISE CUT/OUT WOOD WITH MOUNT BOLT	ea	3
6	CLIP BONDING 22D HOLE GALV	ea	5
7	XARM-WOOD 2.5M X 140-160 CRS 55MPA	ea	1
8	INSUL LINE POST 22KV 4KN 25mm/kV CAPPED	ea	3
9	STRAP TIE ST. GALV910 X 50 X 6	ea	2
10	FUSE CUT/OUT ASSY. L/BRK 22KV	ea	3
11	TAP CONN-T-OFF MAIN 9.0-15.0 TAP 9.0-15.0	ea	3
12	FUSE HLDR, L/BRK 22kV 100A FUSE CUT OUT	ea	3

C3.5.25.8 SECTIONAL LINKS ASSEMBLY

ITEM	11-22KV 200A FUSE LINKS 2.5M WOODEN CROSSARM		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	2.5
2	ROD THREADED GALV M20XM350 WASH+NUT	ea	6
3	ROD THREADED GALV M20XM450 WASH+NUT	ea	1
4	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	0.03
5	BRACKET-L 22KV FISE CUT/OUT WOOD WITH MOUNT BOLT	ea	3
6	CLIP BONDING 22D HOLE GALV	ea	5
7	XARM-WOOD 2.5M X 140-160 CRS 55MPA	ea	1
8	INSUL LINE POST 22KV 4KN 25mm/kV CAPPED	ea	3
9	STRAP TIE ST. GALV910 X 50 X 6	ea	2
10	FUSE CUT/OUT ASSY. L/BRK 22KV	ea	3
11	TAP CONN-T-OFF MAIN 9.0-15.0 TAP 9.0-15.0	ea	3
12	LUG BI/METAL 9.0-15.0 M12 0DEG	ea	6
13	LINKS, SOLID L/BRK 22kV FOR FUSE C/OUT	ea	3
14	TIE TOP GRVE MINK B/MINK	ea	3
15	CONDUCTOR MINK	ea	

C3.5.25.9 SHARING INTERMEDIATE AND TERMINAL (0-60) AS PER CITY OF POLOKWANE

ITEM	MV INTERMEDIATE ASSENBLY STAGGERED VERTICAL 0-60		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	11.5
2	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	0.25
3	BUCKLE-STRAP 12MM S/ST C254	ea	1
4	CLIP BONDING 22D HOLE GALV	ea	3
5	INSUL LINE POST 22KV 4KN 22mm/kV CAPPED HVH	ea	3
6	SPINDLE PIN INSUL LONG M20X300. 2.5-6 REGULAR SHANK	ea	3
7	WRAPLOCK TIE /TIE-SIDE GROOVE BARE MINK M/NECK	ea	3
8	RODS THREADED 600MM FOR FOX EARTHWIRE	ea	1
9	STRAPPING ALMN 7.6 X 1.30MM THK	ea	0.03
10	12M WOODEN POLE	ea	1
11	EYE, NUTS	ea	2
12	NUTS 20MM	ea	2
13	PIGTAIL BOLT AND NUT FOR ABC	ea	1
14	SUSPENSION CLAMP FOR ABC	ea	1
15	CABLE TIE PVC	ea	3
16	S-HOOK TWISTED, 10	ea	1

C3.5.25.10 SHARING ANGLE STRUCTURE (60-90) AS PER CITY OF POLOKWANE

ITEM	MV STRAIN ASSEMBLY VERTICAL 30-90		
1	WIRE STRAND-ST 3X3.35 1100MPa 100m roll	m	11.5
2	STAPLE GALV WIRE 40MM LONG X 4MM W	kg	2
3	CLIP BONDING 22D HOLE GALV		3
4	SHACKLE-D STRAIGHT H/BACK PIN 70KN	ea	6
5	BOLT-EYE GALV M29X250MM	ea	3
6	INSUL L/ROD 22KV 40KN 450C/L 22C LM	ea	6
7	CLAMP THIMBLE CLEVIS A/ALLOY 4OKN	ea	6
8	JOINT NON-TEN AL 9.0-15.0 D I/C	ea	3
9	CLAMP STRAIN PISTOL 3B 70KN 6-15 MM	es	6
10	DEAD END P/FORM AL/ALLOY MINK COND	ea	6
11	12M WOODEN POLE	ea	1
12	BOLT-EYE GALV M29X250MM	ea	1
13	WADGE CLAMPS	ea	2
14	PIGTAIL BOLT	ea	2

C3.5.25.11 POWER LINE CROSSING FOR MINK TO MINK AND HARE TO MINK AS PER CITY OF POLOKWANE

ITEM	MV INTERMEDIATE ASSENBLY STAGGERED VERTICAL 0		
1	TAP CONN-T-OFF MAIN 7.0-15.0 TAP 9.0-15.0	ea	6

C3.5.25.12 TRANSFORMER INSTALLATION STRUCTURE H POLE

ITEM	MV TRANSFORMER 200KVA STRUCTURE INSTALLATION H-POLE		
1	BOLT HEX GALV M10 X 40	ea	6
2	ROD THREADED GALV. M20 x450(STUD)	ea	2
3	ROD THREADED GALV.M20 X 250	ea	3
4	BUCKLE STRAPPING 12mm ST. STEEL	ea	6
5	BRACKET METER GALV 3 PHASE BOX	ea	1
6	STRAPPING 12x7.5mm ST. STEEL (ROLL)	ea	0.20
7	L-BRACKET FUSE CUT-OUT ASSY. (WOOD X-ARM)	ea	3
8	CROSS-ARM WOOD 2.5m	ea	1
9	SURGE ARRESTOR M/0XIDE 6.0kV 10kA	ea	1
10	FUSE CUTOUT CHANGE 22kV	ea	3
12	CLAMP EARTH SPIKE 16mm ROD COPPER	ea	8
13	LUG CRIMPING COPPER120mm2 _12 HOLE	ea	8
14	LUG CRIMPING COPPER 70mm2-10mm HOLE	ea	3
15	LUG CRIMPING COPPER 25mm2 _14 HOLE	ea	2
16	CONDUIT STEEL 20mm GALV	ea	1
17	CABLE GLAND NO 5	ea	1
18	CABLE SHROUD NO 5	ea	1
19	EARTH SPIKE COPPER 1500x_16mm DIAMETER	ea	8
20	200KVA DISTRIBUTION BOX AS PER ORDER	ea	1
21	CABLE TIE STRAP 200mm LG BLACK	ea	10
22	SUPPORT TRANSFORMER (2 POLE)	ea	1
23	CABLE 120mm2 PVC 600/1000V X 4 CORE CU	m	15
24	CONDUCTOR HDC 25mm2 7/2.12(m)	m	40
25	CONDUCTOR 25mm2 COPPER STRANDED PV COAT	m	30
26	SIGN DANGER/GEVAAR/INGOZI 195 X 125mm	ea	1
27	LUG/AL/CU 10.82 MINK 16mm2 HOLE	ea	3
28	TAPP CONNECTOR TEE-OFF	ea	3
29	LUG AL/CU 13.94 HARE 16mm HOLE	ea	3
30	TAP CONNECTOR TEE-OFF	ea	3
31	200KVA 3 PHASE 11kV/420V TRANSFORMER	ea	1
32	WIRE BRAIDING FLEXIBLE 29 x 2.5mm(m)	m	1.8
33	SURGE ARRESTOR DIST.TYPE 11kV 10kA	ea	3
34	13m WOODEN POLE	ea	1
35	9m x 189-219mm DIAMETER WOODEN POLE	ea	1

C3.5.26 TECHNICAL SCHEDULE

ITEM	DESCRIPTION	SCHEDULE A Requirements and site particulars	SCHEDDULE B Equipment guarantees and technical particulars (To be completed by Tenderer)
1.1	TECHNICAL SCHEDULE APPROVAL OF EQUIPMENT Tenders shall only offer equipment of an approved manufacturer as listed under each heading below as part of their main offer. Equipment that is equal or similar to the specified equipment in operation and general appearance shall only be offered as an alternative offer to the main offer. Alternative offer shall not be included or priced in the tender document, but all information and price of alternative offer shall be supplied in an addendum or covering letter. Where an alternate offer is subjected, tenders shall in their main tender supply rates and tariffs for materials as specified below. Where such alternative equipment is offered subject to final approval, the tender shall submit detailed information to enable the Engineer to evaluate the equipment with the tenderer. If the information is not adequate to satisfy the Engineer of the full mechanical and electrical properties of the equipment, such an alternative offer will not be considered.		

ITEM	DESCRIPTION	SCHEDULE A Requirements and site particulars	SCHEDDULE B Equipment guarantees and technical particulars (To be completed by Tenderer)
	DESIGN PARAMETERS		
	The tenderer shall detail the manufacturer's specification for the relevant minimum parameters only where it differs from the parameters as supplied below.		
	STAYS AND ACCESSORIES		
	Approved Manufacturers:		
	Eberhardt – Martin		
	Cullinan Electric		
	Stranding size of stay wire MV	7/4.0	Yes/No
	Standing size wire of stay wire LV	7/3.2	Yes/No
	Nominal Breaking Load MV	97kN	……….kN
	Nominal Breaking Load LV		
	Stay Insulator required	Yes	
	Stay insulator Manufacture: Cullinan		
	Stay rod dimensions		
	Length	2400mm	………..mm
	Diameter	20mm	…………mm
	Thread length	300mm	…………mm
	Mass per unit	9kg	…………..kg

ITEM	DESCRIPTION	SCHEDULE A Requirements and site particulars	SCHEDDULE B Equipment guarantees and technical particulars (To be completed by Tenderer)
	Stay box plate dimensions		
	Area	610x 610mm	……..mm
	Plate thickness	6mm	……..mm
	Mass	18.6kg	……kg
	Washers dimensions		
	Area	150 x 150mm	…….mm
	Thickness	6mm	……..mm
	Mass	1kg	……kg
	Stay plate and washers bitumen dipped	Yes	Yes/No
	Delivery of Complete stay		…….wks

ITEM	DESCRIPTION	SCHEDULE A Requirements and site particulars	SCHEDDULE B Equipment guarantees and technical particulars (To be completed by Tenderer)
	CONDUCTORS WITH POLOKWANE MARK		
	Approved Manufacturer's:		
	Huletts Aluminium	Yes	Yes/No
	Haggie Rand	Yes	Yes/No
	Medium Voltage Conductors		
	Type: Aluminum conductor steel reinforced.		Yes/No
	Code name: "Hare" (ASCR) for MV	6/1/4.72	……
	Code name: "Mink" (ASCR) for MV	6/1/3.66	……
	Mass: "Hare" (ASCR) for MV	427kg/km	……
	Mass: "Mink" (ASCR) for MV	257kg/km	……
	Ultimate tensile strength: "Hare" (ASCR) for MV	36.7kN	……
	Ultimate tensile strength: "Mink" (ASCR) for MV	21.9kN	……
	Max working tension	@ -5^{o}C + wind 8.8kN.	……
	Low Voltage Conductor with Polokwane Mark		……
	Aerial Bundled Conductor	ABC	……
	System Voltage:	600/1000V	……
	Aluminum ABC:	3xCore+Neutral + Street light.	……
	Specification:	SABS 1418	……
	Earth wire conductor with Polokwane Mark		……
	Type: Aluminum conductor steel reinforced.	6/1/2.79	……
	Code name:	"Fox" (ASCR)	……
	Mass:	149kg/km	……kg/km
	Ultimate tensile strength	13.2kN	……..kN
	Max working tension	@ -5^{o}C + wind 8, 8kN	……kN
	Phase reactance a proposed spacing from top of pole.		
	White	150mm	……
	Blue	600mm	……
	Red	1050mm	……
	Earth Wire	1650mm	……

ITEM	DESCRIPTION	SCHEDULE A Requirements and site particulars	SCHEDDULE B Equipment guarantees and technical particulars (To be completed by Tenderer)
	11kV MEDIUM VOLTAGE LINE STRUCTURES **Type of Construction Configuration**		
	– Intermediate (0-30)	Single Pole	……
		Vertical Staggered configuration.	……..
		With two earth Wire support	……
	-Medium strain structure (30-60)	Single Pole	…….
		Vertical Staggered Configuration	…….
		With Earth Wire	…….
	-Large Strain Angle Structure (60-90)	Single Pole	……
		Vertical Staggered configuration.	……
		With Earth Wire	……
	-Terminal small Angle structure (0)	Single Pole	……
		Vertical Staggered	……
		With two terminated earth wire	……
	-Transformer installed on Terminal structure and Inline Structure as per City of Polokwane Specification.	On H Pole 13m and 9m Transformer platform 2.5m Cross-arm 2.5m Fuse links cross-arm Two earth wire terminated Low voltage Distribution Box	

ITEM	DESCRIPTION	SCHEDULE A Requirements and site particulars	SCHEDDULE B Equipment guarantees and technical particulars (To be completed by Tenderer)
	11kV MEDIUM VOLTAGE LINE STRUCTURES (Continued)		
	Materials		
	Poles	Wood	……..
	Post Insulator	Porcelain	……
	Long rod Insulator	Cyclophatic	……
	Cross-arm for links	Wood	……
	Transformer platform	Galv Steel	……
	Dimensions		
	-Intermediate pole with low voltage only	9m	……m
	-Medium angel strain structure with LV only	9m	……m
	-Intermediate with MV/LV	11m	……m
	-All structure with MV/LV Sharing	11m	……m.
	-All intermediate pole with medium voltage only	11m	……m.
	-Medium Angle strain structure	11m	……m..
	Pole Top Diameter		
	-Intermediate	180-199mm	……m
	-Angle Strain	200-219mm	……m
	-Terminal	200-219mm	……m
	-Transformer structure poles	200-219mm	……m
	-Low Voltage poles	160.179mm	……m
	-Cross-arm	120-160mm	……m
	Class of Wooden poles	55MPa	……55MPa
	Conductors and poles Delivery		……wks

ITEM	DESCRIPTION	SCHEDULE A Requirements and site particulars	SCHEDDULE B Equipment guarantees and technical particulars (To be completed by Tenderer)
	Insulators 22kV		
	-Intermediate structures	Porcelain	……..
	-Angle strain structures	Cyclophatic	……
	-Inline strain structures	Cyclophatic	…….
	-Terminal strain structures	Cyclophatic	……
	Number of Insulators		
	Intermediate	1	…….
	Angle Strain	1	…….
	Terminal strain	1	……
	Insulators Delivery		……wks
	Expulsion Fuse –switch Units		
	GEC		……....Yes/No
	Westinghouse		……Yes/No
	Service Voltage	12KV	……..kV
	Mounting	Single Wooden Cross-arm	……wks
	Surge Arrestors:		
	Approved Manufacturers		
	GEC		Yes/No
	Westinghouse		Yes/No
	Surge Arrestors Delivery		……..wks
	Approval manufacturer		
	Beka		Yes/No

ITEM	DESCRIPTION	SCHEDULE A Requirements and site particulars	SCHEDDULE B Equipment guarantees and technical particulars (To be completed by Tenderer)
	Pole Mounted Transformer Approved manufacturers ABB Desta Power Engineers GEC Transformer Delivery		 Yes/No Yes/No Yes/No Yes/No ……wks

C3.5.27 LIST OF DRAWINGS

DRAWING NO.	REV.	TITLE
D-DT-0332	LATEST	POLE PLANTING DEPTH – WOOD AND CONCRETE
D-DT-0351	LATEST	STRUT ASSEMBLY – SWIVEL 11M AND 12M POLES
D-DT-0343	LATEST	FLYING STAY ASSEMBLY
D-DT-1711	LATEST	INTERMEDIATE (1-10) DEG DEVIATION
D-DT-1714	LATEST	STRAIN (1-30) DEG DEVIATION
D-DT-1710	LATEST	STAGGERED VERTICAL INTERMEDIATE
D-DT-1810	LATEST	TAKE-OFF-VERTICAL
D-DT-1715	LATEST	VERTICAL STRAIN (30-90) DEG DEVIATION
D-DT-0341	LATEST	MV OR LV STAY RETICULATION ASSEMBLY
D-DT-1713	LATEST	VERTICAL STRAIN 0 DEG DEVIATION
D-DT-1147	LATEST	ABC STRAIN ASSEMBLY (60-90
D-DT-1148	LATEST	
D-DT-1146	LATEST	
D-DT-1149	LATEST	
D-DT-1151	LATEST	
D-DT-1153	LATEST	
D-DT-1154	LATEST	
D-DT-1155	LATEST	
D-DT-1156	LATEST	
D-DT-1157	LATEST	
D-DT-1159	LATEST	
D-DT-1165	LATEST	
D-DT-1167	LATEST	
D-DT-1168	LATEST	
D-DT-3055	LATEST	
D-DT-1860	LATEST	
D-DT-0627	LATEST	
D-DT-1159	LATEST	
D-DT-0309	LATEST	
D-DT-1850	LATEST	
D-DT-3145	LATEST	
D-DT-3055	LATEST	

C3.5.28 Procurement

3.4.1. All materials procured MUST be brand new, in good order and must comply with SABS and other standards mentioned in specifications.

3.4.2. The works shall be executed in accordance with the Preferential Procurement Policy Framework Act and Preferential Procurement Regulation 2017.

3.4.3. The Contractor shall without delay enter into contact with the subcontractor based on their accepted quotation. The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.

C3.5.29 INTERNATIONAL, NATIONAL AND ESKOM STANDARDS

THE *CONTRACTOR* IS TO TAKE NOTE OF THE STANDARDS AND SPECIFICATIONS AS LISTED IN THE TABLE BELOW.

Specification No.	TITLE / DESCRIPTION OF STANDARD AND SPECIFICATION	DATE OF REVISION	TICK IF PUBLICLY AVAILABLE
SCSASA AM0	**DISTRIBUTION STANDARD PART 0: STRUCTURES, DEFINITIONS, ABBREVIATIONS AND EXEMPTIONS.**	**REV 1**	✔
SCSPVAB F3	**DISTRIBUTION STANDARD PART 0: OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS TO BE MET BY CONTRACTORS AND SUB-CONTRACTORS EMPLOYED BY POLOKWANE MUNICIPALITY AND/OR ESKOM.**	**REV 1**	✔
SCSASA AL9	**DISTRIBUTION STANDARD PART 2: MV AND LV RETICULATION EARTHING.**	**REV 2**	✔
SCSASA AM2	**DISTRIBUTION STANDARD PART 3: LV OVERHEAD RETICULATION.**	**REV 4**	✔
SCSAGA AF5	**DISTRIBUTION STANDARD PART 3: LV PROTECTION PHILOSOPHY.**	**REV 1**	✔
SCSASA AP2	**DISTRIBUTION STANDARD PART 4: 22KV OVERHEAD RETICULATION UP TO HARE/OAK CONDUCTOR.**	**REV 0**	✔
SCSASA AS3	**DISTRIBUTION STANDARD PART 8: ELECTRIFICATION**	**REV 2**	✔
SCSASA BZ1	**HANDING OVER DOCUMENTATION: MAJOR/MINOR RETICULATION ELECTRIFICATION**	**REV 0**	✔

Notes to Table:

- This is a list of all the specifications and other documentation referenced or described as being part of the Works Information.
- The list includes publicly available standard specifications which may not be attached, but which are part of the Works Information.
- Variations to standard specifications are also listed as applicable and are attached.
- A detailed description of each part of the *works*, including a Bill of Quantities, is given in this document.
- The contractor must be in possession (on site) of the latest Distribution Standards, Parts 2, 3, 4, 8 and 9. Failure to adhere to this requirement may lead to the termination of this contract.

C3.5.30 TABLE: REFERENCE TO NATIONAL AND INTERNATIONAL STANDARDS

TOPIC	DOCUMENT
Aerial Bundled Conductor	SABS 1418, PART 1 TO 3 DTS 0105 (NRS 018)
BOLTS AND NUTS	
BOLTS, EYE	SABS 135
BUSBARS	SABS 178 SABS 1195
CNE	
	SABS 1268:1979
CABLES, INSTALLATION OF ELECTRIC	NRS 016:1991
CABLES, LOW VOLTAGE	SABS 0198:1988
CABLES, MEDIUM VOLTAGE	NRS 012:1991
CABLE (HOUSE SERVICE SPLIT CONCENTRIC)	NRS 013:1991
CABLE GLANDS	DTS 0084 (NRS 017)
CABLE TIES	SABS 808
CLAMPS (STRAIN FOR SPLIT CONCENTRIC)	DTS 0086 (NRS 020)
CLAMPS (SUSPENSION FOR SPLIT CONCENTRIC)	
CLAMPS STRAIN	
CLEVIS TONGUE ADAPTOR (TWISTED)	SABS 178
CLIPS FOR WIRING	SABS 178
COMPRESSION FITTINGS	
CONCRETE POLES	BS 3288 PART 1 (TESTS) SABS 470
CONDUCTOR ACSR/AAC AND AAAC	DTS 0106
CONDUCTOR, COVERED	SABS 182
CONDUIT SADDLES	DTS 0087 (NRS 021)
CONDUIT	
CONNECTORS, LUG/TERMINATION	
CONNECTORS, INSULATION PIERCING	NRS 028 EDF 6737/HN 33 E60 (MAIN CABLE 350 mm^2 TO 70 mm^2, TAKEOFF 6 mm^2 TO 35mm^2
CONNECTORS, MID-SPAN/FULL TENSION	
CONNECTORS, MID-SPAN/NO TENSION	
CONNECTORS	
CROSS ARM BRACES	SABS 0162 SABS 1200 H/HA
CROSS ARMS	
D FUSES	SABS 0162 SABS 1200 H/HA
EARTHING RODS	DTS 0048 REV 0 SABS 1063 SABS 0199
ELECTRICITY DISPENSER	
FITTINGS (STRAIN AND SUSPENSION)	
ABC	SABS 1524-1
FUSE HOLDER	NRS 009-1
FUSES	DTS 0105 (NRS 018) SABS 172

C3.5.31 TABLE: REFERENCE TO NATIONAL AND INTERNATIONAL STANDARDS

TOPIC	DOCUMENT
GALVANIZING	SABS 763:1988 SABS 935
HARNESS WIRING	
INSULATOR HARDWARE	IEC/NWS 1536
INSULATOR SPINDLE	DTS 0092
ISOLATORS	SABS 0162 SABS 1200 H/HA
LINE CONSTRUCTION	NWS 1512
LINKS TRILINKS	IEC/NWS 1536
LINKS, GANGED 3 PHASE (ISOLATORS)	IEC/NWS 1536
LINKS, PULL STICK (KNIFE LINKS)	IEC/NWS 1536
LINKS, SINGLE POLE "HUKLINKS"	IEC/NWS 1536
LONG ROD INSULATORS	DTS 0092
MINIATURE CIRCUIT BREAKERS OHASA ACT (1993) AND ITS REGULATIONS AND AMENDMENTS	SABS 156
POLE TOP SERVICE BOX	DTS 0104 (NRS 032)
POST INSULATORS	DTS 0092
PREFORMED TENSION WRAPS	SABS 178
PREFORMED TIES	
READY BOARDS	DTS 0085 (NRS 019)
RETICULATION LV	DTS 0090 (NRS 023)
ROAD CROSSING STANDARD	DTS0060
SAFETY ON CONSTRUCTION SITES	NWS 1058
SERVICE BOX	DTS 0104 (NRS 032)
STAINLESS STEEL STRAPS AND BUCKLES	
STAY ASSEMBLIES	BS 16
STAY ATTACHMENT BRACKETS	SABS 0162
STAY INSULATORS	
STAY WIRES	SABS 182, PART 5
SURFIX WIRING	SABS 1507
Surge Diverters	NWS 1108
SYMBOLIC SAFETY SIGNS	SABS 1186:1978
TRANSMISSION LINE HARDWARE	NWS 1827
WASHERS	SABS 135
WIRE, PVC COVERED	SABS 182
WIRE ROPE GRIPS	BS 462
WOOD POLES, PINE GUM	SABS 753 SABS 754

C3.5.32 TABLE: GUIDELINES AND RECOMMENDED PRACTICES

TITLE	DOCUMENT
OVERHEAD RETICULATION: RECOMMENDED PRACTICE FOR LOW-COST URBAN RETICULATION	NRS 023: 1991 (DTS 0090)
ELECTRIFICATION STANDARD: VOLUMES 1 & 2.	
CODE OF PRACTICE FOR THE APPLICATION OF CNE ON LOW VOLTAGE DISTRIBUTION SYSTEMS.	NRS 016: 1991 (DTS 0103)
POWER LINE CROSSINGS OF PROCLAIMED ROADS, RAILWAY LINES, TRAMWAYS AND IMPORTANT COMMUNICATION LINES.	DTS 0060 Z
CODE OF PRACTICE FOR THE JOINT USE OF STRUCTURES FOR POWER AND TELECOMMUNICATION LINES.	NRS 043 OF 1997

C3.5.33 Constraints on how the Contractor Provides the Works

Some of the construction work will be inside the premises of customer. The Contractor must allow for the work to be performed inside these premises. The Contractor must also allow for outages in order to connect to the existing lines.

C3.5.34 Requirements for the programme

The Contractor must provide, if successful the Project manager with a construction programme within one week after adjudication of the contract, indicating the planned methodology of achieving completion the works within the required contract period.

Reporting and invoice requirements are as follows:

a) A Weekly Report

i. Executive summary (typical one to two paragraphs).
ii. Physical progress on all aspects of the project on each Friday of the week before 12:00.
iii. Performances to date.
iv. Problems experienced.
v. Priorities for the next two weeks.
vi. Corrective actions necessary and needed.

b) Monthly EPWP Report

i. Physical progress on all aspects of the project on the 3rd day of each month before 12:00.

c) Monthly OHS Report

i. Physical progress on all aspects of the project on the 3rd day of each month before 12:00.

d) Invoices

i. The contract number, invoice number, VAT registration number (if applicable), banking details and the Employer's VAT registration number must be indicated on each invoice.
ii. A breakdown commensurate with the "prices" is shown on each invoice.
iii. The Employer accepts only original invoices.
iv. The Tax Invoice must reach the Project Manager from Polokwane Municipality NOT later than the 20th of each month. If the 20th day falls on a weekend, the invoice must be submitted on the previous Friday.

POLOKWANE MUNICIPALITY
Coherent Health & SafetySpecifications

PROJECT NAME: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS.

PROJECT NUMBER: PM23-25/26

FOREWORD

These health & safety specifications have been compiled in terms of the Occupational Health& Safety Act no. 85 of 1993 and Construction Regulations of 7 February 2014 as amended. Itmust be clear that this document is a management tool and should be used by the Principal Contractor and Contractors to comply with the Act and regulations.

Should there be any contradiction between this document and the Act; the Act must takepreference except where explicitly stated.

Similarly, where this document is silent on a specific health & safety requirement, the Act mustbe used as the minimum requirement.

Should you be unclear about anything set out in this document, please contact this office.These specifications are site specific and include all works to be done by the principal contractor. The principal contractor will be responsible for all the work on site.

Every endeavour has been made to address the most critical aspects relating to Health and Safety issues to assist contractors in adequately providing for Health and Safety of employeeson site. However, the Principal Contractor is required to ensure they stay compliant with statutory requirements and construction programs and processes and include such aspects intheir Health and Safety file.

COHERENT HEALTH AND SAFETY SPECIFICATIONS FOR

THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS.

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1. INTRODUCTION AND BACKGROUND

1.1. Background to the Health and Safety Specifications

The Construction Regulations (February 2014) places the onus on the Client to prepare coherent health & safety specifications, highlighting risks not successfully eliminated during design. The Client also has the opportunity to set the tone and standard of occupational health & safety on the construction site.

1.2. Responsibility and Accountability

It is imperative to understand the process of determining legal accountability, as the OHS-Act is the only criminal Act still administered by the Department of Labour. It assumes that the CEO is overall accountable even though he may delegate some of his responsibilities. This principal is entrenched in Section 37(1) of the Act and copied below for your benefit. This is generally referred to as the REASONABLE MAN TEST. SECTION 37: Acts or omissions by employees or Mandatories.

Gazette 37305 shall specifically apply to all persons involved in the construction workpertaining to this project.

“Purpose of the Act” To provide for the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establishan advisory council for occupational health and safety; and to provide for matters connected therewith.

“Agent” means a competent person who acts as a representative for a Polokwane Municipality.

“Polokwane Municipality” means any person for whom construction work is performed.

"Construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site.

"Construction site" means a workplace where construction work is being performed.

"Construction supervisor" means a competent person responsible for supervising construction activities on a construction site.

"Construction work" means any work in connection with:

a) The construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or 6
b) The construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

“Contractor” means an employer who performs construction work.

"Designer" means:

a) A competent person who
   - Prepares a design.
   - Checks and approves a design.
   - Arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or Designs temporary work, including its components.
b) An architect or engineer contributing to or having overall responsibility for a design.
c) A building services engineer designing details for fixed plant.
d) A surveyor specifying articles or drawing up specifications.
e) A contractor carrying out design work as part of a design and building project; or an interior designer, shopfitter, or landscape architect.

“Health and Safety File” means a file, or other record containing the information by the Construction Regulations.

“Health and Safety Plan” means a site, activity or project specific documented plan in accordance with the Polokwane Municipality 's health and safety specification.

“Health and Safety Specification” means a site, activity or project specific document prepared by the Polokwane Municipality pertaining to all health and safety requirements related to construction work.

“Method Statement” means a document detailing the key activities to be performed to reduce as reasonably as practicable the hazards identified in any risk assessment.

"Principal contractor" means an employer appointed by the Polokwane Municipality to perform construction work.

"Risk Assessment" means a program to determine any risk associated with any hazard at a construction site, to identify the steps needed to be taken to remove, reduce or control such hazard.

Abbreviations:

GMR: General Machinery Regulations

OHS Act: Occupational Health & Safety Act. Act 85 of 1993: Construction Regulation 2014

ORHVS: Operating Regulations for High Voltage Systems PPE: Personal Protective Equipment

2. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

2.1 ROLES

Polokwane Municipality / Agent

a) Prepare a baseline risk assessment and issue a health and safety specification to the Principal Contractor, Designer and include the specificationin tender documentation.
b) The Polokwane Municipality or the appointed Polokwane Municipality Agent will appoint each Principal Contractor for this project or phase/section of the project in writing for assuming the role of Principal Contractor as intended by the ConstructionRegulations.
c) The Polokwane Municipality or the appointed Polokwane Municipality Agent shalldiscuss, negotiate, and approve the contents of the specified project health andsafety plan submitted by the Principal and Sub Contractor.
d) The Polokwane Municipality or his Agent will take reasonable steps to ensure thatthe health and safety plan of the Principle and Sub Contractor is correctly implemented and maintained. Monthly audits shall be conducted to monitor the compliance.
e) In the event of design changes the Polokwane Municipality or the appointedAgent on his behalf will ensure that enough resources will be provided to implement the work safely.
f) The Polokwane Municipality or his appointed Agent on his behalf will prevent thePrincipal Contractor and/or the Contractor from commencing or continuing with construction work should the Principal Contractor and/or the Contractor at any stage in the execution of the works be found to:
g) ***have failed to have complied with any of the administrative measures required by the Construction Regulations in preparation for the construction project or any physical preparations necessary in terms of the Act;***

have failed to implement or maintain their health and safety plan;

have executed construction work which is not in accordance with their health and safety plan;

have acted in any way which may pose a threat to the health and safety of any person(s) present on the site of the works or in its vicinity, irrespective of him/them being employed or legitimately on the site of the works or in its vicinity.

Designer

a) Must consider the health and safety specifications of the Polokwane Municipality.
b) Before the tender process, the designer must make available a report to the Polokwane Municipality about:

- All the relevant health and safety information about the design of the relevantstructure that might affect the pricing of the construction work.
- The geotechnical -science aspects, where appropriate.
- The loading that the structure is design to withstand.

c) Inform the Polokwane Municipality in writing of any known or anticipated dangers or hazards related to the project.
d) Make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered.
e) During the design consider the hazards relating to any subsequent maintenance to be performed with the minimum risk.
f) During the design stage cognizance of ergonomic design principals must be applied to minimize ergonomic related hazards in all phases of the life cycle of a structure.

2.2 Implementation of the Health and Safety Specifications (Drafting of the coherent Health & Safety Plan)

These health & safety specifications document forms an integral part of the contract, and the Principal Contractor is expected to use it when compiling its project-specific coherent health & safety plan. The Principal Contractor must forward a copy of these specifications to all Contractors at their bidding stage so that they can in turn prepare coherent health & safety plans relating to their operations.

3. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM ELEMENTS

3.1 *Scope of the Project*

These Specifications set out the requirements for eliminating or if this is not possible, for minimising as far as reasonably practicable, the risk of incidents and injuries occurring at Polokwane Municipality. This document covers work to be undertaken of the project and sets out the rules and procedures for engagement on the project. The scope also addresses legal compliance, Polokwane Municipality standards, hazard identification and risk assessment, risk control, and the promotion of a health and safety culture amongst those working on the project. The health &safety specifications also make provision for the protection of those persons other than employees.

3.2 The Extent of the works:

The contract consists of the following:

a) 11kV Overhead reticulation.
Surveying and pegging of Medium Voltage route to supply all transformers.
Digging of all holes for 11m, 12m and stay assemblies for Medium Voltages as per layout drawing.
Planting pole at 500mm of stand boundary and plumbing of all poles stay them with stay assembly and flying stays.
Compact all poles with local soil materials or import materials.
Address all poles as type of required poles on the specific pole hole.
String the Mink Conductor and for 11kV voltage system and Fox for earth wire running under 3 Phase Mink conductors on vertical staggered configuration.

b) 420V Overhead reticulation:

Survey and pegging of Low Voltage route to supply all stands.
Digging of all holes for 9m and stays assembly, strut poles assembly for Low voltage as per layout drawing.
Planting all poles at 500mm from stands boundary of each stand and plant stay assembly and strut assemble to avoid stands gate.
Compact all poles with local soil materials or import materials House and bulk services connection where specified.
Address all poles as type of required poles on the specific pole hole.
String the Aerial Bundle Conductor as per Manufacture specification together with Polokwane

3.3 Application

This specifications document is a legal compliance document compiled in terms of the OHS Act & Construction Regulations 2014 and is therefore binding. The document must be read in conjunction with other relevant legislation.

3.4 Definitions

The definitions as listed in the OHS Act 85/1993 and Construction Regulations (February 2014) shall apply.

3.5 Minimum Administrative Requirements

1.5.1. Notification of Intention to Commence Construction Work

The Principal Contractor must notify the Provincial Director of the Department ofLabour in writing before construction work commences. A copy of this notification must be held in the Principal Contractor's health & safety file on site.The fax transmission slip will serve as proof of notification.

See attached **Annexure "F"**

1.5.2. Assignment of the Principal Contractor's / Contractors' Responsible Persons to supervise and Co-ordinate Health and Safety on Site

The Principal Contractor and all Contractors must make supervisory appointments as well as other relevant appointments in writing (as stipulated by the OHS Act and Construction Regulations 2014). See attached **Annexure 'B'** for more detail on what health & safety management appointments are relevant on this project.

1.5.3. Competence of the Principal Contractor's / Contractors' Appointed Competent Persons

The Principal Contractor and Contractors' competent persons for the various risk management portfolios must fulfil the criteria as stipulated in terms of the definition 'Competent' in accordance with the Construction Regulations (February 2014).

1.5.4. Compensation for Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The Principal Contractor must have in its possession a letter of good standing issued by its Compensation Assuror as proof of registration. Contractors must also hold proof of workman's compensation assurance registration in the form of a letter of good standing and forward a copy to the Principal Contractor before they begin work on site. Contractors must always be in good standing while carrying out work on site.

1.5.5. Health and Safety Organogram

Including all appointed risk management competent persons. In cases where appointments have not yet been made, the organogram shall reflect the intended positions.

The organogram must be updated when there are changes in the Site Management Structure and dated accordingly. The organogram merely serves as a quick reference to who is responsible for what risk portfolio in what area.

1.5.6. Preliminary Hazard Identification and Risk Assessments, Progress Hazard Identification and Risk Assessments Reviews.

The Principal Contractor must cause preliminary hazard identification and risk assessment to be performed under the leadership of a competent person before commencement of construction work. On this project detailed task- specific risk assessments based on the proposed sequence of work (method of work) must be compiled. Generic risk assessments will not be accepted.

The assessed risks, together with written safe work procedures for the 'medium & high-risk' rated activities must form part of the coherent site-specific health and safety plan submitted for approval by House of Safety. The risk assessments must include:

a) A list of hazards identified as well as potentially hazardous tasks;
b) The risks which may result based on the list of hazards and tasks;
c) A set of safe work procedures to be implemented with the aim of eliminating or if this is not possible, reducing and/or controlling the risks as far as reasonably practicable to ALARP (as low as reasonably practicable);

d) A monitoring and review procedure of the risk assessments as they change, i.e. how will the risk assessments be reviewed, when will they be reviewedand by whom.

The Principal Contractor must ensure that all Contractors inform, instruct and train their workers regarding any hazards, the associated risks and the related safe work procedures to be implemented before any work commences and thereafter at regular intervals as the risks change and as new risks develop. This training should be carried out in the form of toolbox health & safety talks. Contractors must conduct their own toolbox talks and submit proof of these talks in the form of attendance registers to the Principal Contractor at least every two weeks. Every worker on site must undergo such toolbox safety talks with the attendance registers kept in the Principal Contractor's safety file.
Contractors must conduct their own hazard identifications and risk assessments specific to their operations and forward a copy to the Principal Contractor.
The Principal Contractor when required must report on the status of these Contractor risk assessments to the Polokwane Municipality i.e. at audits.

1.5.7. General Record Keeping

The Principal Contractor and all Contractors must keep and maintain all the necessary Health and Safety records to demonstrate compliance with these Coherent Specifications, the OHS Act 85/1993, and the Construction Regulations (February 2014). The Principal Contractor must also ensure that all records of incidents/injuries, emergency procedures, training, planned maintenance inspections, monthly contractor audits, etc. are kept in the health & safety file(s) held in the site office. The Principal Contractor must ensure that every Contractor keeps its own health & safety file, maintains the file, and makes it available on request (the file must include the Contractor's health & safety plan and all relevant records). Such 'Contractor safety files' must be audited by the Principal Contractor monthly with audit reports kept as proof.

1.5.8. Injury / Incident Reporting and Investigation

Injuries are to be categorised into first aid; medical; disabling (lost day); and fatal. When reporting injuries to the Polokwane Municipality, these categories must be used. The Principal Contractor must investigate all injuries. All Contractors must report injuries to the Principal Contractor immediately and the Principal Contractor must inform the Polokwane Municipality immediately. All incidents reportable in terms of the provisions of Section 24 of the OHS Act must be reported to the local Dept. of Labour in the prescribed manner.

1.5.9. Consolidation of Health & Safety Documentation

It is the duty of the Principal Contractor to ensure that all documentation required to be kept or generated during the construction phase is consolidated into one set of documents that must be handed over to the Polokwane Municipality upon completion of the construction work. This consolidated safety file(s) should include instructions from the design team that will be required for the continued safe operation and maintenance of the new structure(s).

1.5.10. Offences and Penalties

Penalties may be imposed on the Principal Contractor and Contractors for ongoing non-compliance with the provisions of the Polokwane Municipality 's coherent health & safety specifications, the Principal Contractor's coherent health & safety plan, site health & safety procedures and rules. Non- compliances identified during safety agent audits and visits will be categorised into one of three levels based on severity. These will be as follows: Life threatening situation - a prohibition order will be issued by means of a written instruction in the site instruction book or an explanation in an audit report. This activity must be seized immediately, and corrective measures taken. Serious injury possible - a contravention notice will be issued with a time frame for compliance stipulated. Minor or no injury may result - an improvement notice will be issued. The corrective measures stipulated in the audit report must be taken. The methodology used to decide the above levels will be causally linked to the risk assessments of the Principal Contractor and

contractors, Polokwane Municipality Standards. The decision of the safety Agent will be final.

3.6 Principal Contractors, Contractors and Sub-contractors

1.6.1. Principal Contractor's and Contractors' Requirements

The Principal Contractor must ensure that all Contractors appointed by them comply with these Specifications, the Principal coherent health & safety plan as well as the OHS Act, Construction Regulations (February 2014), and other relevant legislation that may relate to the activities directly or indirectly. A Contractor, when appointing other Contractors as 'Sub-contractors', shall mutatis mutandis ensure compliance as if it was the Principal Contractor.

The Principal Contractor may only allow a Contractor to begin work on site after receiving a coherent health & safety plan which must include a project specific hazard identification, risk assessments and safety measures. The Principal Contractor must test competency and finally approve his sub - contractor coherent site-specific health and safety plan. The Principal Contractor must audit each of its contractors monthly, with audit reports kept in the health & safety file on site. The audit must include an administrative assessment as well as a physical inspection of the contractor's site activities. The Principal Contractor must stop any Contractor from carrying out construction work that is not in accordance with the Principal Contractor's and/or Contractor's health & safety plan or if there is an immediate threat to the health and safety of persons.

The Principal Contractor shall take all reasonable steps necessary to ensure co-operation between all contractors to enable each of those contractors to comply with the provisions of the Construction Regulations;

The Principal Contractor shall take all reasonable steps to ensure that each contractor's coherent health and safety plan is implemented and maintained on the construction site: Provided that the steps taken shall include periodic audits at intervals mutually agreed upon between the Principal Contractor and contractors, but at least once every month;

The Principal Contractor must ensure that where changes are brought about to the design and construction, that sufficient health and safety information and appropriate resources are made available to contractors to allow them to execute the work safely;

The Principal Contractor must ensure that every contractor is registered and in good standing with a recognised compensation fund or with a licensed compensation insurer prior to work commencing on site;

The Principal Contractor must ensure that potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process;

The Principal Contractor shall discuss and negotiate with the contractor the contents of the coherent health and safety plan and shall finally approve that plan for implementation;

The Principal Contractor shall hand over a consolidated health and safety file to the Polokwane Municipality upon completion of the construction work and shall include a record of all drawings, designs, materials used and other similar information concerning the completed structure;

The Principal Contractor may only appoint a contractor to perform construction work when such Principal Contractor is reasonably satisfied that the contractor he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely and that the contractor is an approved Polokwane Municipality contractor.

1.6.2. Principal Contractor / Contractor Competency Assessment

The Principal Contractor must be reasonably satisfied that the contractors it intends to appoint have the necessary competencies and resources to safely conduct the work they

will be appointed for. This should be established at tender stage and before appointments are made. One of the preferred ways of determining whether a contractor is competent is to make sure the contractor is an accredited contractor for Polokwane Municipality. Once the contractor is appointed, but before it begins work on site a site- specific safety plan must be discussed and negotiated with the Principal Contractor. Such safety plan must be approved for implementation by the Principal Contractor.

The Principal Contractor and Contractors should submit the following documentation for perusal and verification by the Polokwane Municipality and Principal Contractor respectively:

- Coherent health & safety plan as compiled for this project; (including Risk assessments, safe work procedures, fall protection plan, PTW Issuer/PTW Holder certificates
- Management Structure as envisaged at tender (organogram);
- Letter of Good Standing with the Compensation Commissioner or FEM;
- Proof of health & safety training and other related training; (CV and certificates) Legislative appointment letters
- Notification of Construction work; (proof notification was done)

1.6.3. Pricing for Occupational Health & Safety Compliance All parties bidding to do work on this construction project must ensure that they have made provision for the cost of complying with this Specifications document as well as with the OHS Act and incorporated Regulations as a minimum requirement in their tender documentation. It must also be taken into consideration that time is money, which implies that sufficient time must be allowed for the implementation of the minimum OHS standards. No additional claims will be entertained at a later stage should a compliance requirement be prescribed in the OHS Act, incorporated regulations or in this Specifications document.

1.6.4. Contractors' Coherent Health & Safety Plans [Construction Regulations 7]

1. Introduction:

The Construction Regulations (2014) aims to improve overall management and co-ordination of Health, Safety and Welfare throughout the Construction Phase and reduce the large number of serious and fatal injuries and cases of ill health, which occur every year in the Construction Industry.

In terms of the Construction Regulations (2014), the Principal Contractor is required to develop a Health and Safety Plan before work commences on site and review it throughout the Construction Phase. The degree of detail required in the Health and Safety Plan and the time and effort in preparing it should be in proportion to the nature, size and level of Health and Safety risks involved in the project. Projects involving minimal risks will call for simple, straightforward plans. Large projects or those involving significant risks such as this project will need much more detail.

2. What should the construction health & safety plan cover?

The Construction Health and Safety Plan should set out the arrangements for ensuring the Health and Safety of everyone carrying out the construction work as well as all other persons who may be affected by it. The index of this plan must be in line with Annexure:

1.6.5. Communication and Management of the work

The Principal Contractor must indicate in its health and safety management plan that it has made provision for the following:

a) Management structure and responsibilities
b) Health and Safety goals for the project and arrangements for monitoring and review of Health and Safety performance i.e. safety meetings; contractor meetings; risk assessment review, etc.

c) Arrangement for:

i. Regular liaison between parties on site i.e. meetings
ii. Consultation with the work force i.e. toolbox talks
iii. The exchange of design information between the Polokwane Municipality, designers, and Contractors on site
iv. Selection and control of Contractors i.e. selection criteria; inspections; audits, etc.
v. Site health & safety induction and onsite training i.e. toolbox talks
vi. Welfare facilities, first aid, emergency planning and fire prevention strategy
vii. The reporting and investigation of injuries and incidents including near misses what the intended system will be
viii. The production, approval and review of risk assessments, safe work procedures and method statements and how does the company's risk assessment system work.

d) Site specific rules and procedures.

3.7 Polokwane Municipality identified Hazards and Potentially Hazardous Situations

See attachment.

3.7.1. Other possible risks you need to consider.

1. Existing services
2. Interface with the public
3. Hazardous chemical such as solvents, cleaning agents, cement, fuels, oils, epoxies, etc.
4. Site security and access control issues
5. Relocation and protection of existing services
6. Finishing trades

3.7.2. Unforeseeable Hazards

The Principal Contractor must immediately notify Contractors as well as the Polokwane Municipality, in writing, of any hazardous or potentially hazardoussituations that may arise during the performance of construction activities so that the necessary precautions may be taken before such work begins.

3.8 Site Operational Requirements

3.8.1. Health and Safety Representative(s)

The Principal Contractor and all Contractors must ensure that Health and Safety Representative(s) are appointed under consultation with the employees. The H&S representatives must be competent to carry out their functions. The appointments must be in writing. The Health and Safety Representatives should carry out monthly inspections, keep records of the inspections and report all findings to the Responsible Person or safety officer forthwith and at monthly health & safety committee meetings. At least one Health & safety representatives are required by all Employers on site.

3.8.2. Health and Safety Committees

The Principal Contractor must ensure that project health and safety committee meetings are held monthly with minutes kept. Meetings must be chaired by the Principal Contractor's Responsible Person [CR 7(1) person]. All Contractors' Responsible Persons and Health & Safety Representatives must attend the Principal Contractor's monthly health & safety meetings. The Principal Contractor's appointed supervisors must also attend health & safety meetings. The following topics must be tabled at meetings: management appointments and risk management portfolios; sub-contractor legal compliance issues; injuries and incidents; hazards and risk assessments (present and foreseen); safety procedures; method statements for upcoming activities; planned

inspections and registers/record keeping, etc. The committee chairperson must sign off and date the minutes.

3.8.3. Health and Safety Training

3.8.3.1. Induction

The Principal Contractor must ensure that all site personnel including all sub-contractors undergo the agreed health & safety induction training session held and managed by the P/Contractor before any worker starts work on the project. A record of attendance must be kept in the health & safety file. Workers must carry proof of inductions on their person while on site i.e. identification passport cards or like be agreed.

3.8.3.2. Awareness

The Principal Contractor must ensure that, on site, periodic toolbox health & safety talks take place at least once every two weeks. All site personnel including all sub-contractors must attend safety talks at such intervals and keep proof thereof. These talks should deal with risks relevant to the construction work at hand i.e. they should be based on the job-specific risk assessments and safe work procedures. Records of attendance must be kept in the contractor's health & safety file. All contractors' employees must attend safety awareness toolbox talks carried out by their supervisors; the attendance registers must be copied to the Principal Contractor together with information on the information discussed at the session.

3.8.3.3. Competence

All competent persons must have the knowledge, experience, training, and qualifications specific to the work they have been appointed to supervise, control and/or carry out. This must be assessed on a regular basis e.g. training, evaluation, and periodic audits by the Polokwane Municipality, progress meetings, etc. The Principal Contractor is responsible to ensure that Competent Contractors are appointed to carry out construction work on site.

3.8.4. Health & Safety Audits, Monitoring and Reporting

The Principal Contractor is obligated to conduct monthly audits on all Contractors appointed by it and keep audit reports in its health & safety file. Contractors must audit their sub-contractors and keep records of these audits in their health & safety files, made available on request. The Polokwane Municipality / Agent will conduct monthly audits on the Principal Contractors' safety management plan.

3.8.5. Emergency Procedures

The procedure must detail the response procedures including the following key elements:

- List of key competent personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the specific types ofemergencies;
- Evacuation procedures: including routes and exits to be available on adrawing.
- Emergency procedure(s) must include, but shall not be limited to fire; spills; injury to employees; damage to material / equipment / plant; use of hazardous substances; bomb threats; major incidents/injuries; evacuation; etc.
- The Principal Contractor must advise the Polokwane Municipality in writing forthwith, of any emergency situations, together with a record of action taken/action to be taken.
- A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and made available to site personnel.

- The emergency plan will need to be reviewed from time to time as conditions/environment changes i.e. as building work increases inextent.

3.8.6. First Aid Boxes and First Aid Equipment

The Principal Contractor and all Contractors must appoint First Aider(s) in writing. The Principal Contractor must appoint at least one First Aider to start with, which first aider must be certificated. Copies of valid certificates are to be kept on site. The Principal Contractor must provide at least 1 (one) first aid box, adequately always stocked. Due to the nature of this project i.e. satellite workstations/areas, further first aid boxes must be provided close to the various workstations to allow for quick, effective treatment of injured persons. As the work progresses and the structure increases in height, extra first aid

3.8.7. Personal Protective Equipment (PPE) and Clothing

The Contractor must ensure that all site workers are issued with and wear the appropriate PPE as indicated in their risk assessments. The Contractors must always make provision and keep adequate quantities of SANS approved PPE on site according to their risk assessments. Safety harnesses are mandatory wherever work takes place in an elevated area where safe working platforms or ladders are not possible. Overalls clearly indicating the Contractor's logo must be worn and all sub-contractors must conform to this requirement. Eye protection must be worn by those working grinders, skill saws, and high- pressure water cleaners. Even those workers near these operations will also be required to wear such eye protection.

Safe footwear will be required by all workers. A high visibility vest is mandatory on a Polokwane Municipality site.

3.8.8. Occupational Health and Safety (OHS) Signage

The Principal Contractor must provide adequate on-site OHS signage. Including but not limited to: 'construction work - no unauthorised entry', 'beware of overhead work', 'hard hat area', first aid - to be posted up at all work areas/zones.

Signage must also be posted up at strategic locations to warn the public of diversions, alternative through ways and other irregularities caused by construction work (pedestrians and motorists).

Signs are also required as per law e.g. scaffolding and other potential risk areas/operations such as exposed edges and openings and trenches/excavations where persons are at work. Safety signs and awareness posters will also be required in strategic locations on site such as frequently used access routes, stairways, and entrances to structures and buildings where the workers will continuously be made aware of health & safety. Health & safety signage must be well maintained including weekly inspections, cleaning, replacement, and repair.

3.8.9. Public and Site Visitor Health & Safety

Public walkways and roadways must be kept clean and free of construction materials to prevent any negative impact on the public. Public roadways and walkways will have to be cleaned on a regular basis - daily inspections to be conducted by the Principal Contractor with action to be taken without delay (daily).

Site visitors must be briefed on the hazards they may be exposed to as well as what measures are in place or should be taken to control these hazards. The Construction Regulations require that a record of these 'inductions' be kept on site. It is advised that a visitor book with site rules leaflet be kept at the reception/site office and all visitors to be directed to such point where they must read through the site safety information and sign the visitor book. It will be the Principal Contractor's prerogative to decide whether site visitors require supervision while on site. Visitor hard hats must be kept in the site office.

3.8.10. Access to Site

Where any permits are necessary from the local authorities, this will be the Principal Contractor's responsibility. The road surface of all public and private roadways and pavements/pedestrian walkways must remain in a reasonably clean state, free of excessive sand, stone, water, or other construction related materials. The access gate(s) must be controlled, and visitors must sign in and report to the site office for further instruction.

3.8.11. Night Work (After Hours)

No night work will be allowed within the hazardous zone on this project without prior approval from the Polokwane Municipality /Polokwane Municipality 's Agent and the Construction Health and Safety Agent. Additional health and safety requirements will then be applicable.

3.8.12. Transport of Workers

The Principal Contractor and other Contractors may not transport:
Persons together with goods or tools unless there is an appropriate area or section to store the tools or equipment; Contractors must adhere to the National Road Traffic Act.

3.8.13. Construction Health & Safety Officer

A full-time construction safety officer (in terms of Construction Regulation 8) will be required on this project. **The construction health and safety officer must be registered with SACPCMP.** The construction officer will be required to carry out at least the following duties:

a) Health & safety audits and inspections on site including administrative and Physical audits of all Contractors' health & safety plans, files and activities, and record findings in the form of audit reports to be kept in the health & safety file; b) Assess, and finally approve contractor safety plans;

3.9. Physical Requirements

3.9.1. Earthworks (including Trenching and excavations)

The Principal Contractor and relevant Contractors must make provision in their tender for the shoring of excavations where the soil conditions warrant it or if this is not possible cut it back -excavation walls must be battered back to a safe angle, termed the safe angle of repose.

The Principal Contractor has the following options: first option is to shore or brace the excavation, should this not be practical then such excavation must be battered back to the safe angle of repose (second option). Should the first two options not be deemed necessary by the Contractor, then permission must be given in writing by the appointed competent excavation supervisor (third option). Where uncertainty pertaining to the stability of the soil exists, the decision of a professional engineer or professional technologist competent in excavations shall be decisive. Such permission must be in writing.

The following is relevant to excavations:

- Excavations/trenches are inspected before every shift and a record of these inspections is kept;
- Safe work procedures have been communicated to the workers;
- The safe work procedures are always enforced and maintained by the Principal Contractor's and Contractors' responsible persons;
- Excavations next to permanent or temporary roadways - ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it is likely to cause its collapse and thereby endangering the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;

- Ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken that may be necessary to ensure the stability of such building, structure or road as well as the safety of persons
- Cause convenient and safe means of access to be provided into every excavation in which persons are required to work and such access shall not be further than 6m from the point where any worker within the excavation is working;
- Ascertain as far as is reasonably practicable, the location and nature of electricity, water, gas, or other similar services which may in any way be affected by the work to be performed. The necessary steps must then be taken to render the circumstances safe for all persons involved;
- Cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or where the safety of persons may be endangered, to be
- Adequately protected by a barrier or fence of at least one meter in height and as close to the excavation as is practicable; and provided with warning illuminates or any other clearly visible boundary indicators at night or when visibility is poor;
- Cause warning signs to be positioned next to an excavation within which persons are working or carrying out inspections or tests

3.9.2. Edge Protection, Barricading and Penetrations (CR 10) A Contractor must ensure that –

- All unprotected openings in floors, edges, slabs, hatchways, and stairways are adequately guarded, fenced, or barricaded or that similar means are used to safeguard any person from falling through such openings;
- No person is required to work in a fall risk position, unless such work is performed safely as contemplated in sub-regulation (2);
- A detailed Fall Arrest and Rescue Plan will be drafted and implemented on site.
- The above-mentioned plan will be demonstrated on instruction of the Polokwane Municipality's Agent.

3.9.3. Deliveries, Waste Removal, Stacking/Storage of Materials

The Principal Contractor and other relevant contractors must ensure that there is an appointed stacking supervisor and all materials, formwork and all equipment is stacked and stored safely, on level, compact ground, out of access ways and no more than three times the minimum base width in height. Pallets of bricks may not be stacked more than two above each other and must be on timber pallets. No construction materials or equipment may be stacked or stored in public areas unless authorised by the Polokwane Municipality and fenced off as per the Polokwane Municipality's requirements. Waste materials must be kept within designated construction zones. The Principal Contractor will be responsible for co-ordinating and managing this function.

3.9.4. Fire Extinguishers and Fire Fighting Equipment

The Principal Contractor and relevant Contractors shall provide adequate, regularly serviced firefighting equipment located at strategic points on site, specific to the classes of fire likely to occur. The appropriate notices and signs must be posted up as required. A minimum of four 9 kg dry chemical powder fire extinguishers must be available in and around the site office establishment and stores. Fire extinguishers must also be placed at all work zones/areas, in strategic locations. Wherever *'hot work' is taking place, additional fire extinguishers must be on hand. Contractors are responsible for ensuring compliance with hot work procedures and must be in possession of method statements detailing the safe working procedures. *'Hot work' includes all work that generates a spark or flame and may therefore result in a fire.
Further, during the finishing stages of the construction phase when the finishing trades are on site, fire extinguishers will be required at strategic locations within the work areas - to be supplied and managed by the Principal Contractor.

3.9.5. Traffic Control

The Principal Contractor shall ensure that a fulltime traffic safety officer be appointed in writing, upon the commencement of construction activities. The traffic safety officer shall be tasked with regular inspections and movement of road traffic signs as per the approved traffic accommodation plans and will report to the safety officer.

The principal Contractor must prepare a site specific a Traffic Accommodation Plan that should be signed off by the relevant appointed Engineer on this project.
This document must indicate the potential risk to the public or environment posed by all vehicles travelling to and from the areas of construction for the purpose of the construction work and proposes methods to eradicate or minimize these risks. Such a plan must include the following aspects:

- Design of Traffic Management Plan
- Site specific base line risk assessment
- Protection of employees
- Protection of pedestrians
- Specific signage and distances applicable
- Applicable training
- Appointments of road safety officers
- Management after hours/weekend/adverse weather conditions
- Setup and clearing of signage

Only SABS approved temporary road signage must be used. Note that the Principal Contractor must always enough signage available.

The Principal Contractor will also put in place flagmen to control the entry and exit of vehicles to and from the site onto the public road. These flag personnel must be highly visible and must have been trained. Flag personnel may not use cell phones while on duty.

3.10. Plant, Machinery and Equipment

3.10.1. Construction Vehicles & Mobile Plant

"Construction Plant" includes all types of plant including but not limited to, cranes, piling rigs, excavators, construction vehicles, compaction plant, batch plants and lifting equipment.

The Principal Contractor must ensure that such plant complies with the requirements of the OHS Act, Construction Regulations (Feb 2014) and any manufacturers specifications. The Principal Contractor and all relevant

contractors must inspect and keep records of inspections on construction vehicles and mobile plant used on site. Only authorised/competent persons in the possession of the necessary training certificates and in possession of a certificate of medical fitness may operate construction vehicles and mobile plant.

Appropriate PPE and clothing must always be provided and maintained in good condition.

Reverse alarms must be installed on construction vehicles i.e. trucks, digger loaders, etc.

Vehicles and pedestrian traffic must be safely separated, preventing any unnecessary interfacing.

Any vehicle or mobile plant using any public road must be roadworthy and carry a certificate proving this. Likewise, any operator of such construction vehicle or mobile plant will have to carry the necessary driver's license.

3.10.2. Pressure Equipment

The Principal Contractor and all relevant Contractors must comply with the Pressure Equipment Regulations, including:

Providing competency and awareness training to the operators/users; Providing the relevant PPE and clothing;

Inspecting equipment regularly (every 3 months) and keeping records of these inspections;
Providing appropriate firefighting equipment (Fire Extinguishers) on hand;

Ensuring that oxygen and acetylene bottles are secured in an upright position, do not show signs of corrosion or damage, and have flash back arrestors fitted on both torch & bottle ends of hoses.

3.10.3. Hired Plant and Machinery

The Principal Contractor must ensure that any hired plant and machinery used on site is safe for use and complies with the minimum legislated requirements. The necessary requirements as stipulated by the OHS Act and Construction Regulations shall apply. The Principal Contractor shall ensure that operators hired with machinery are competent and that competency and medical certificates are kept on site in the health & safety file. Any load test requirements and inspections in terms of legislation must be complied with and copies of load test certificates and inspections must be kept in the health & safety file. All relevant contractors

3.10.4. General Machinery

The Principal Contractor and relevant contractors must ensure compliance with the Driven Machinery Regulations, which includes carrying out risk assessments on the machines, inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE and relevant clothing, and training those who use machinery.

3.10.5. Electrical Installations and Portable Electrical Tools

The Polokwane Municipality will ensure as far as possible that the Principal Contractor is made aware of the positions of all electrical power lines. The Principal Contractor must notify the Polokwane Municipality should it not be sure of the location of any electrical power lines.

The Principal Contractor must comply with the Electrical Installation Regulations, the Electrical Machinery Regulations, and the Construction Regulations (CR 24).

The Principal Contractor must keep a copy of the Certificate of Compliance (CoC) for its temporary electrical power supply. A revised CoC is required whenever the installation is altered or changed in any way. All temporary electrical installations must be inspected at least weekly by a competent person appointed in writing with records kept. Portable electrical tools and equipment must be visually inspected daily with records kept. It is advised that the P/Contractor appoints the electrical contractor to inspect the temporary electrical installation on a weekly basis with feedback given in a report so that any maintenance and repairs can be undertaken. Such appointed inspector must 'stop' or isolate any distribution board that is unsafe for use.

3.11. Occupational Health

3.11.1. Industrial Hygiene (exposure to physical and chemical stress factors)

Exposure of workers to occupational health hazards and risks is quite common in any work environment, especially in construction. Occupational exposure is a major problem, and all Contractors must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards. Prevent inhalation, ingestion,

and adsorption through the skin of hazardous chemical substances.

3.11.1.1. Noise induced hearing loss is a highly underrated occupational condition. Occupational noise emitted by construction machinery and power tools must be controlled as far as possible by implementing engineering solutions such as noise dampening, regular maintenance, servicing, and inspection, screening off the noise, and reducing the number of persons exposed. Personal protective equipment such as earmuffs and earplugs must also be used in conjunction with engineering controls to reduce noise exposure to below the acceptable levels.

3.11.1.2. Ergonomics is the study of how workers relate to their workstations. We advise the Principal Contractor and Contractors to take this into consideration when conducting risk assessments, thereby improving the worker-task relationship, which will in turn improve productivity and reduce chronic conditions such as back strains, joint problems and mental fatigue, amongst others.

3.11.2. Hazardous Chemical Substances (HCS)

The Principal Contractor and other relevant contractors must provide the necessary training and information as far as the use, transport, and storage of HCS. The Principal Contractor must ensure that the use, transport, and storage of HCS are carried out as prescribed in the HCS Regulations. The Principal Contractor and contractors must ensure that all hazardous chemicals on site have Material Safety Data Sheets (MSDS) on site and the users are made aware of the hazards and precautions that need to be taken when using the chemicals. The First Aiders must be made aware of the MSDS's and how to treat HCS incidents appropriately. Copies of the MSDS's must be kept in the first aid box and in the store. All containers must be clearly labelled.
Flammable substances must be stored separately, away from other materials, and in a well-ventilated area (appropriate cross ventilation). A competent person should be appointed to be in control of this portfolio.
Stores must be well ventilated, preventing the build-up of flammable and toxic gases/vapours. Should fuel storage containers be used, they must conform to the general environmental legislation and Environmental Management Plan (if a requirement on this site). The necessary safety signage must be posted up - 'no naked flames', 'no smoking'. Two 9 kg DCP fire extinguishers must be placed near to the fuel containers, but not within 5 m of the containers. These extinguishers are over and above the minimum four required for the offices and stores.

3.11.3. Welfare Facilities

The Principal Contractor must supply sufficient toilets (1 toilet per 30 workers), clean, lockable changing facilities, hand washing facilities, soap, toilet paper, and hand drying material. Waste bins must be strategically placed around site and emptied regularly. Workers must not be exposed to hazardous materials/substances while eating and must be provided with adequate, sheltered eating areas complete with benches and tables. Stores may not double up a change rooms or mess areas.

3.11.4. Alcohol and other Drugs

No alcohol and/or other drugs will be allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site. Any person on prescription medication must inform his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suffering from any illness/condition that may have a negative effect on his/her / anyone else's health or safety performance must report this to his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suspected of being under the influence of alcohol or other drugs must be sent home immediately, to report back the next day for a preliminary inquiry. The Contractor concerned must follow a full disciplinary procedure and a copy of the disciplinary action must be forwarded to the Principal Contractor for its records.

3.11.5. COVID- 19

3.11.5.1. Response plan

This International pandemic will force the contractors and clients to think about the workplace that the employees work in and the applicable PPE to safeguard the employees against this COVID 19 virus. Polokwane Municipality have drawn up a checklist with all the necessary equipment and guidelines that will need to be in place before construction can start. The checklists are written using the above-mentioned acts, regulations, and guidelines. This checklist is listed as annexure A. The SHE committee shall have a meeting in the first week of starting to discuss the plan forward with COVID 19.

3.11.5.2. Access control

The client and the contractor will remain responsible to ensure that the correct measures are taken at the entrance of the construction site. The contractor shall have a thermometer available at each entrance to measure the temperature of each of the employees and visitors that enters and exits the site. The following is equipment and processes that will need to be in place at each entrance:

NOTE: This shall be done when entering the site as well as exiting the site every time

- Employee or security available at each gate
- Every entrance to site must have a thermometer
- Every entrance shall have a sanitation bottle to sanitize every person entering the sites hands
- Every person shall complete the sign in register that will enable the contractor to track the person in case of a possible positive case
- Non-essential visitors will not be allowed to enter the site
- All persons entering the site shall have a mask or a face shield on when entering, if not no access will be given to the person
- All hand sanitizer that is used must have 70% alcohol and the certificate must be available on site.

Documents that need to be updated

Document control will be a critical path to ensure that all employees knows the exact risks and mitigation factors around the COVID 19 virus.

- Baseline risk assessment shall be written on COVID 19 to ensure all the risks is covered and discussed to the employees
- Health and safety policy would need to be changed to address the COVID 19 pandemic
- All safe work procedures shall cover COVID 19
- COVID 19 guideline or procedure shall be drawn up and available in the safety file and discussed to all employees. This procedure will explain how the contractor will ensure that the virus does not spread during construction
- A guideline on what the process will be if an employee or a visitor is showing symptoms of the COVID 19 virus
- COVID 19 Toolbox talks shall be held with all employees to explain to the employees what the COVID 19 virus is
- Applicable Checklist & register should be in place to ensure that all the measures that is stipulated in the Client OHS Spec, Baseline Risk assessment, COVID procedure and contractor OHS Plan
- Sign in register will need to be available at every site entrance where the employee or site security can write down the temperature of the employee or Visitor
- All Health and safety related policies will need to be revised to ensure

that COVID 19 is cover and explained in all of them in the applicable manner
- COVID 19 manager shall be appointed on site. This employee shall be on site full-time.

Hand sanitation points

Hand sanitation points will need to be placed at strategic places as well as the high-risk area. The first place where sanitation station shall be placed is at all site entrances. High risk areas will be identified by the following:

- Areas where employees are in frequent and/or close contact (i.e. within 1,5 Meter of people)

The high-risk areas will have additional sanitation stations, all employees shall wear mask or face shield when working closer than 1, 5 Meter from the nearest employee. Employees will be trained to wash hands more frequently or to use sanitizer more frequently.

The hand sanitizer that will be used shall have more than 70% of Ethyl alcohol. This needs to be ensured by the safety office on site as well as a Material Safety Data Sheet (MSDS) available close by for confirmation of the 70%. The hazardous chemical register shall be available in the flammable store. This register shall also include the hand sanitizer.

Hand washing posters shall be available at all hand washing stations to ensure that all employees know what the correct way is of washing your hands to cover all the areas. Informational posters about COVID 19 shall also be visible at these areas to ensure that employees know how the virus spreads and how to prevent spreading. The sanitisation stations will need to be cleaned on a regular basis.

Cleaning & disinfecting

All work surfaces need to be cleaned and disinfected on a regular basis. The chemical that will be used to clean the surfaces must have a minimum of 70% Ethyl Alcohol and the MSDS for that specific sanitizer must be available in the safety file under the MSDS's section. Plant, site offices & construction sites shall be decontaminated before the start of the site. The contractor that decontaminated the site shall issue a certificate to explain it has been done and explain what chemicals was used.

Offices

- All offices must have a biochemical hazardous bin with a medical waste bag that can be sealed
- The offices need to be cleaned on a regular basis
- If disposable gloves are being used, they must be discarded in the medical waste bin.
- Only employees that is working in the office will be allowed in the offices
- All visitors must arrange with office personnel if they have an appointment with one of the office employees to move outside and have the appointment outside or in a well-ventilated area and if possible, keep social distancing distance (1,5 Meter)
- Cleaners must focus on cleaning the following areas: desks, printers, door handles, kettles, microwaves & office equipment (cabinets, staplers, punchers) etc.
- No utensils shall be shared
- All employees shall sanitize their hands before and after using building plans

Ablution Facilities

- All ablution facilities shall have a washing station or a sanitation station.
- Sufficient paper towels shall be available to dry off hands after sanitizing
- All ablution facilities must have a biochemical hazardous bin, with a medical waste bag that can be sealed
- Paper towels shall be discarded into the medical waste bin provided at the ablution facilities
- Ablution facilities must always be cleaned on a more regular basis to ensure a clean surface
- Chemical toilets ratio is reduced to 1-10 employees and flush toilets ratio is reduced 1-15 employees
- Cleaners must focus on the most touch areas when cleaning ablution facilities (toilet handles, door handles, taps, basins surfaces, toilet seats etc.)

Eating areas

The eating areas in construction is a high risk since the employees under normal circumstances would have sit within 1, 5 Meter of each other.

- Eating areas will need to make bigger to accommodate all employees at once but still implement social distancing of 1, 5 Meter at least.
- All eating areas must have a biochemical hazardous bin, with a medical waste bag that can be sealed
- All Servite that was used or paper towels that was used to dry hands after using the sanitation station must be discarded in the hazardous bin.
- All eating areas shall have a washing station or a sanitation station
- Lunch breaks should be staggered between contractors / employees to ensure that during lunch the social distancing 1, 5 Meter can still be implemented.
- All chairs, Tabletops and drinking water taps need to be cleaned after each lunch break
- Notice board shall be placed at the eating area to ensure that all employees see all posters and notices
- Clean drinking water need to be supplied to all employees at the eating area

Waste management

The waste management on site will be a critical path and will need to be monitored. The PPE and cleaning material that will be discarded will be medical (biological hazardous) waste. This will need to be separated from normal waste, all medical waste bins will need to have a waste bag that can seal and need to be removed by a registered service provider. Hazardous bins shall be foot operated to ensure employees do not touch the lid of the hazardous bin.

Paper towels

Paper towels shall be supplied to by the contractor at all sanitation stations and washing stations for employees to dry their hands. These towel papers will be discarded in the medical waste bins. The contractor shall ensure that sufficient paper towels is in storage for a fast and effective replacements

PPE

All disposable PPE shall be discarded in these medical waste bins. Disposable PPE will be the following: dust masks, surgical masks etc.

Disinfectants

The sanitizers that will be available throughout the site if finished and not refilled will be discarded as medical waste. The contractor must ensure that sufficient stock of hand sanitizer and soap is available in the storeroom. This chemicals and soap shall be recorded as it is booked out of the storeroom.

Wastewater

The water that will be used at the hand washing points will need be stored in a container with a lid. This infected water will then need to be treated before the water can be discarded in a normal municipal sewage system.

Personal Protective Equipment (PPE)

COVID 19 be prevented from spreading using the correct PPE. The COVID 19 virus is spread by small droplets that can be enter the body at the face through the nose, mouth, and the eyes. This is the critical areas that must be protected at all cost to prevent the employees from getting the feared COVID 19 virus.
The disposable PPE will be treated as biological hazardous waste as explained above in waste management
The Contractor shall supply all employees with 2 cloth masks (1 to wear, 1 to wash). The cloth masks will be checked every morning at the entrance of the gate to ensure that employees are washing the cloth masks. This is an example of a cloth mask:
If the employees are working in a high-risk area, the contractor will need to have a look at alternative measures to protect the employee's eyes as well as mouth and nose area. Face shields is a perfect example of an alternative way to protect our workers. There are different types of face shields on the market, from loose face shields with a strap to face shield and hard hat combination.
Below is an example of these alternative equipment that will need to be in place in high risk areas when possible:
Employees will only be required to wear hand gloves when the task will require it (will be stipulated in the risk assessment). When for example the employee will do grinding work and the face shield will not last then the employee will be required to wear goggles and a normal dust mask.

Accommodation

When the contractor provides accommodation to the employees on site the following shall be in place:

- The quantity of employees must be looked at that is accommodated on site
- The restrictions on the number of employees using the same ablution facilities
- Cutlery & utensils shall not be shares between employees
- Social distancing between employees (at least 1,5 Meter) when in sleeping quarters and in cooking facilities
- The employees shall practice good personal hygiene and shall sanitize areas that on a regular basis that is used by all employees
- Employees shall not share any personal belongings with each other for example: clothes & towels

Transportation

The transportation of employees shall be monitored by the site safety officer as well as site management. Transportation will be arranged that all employees always implement the social distance of at least 1, 5 Meter from each other. Employee using transportation as well as drivers will always wear mask to prevent the spread of the virus. Employees shall sanitize their hands before using transportation and after using transportation. Transporting employees in big quantities must always be prevented if possible. All transport shall be disinfected before and after use. If employees drive with personal transport, sufficient parking must be made available

COVID 19 Signage's

The applicable signage's shall be displayed at all the applicable places for example all the notice boards that is identified in this document. The contractor shall as far as reasonably practicably post posters about COVID 19 to ensure that all employees know the essential information of the virus. The signage's will be essential to show employees with the use of pictograms what is the most important factors to keep in mind on site. All hand sanitation station shall have a sign that states it is a sanitation station and while have a poster to explain to employees exactly how to wash their hands to prevent getting infected.
This is examples of signs that shall be visible all over site to keep reminding employees of the risks. The site entrances shall get additional signage's to explain to visitor and employees the applicable PPE for the site. These signs are examples of signs that shall be visible at the site entrances:

COVID 19 Posters

The contractor will be responsible to display posters on all notice boards on site as stipulated to ensure that employees are informed of the COVID 19 virus. The responsibility is with the contractor to communicate these posters to the employees and the train them on all the precaution measures and the keep them informed.

4. Omissions from the Site-Specific Health and Safety Specifications

Every endeavour has been made to address the most critical aspects relating to Health and Safety issues to assist the contractor in adequately providing for the Health and Safety of employees on site. However, the Principal Contractor is required to ensure they stay compliant with statutory requirements and construction programs and processes and include such aspects in their Health and Safety File.

PRIMARY HEALTH AND SAFETY COMPLIANCE

ANNEXURE A

Project: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS.

The Principal Contractor and Contractors must submit compliance with Annexure 'A' before commencing on work on site. **Compliance with Annexure 'A' must be maintained and proven to the Safety Agent at audits.**

HSS Item no.	**Requirement**	**Legal Reference**	**Compliance required:**
A1	Health & Safety Plan (H& S Plan)	Constructions Regs.	Withing one weeks of receipt of these specifications
A2	Notification of intentionto commence construction / building work	Complete schedule 1 (Construction Regs.)	Before commencement onsite
A3	Assignment of responsible persons tosupervise constructionwork	OHS Act ~ Section 16(2) appointee ~ all written appointments under the constructionregulations 2014	Before commencement onsite
A4	Competence of responsible persons in the form of CV's related work history of appointees	OHS Act ~ Section 16(2) appointee ~ all written appointments under the construction regulations 2014	Together with H & SPlan
A5	Compensation for occupational injuries and diseases - proof of registration and in good standing	COIDA or FEMA	Together with H & SPlan
A6	Health and safety organogram showing allsafety management portfolios and positions	Polokwane Municipality requirement	Together with H & SPlan
A7	Initial hazard identification and risk assessment document	Construction regulations	Together with H & SPlan
A8	Fall protection plan (firstdraft) as defined in the construction regulations	Construction regulations	Together with H & SPlan

HSS = health & safety specifications
OHS Act = occupational health & safety Act CR = construction regulations
COIDA = compensation for occupational injuries and diseases Act

ASSIGNMENT OF PRINCIPAL CONTRACTOR'S AND CONTRACTORS' RESPONSIBLE PERSONS

ANNEXURE B

Project: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS.

The Principal Contractor must make all the management appointments as set out below. Compliance with annexure 'B' to be maintained and proven to the safety agent at audits (Further appointments could become necessary as the project progresses).

Item no.	Appointment	Legal Reference	Requirement
B1	CEO Assignee	Section 16(2)	A competent person to assist the CEO in achieving compliance with the OHS Act - Contractor's / Contractor's Responsibleperson
B2	Construction Work Manager	CR 8(1)	A full time competent person to Superviseand be responsible for health & safety related issues on site. The person is appointed by the Section 16(2)
B3	Assistant Construction Work Manager	CR 8(2)	A full time competent person(s) to assist the CR 8(1) appointee with daily supervision of construction work safety. One of the CR8(2) appointees must be designated to fulfill the role of the CR6(1)when such person is not on site. Make this clear in the appointment letter
B4	Health & Safety Representative(s)	Section 17	A competent person(S) to be appointed to represent the workforce in H & S matters.Reps may attend safety meetings, conduct monthly site audits, attend incident / injury investigations and make recommendations as far as H&S goes.
B5	Health & Safety Committee Member(s)	Section 19	H&S reps, site supervisors / foreman andthe safety officer should make up the committee, with the CR8(1) appointee chairing the committee.
B6	Incident Investigator	GAR 9	A competent person to head up the investigation team and co-ordinate incident / injury investigation on-site.
B7	Risk assessment coordinator	CR9	A competent person to co-ordinate thedrafting / reviewing / distribution of riskassessments on behalf of the principalcontractor. The same applies to contractors. NQF Level 5

B8	Fall protection plan coordinator	CR10	A competent person to co-ordinate thedrafting / reviewing / distribution of Fall Protection Plan. The same applies to contractors. NQF Level 4
B9	Emergency plan coordinator	Contractor Needs to bein line with service station ERP	A competent person to co-ordinate the drafting / reviewing / distribution of the site emergency procedures / evacuationplan. Such person must be fulltime on site so as to take charge of emergency situations.
B10	First Aider(s)	GSR 3	A certified person to address first aid situations and take charge of injuries. Level 1 certificate
B11	Lifting machine and lifting tackle supervisor	DMR 18	A competent P/Contractor employee to co-ordinate the management of lifting machines and tackle, ensuring that suchequipment is safe for use at all times, inspected when necessary and repairedwhen required. The operators, banks men and contractors to liaises with this person
B12	Scaffolding inspector	SANS 10085 - 2004	A competent person to inspect scaffoldingbefore use and every time after bad weather, etc.
B13	Scaffold supervisor (P/Contractor	SANS 10085 - 2004	A competent P/Contractor employee to supervise all scaffolding on site, ensuringthat scaffolds are safe for use, inspected,extended / altered, repaired when required and that all trades are co-ordinated and authorized to work on such scaffolds
B14	Scaffolding erector	SANS 10085 - 2004	A competent person(s) to erect scaffolding - leader of the scaffold team
B15	Formwork & support work supervisor (Temporary Works)	CR12	A competent person to supervise all formwork & support work erection & dismantling. This person must also ensure that the equipment is safe and that all the necessary inspections (pre, during, post & every day thereafter) are carried out & records kept by the competent inspectors. Design drawings must be available to this supervisor.
B16	Excavation supervisor / inspector	CR13	A competent person to supervise &inspect excavation work (daily) and ensure that excavations are safe. Records of inspections must be kept by this person.

B17	Ladder inspector	GSR13A	A competent person to inspect ladders daily and ensure they are safe for use, keeping monthly record.
B18	Stacking supervisor	CR28	A competent person to supervise all stacking and storage operations
B19	Explosive powered tools inspector / supervisor	CR21	A competent person to inspect & cleanthe tool daily, store the tool in a safe location, ensure that cartridges are signed out and in, and control all operations thereof.
B20	Temporary electrical installations inspector	CR24	A competent person to inspect all temporary electrical installations. Including weekly inspections and record keeping.
B21	Portable Electrical ToolInspector	CR 24	A competent person to co-ordinate / inspect portable electrical tools, leads andplugs.
B22	Fire-fighting equipment inspector	CR29	A competent person to co-ordinate & inspect firefighting equipment. Includingad-hoc checks and monthly inspections with records kept.
B23	Construction vehicles & mobileplant supervisor	CR23	A competent person(s) to co-ordinate thesafety of all construction vehicles & mobile plant. Ensuring that daily inspections are done and records kept, that safety measures are in place, that operators are certified and authorized to operate and that maintenance and services are carried out when required.
B24	Construction safety officer	CR8(6)	A competent person to fulfill the functionsas set out in these HSS

GENERAL COMPLIANCE REQUIREMENTS

ANNEXURE C

Project: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS.

The Principal Contractor and Contractors must comply with but not be limited to the requirements tabled below: Prove compliance with annexure 'C' at audits conducted by the safety agent.

Item no.	What	When	Output	Reviewed by Polokwane Municipality Agent
C1	Construction - phase Health & Safety Plan	Monthly review	Principal Contractor to indicate the status of Contractors health & safety plans	
C2	Health & Safety File(s)	Open file when construction begins and maintain throughout	Have file on hand at audits. Contractors to report on their file at monthly health & safetyaudits by the Principal Contractor.	
C3	OHS Act and relevant Regulations	Monthly review	To be kept in the health & safety file on site.	
C4	Health & Safety Induction training, PTW Procedures	Every worker before he/she starts work	Attendance registers tobe kept	
C5	Awareness Training (Tool Box Talks)	At least oncea week	Attendance registers tobe kept	
C6	Health & Safety Meetings	Monthly	Meeting minutes to bekept	
C7	Health & Safety Reports	Monthly	**Report covering:** • Incidents / injuries and investigations • Non conformancesby employees & Contractors - reports • Internal H&S audit reports	

C8	Audits on contractors	Monthly	**Report covering:** • H&S File / Plan • WCA status • Appointment letters • Section 37(2) agreements • Risk assessment & safe work procedures • Physical site inspection • Any other contractor specific requirements	
C9	Emergency procedure	Monthly evaluation of procedure	Compile written procedure as well as tel.Numbers	
C10	Risk assessments &fall protection plan	Updated and signed off	Documented risk assessments to be available	
C11	Method statements	Drawn up and distributed before workers are exposed to the risks	Documented set of method statements reviewed and signed off.	
C12	General Inspections	Daily	**Report OHS Act compliance:** • Excavations • Portable electrical tools • Formwork & support work • Explosive powered tools	
C13	General Inspections	Daily	• Scaffolding • Temporary Electrical Installations	
C14	General Inspections	Monthly	• Firefighting equipment • Ladders	

C15	General Inspections	Monthly	• Lifting tackle • Oxy-acetylene cutting & welding sets • Fall prevention and arrest equipment	
C16	General Inspections	6-Monthly	• Lifting machines	
C17	Load tests / performance tests	Annually / once erected,before use	• Lifting machines	
C18	List of Contractors	List to be updated weekly	Compile a list of contractors: Name, supervisor, company tel. Numbers and trade.	
C19	Workman's Compensation	Ongoing	Compile a list of Contractors workman's Compensation proof of good standing.	
C20	Construction site rules & Section 37(2) Mandatary Agreements	Ongoing	Compile a list of all signed up Mandataries.Proof of agreement documents to be kept inH&S file.	

OCCUPATIONAL HEALTH & SAFETY – HEALTH & SAFETY COSTS TO BE INCLUDED IN THE PRINCIPAL CONTRACTOR'S / CONTRACTORS' PRICE

ANNEXURE D

Project: THE APPOINTMENT OF TEN (10) ELECTRICAL CONTRACTORS DATABASE FOR THE ELECTRIFICATION PROJECTS IN CITY OF POLOKWANE ON AN AS AND WHEN REQUIRED BASIS FOR A PERIOD OF THREE (3) YEARS.

In terms of the Construction Regulations (2014), it is the Polokwane Municipality's duty to ensure that the cost for health & safety has been provided for by the Principal Contractor, before appointment.
Acting on behalf of our Polokwane Municipality, we require the following health & safety costs to be included by the Principal Contractor. It must be made noticeably clear that these are just some of the health & safety costs to be included in your tender price. It is the duty of the Principal Contractor and Contractors to ensure that all aspects of the Occupational Health & safety Act 85/1993 and Construction Regulations are catered for.

Pricing for Occupational Health and Safety measures should include the following if applicable:

ITEM	DESCRIPTION
1	**Supply of all items of Personal Protective Clothing/Equipment & ensure use thereof for full compliance**
1.1	Steel toe capped safety boots
1.2	Overalls
1.3	Reflective vests (high visibility)
1.4	Hard hats
1.5	Dust masks
1.6	Hearing protection
1.7	Hand gloves
1.8	Any other: Principal Contractor to specify
2	**Supply and provision of Equipment for working at Heights & ensure usethereof for full compliance**
2.1	Fall protection equipment (Safety Harness)
2.2	Double lanyard harness
2.3	Fall protection plan
2.4	Scaffolding access ladders/toe boards/handrails
2.5	Portable Ladders
2.6	Any other: Principal Contractor to specify:
3	**Barricading: Supply & install, including removal upon completion to ensurefull compliance to legislation**
3.1	Rigid type barricading
3.2	Temporary fence barricading along perimeter of excavated area
3.3	Danger tape pre-warning tape
3.4	Any other: Principal Contractor to specify:
4	**Related Training**
4.1	First Aid Training
4.2	Health and Safety Representative training

4.3	Emergency Rescue training (Height)
4.4	Hazard Identification Training
4.5	Training of Personnel working at heights
4.6	Construction Plant Training
4.7	Legal Liability (OHSACT) Training
4.8	COID ACT Training
4.9	Scaffold Erector and Inspector Training
4.10	Any other: Contractor to specify: Working at elevated
5	Occupational Health and Safety Administration
5.1	Develop of a Site-Specific Health and Safety Plan and Hazard and Risk Assessmentby Competent person.
5.2	Develop of Fall Protection and Rescue Plan by a Competent Fall Protection PlanDeveloper.
5.3	Competent Occupational Health and Safety Officer/Consultant.
5.4	COVID-19 Requirements
6	Medical Surveillance
6.1	Medical Certificates of fitness for all Employees by an Occupational HealthPractitioner.
6.2	Medical Certificates of fitness for all EPWP Employees by an OccupationalPractitioner during the duration of the Construction Project.
7	Facilities and Equipment
7.1	Sanitary facility for each sex and for every 30 workers.
7.2	Changing facilities for each sex.
7.3	Sheltered eating areas
7.4	First aid boxes
7.5	Fire extinguishers
7.6	Waste bins
8	Safety Signage
8.1	Sufficient and adequate safety signage on constructions site and at all flammablestores.

ANNEXURE E

The Occupational health and Safety File must consist out of the following documentation:

INDEX

1	Appointment Letter from Polokwane Municipality.
2	Notification of Construction work.
3	Letter of Good standing - COID
4	Copy of Public Liability Insurance Policy and UIF Registration
5	Health and Safety Specifications
6	Scope of Work
7	Tool and Machinery list
8	Method Statement of all work that will be conducted.
9	Risk Assessment Guide / Procedure
10	Baseline Risk Assessments
11	Safe Work Procedures for all Risks
12	Health and Safety Information from Designer
13	Medical Certificates / Copy of ID'S and Personal Information
14	All Health and Safety Related Policies
15	Section 37.2 Agreements
16	Induction Training Information
17	Site Specific Emergency numbers and Emergency Plan
18	Site Specific Fall Protection and Rescue Plan
19	Site Specific Health and Safety Plan
20	Incident / Accident Management Control
21	Traffic Management Plan
22	Contractor Control Procedures
23	Environmental Management
24	Hazardous Chemical Substance Register and MSDS
25	Example of Monthly Health and Safety Report
26	COVID - 19 Management Plan
27	Health and Safety Organogram and Occupational Health and Safety(Construction) Appointments - With Competencies
28	Certificates for all lifting equipment
29	Sample of all registers that will be used on site.
30	Copy of Construction Building Plans (A4)
31	Copy of the Occupational Health and Safety Act and Construction Regulations2014

ANNEXURE F

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

(Regulation 4 of the Construction Regulations. 2014) NOTIFICATION OF CONSTRUCTION WORK

1. (a) Name and postal address of principal contractor:

_____

(b) Name and tel. No of principal contractor's contact person:

_____

2. Principal contractor's compensation registration number:

_____

3. (a) Name and postal address of Polokwane Municipality:

_____

(b) Name and tel. No of Polokwane Municipality's contact person or agent:

_____

4. (a) Name and postal address of designer(s) for the project:

_____

(b) Name and tel. No of designer(s) contact person:

_____

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 8(1).

_____

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 8(2).

_____

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

_____

8. Nature of the construction work:

_____

_____

_____

9. Expected commencement date: _____

10. Expected completion date: _____

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

Total:_____Male:_____Female: _____

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

Contractor: _____

13. Name(s) of contractors already selected.

_____

_____

_____

_____ _____
Principal Contractor Date

_____ _____
Polokwane Municipality's Agent (where applicable) Date

_____ _____
Polokwane Municipality Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENTOF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.

Copies:

1. Original to **Department of Labour**

POLOKWANE MUNICIPALITY

C4 Site Information

1. GENERAL

1.1 Documentation

The documentation included in this section describes the site as at the time of tender to enable the Tenderer to price his tender, furthermore to decide upon his method of working and programming and to evaluate his risks.

1.2 Information

Only actual information about physical conditions of the site and its surroundings (if any available) is included in this Site Information and interpretation thereof is a matter for the Tenderer.

1.3 Site Location

Site location plan to be attached.

2. SITE INFORMATION

2.1 Records and Test Results

2.1.1 Subsoil records

No information available.

2.1.2 Borehole records

N/A

2.2 Reports on Physical Conditions

2.2.1 Mapping

N/A

2.2.2 Hydrographic data

N/A

2.2.3 Hydrological information

N/A

2.3 Publicly available Information

2.3.1 Published papers and interpretation of geotechnical information

N/A

2.4 Information about services below the surface of the site

2.4.1 Water

Not available on site.

2.4.2 Sewage

Not available on site.

2.4.3 Electricity

Not available on site.

2.4.4 Gas

Not available on site.

2.4.5 Communications

Not available on site.

2.5 Information about adjacent main infrastructure

2.5.1 Buildings

Unavailable.

2.5.2 Structures

Unavailable.

2.5.3 Internal Roads

Unavailable.

2.5.4 Restrictions for Heavy Loads

Unavailable.

2.6 Atmospheric criteria

Unavailable.

2.7 Environmental criteria

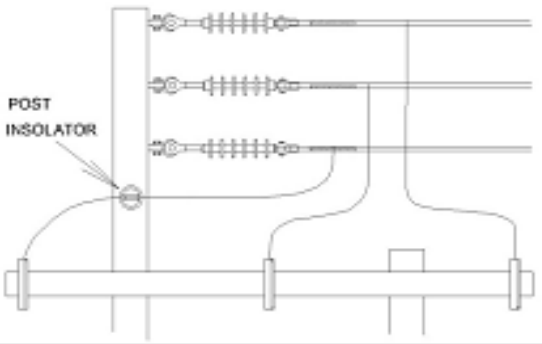
Unavailable.

POLOKWANE MUNICIPALITY

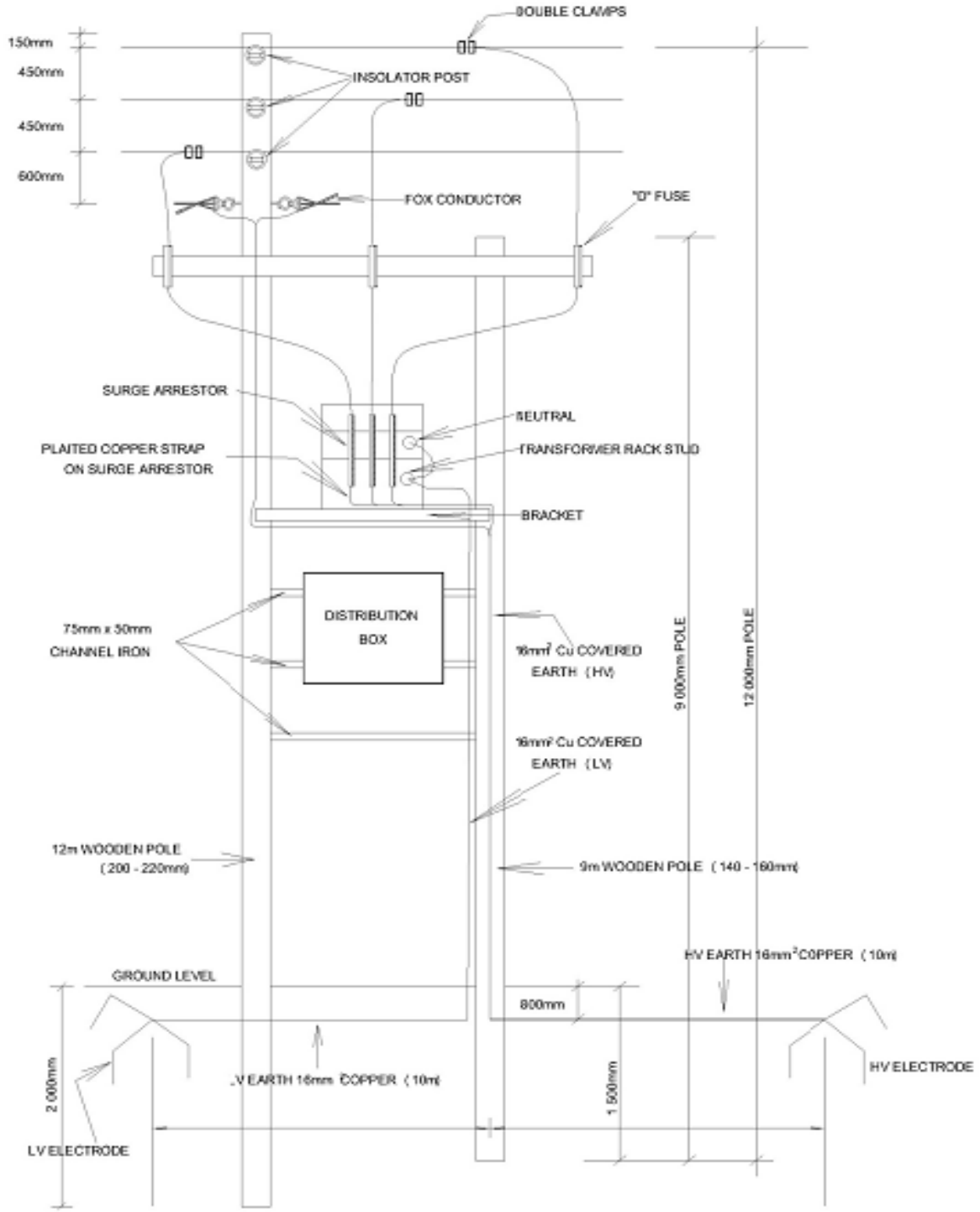
Subject to tender

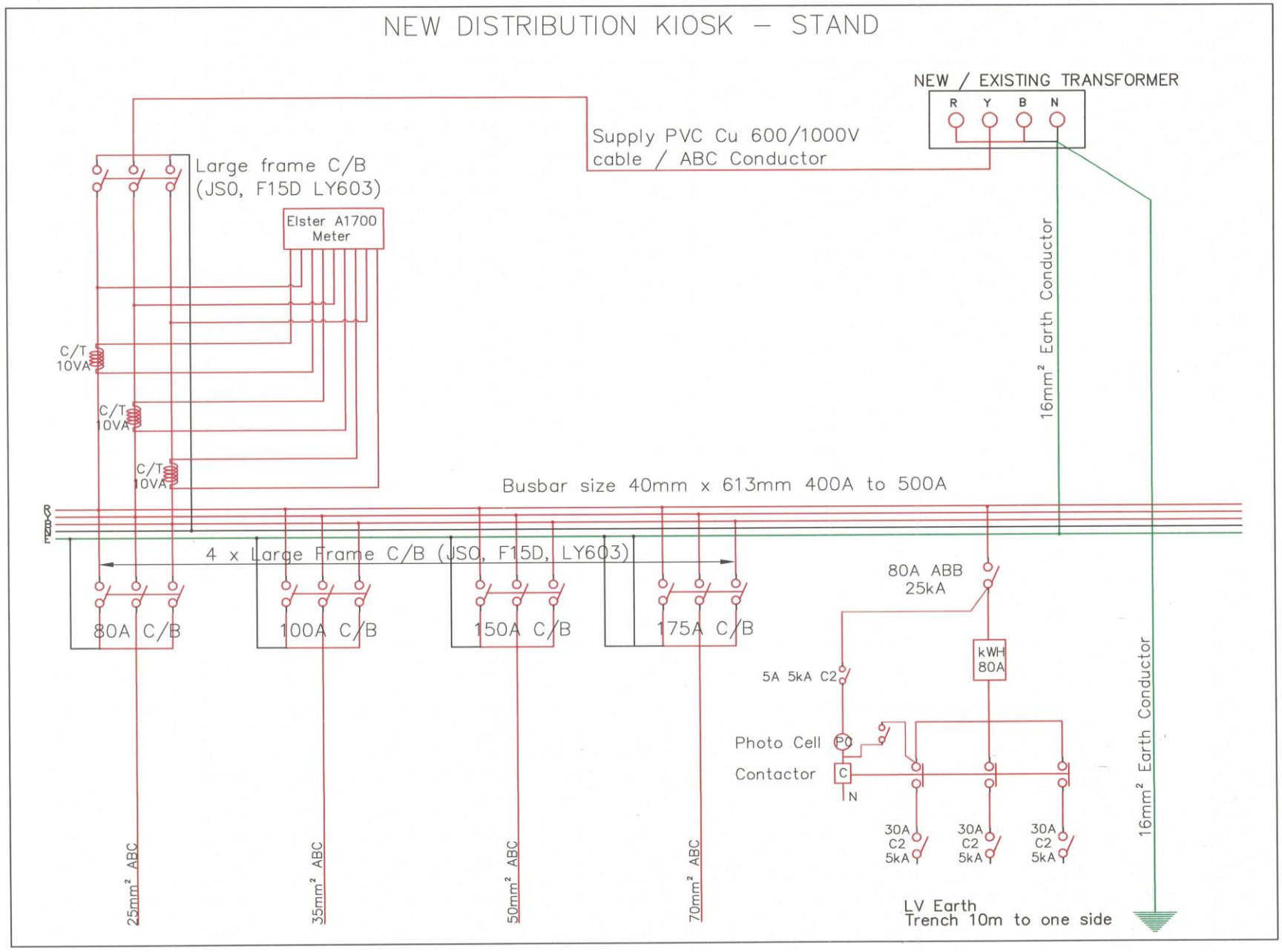
TITLE	OFF-LINE 200-250 TRF STRUCTURE (Low Cost) (4 of 5)
DESCRIPTION	OFF-Line OR Vertical Strain 200-250 315kVA Transformator Structure

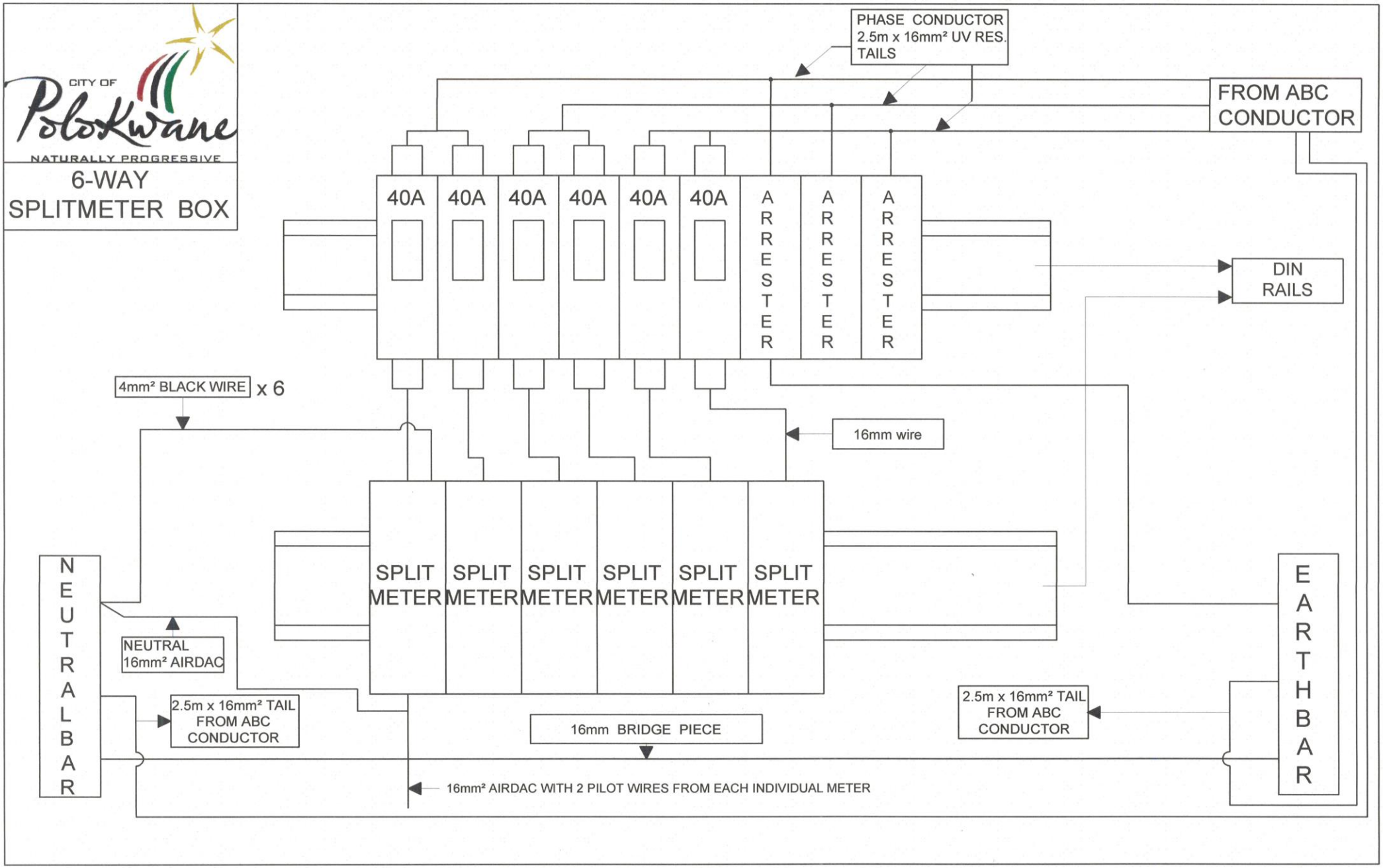
VERTICAL STRAIN STRUCTURE



OFF-LINE STRUCTURE



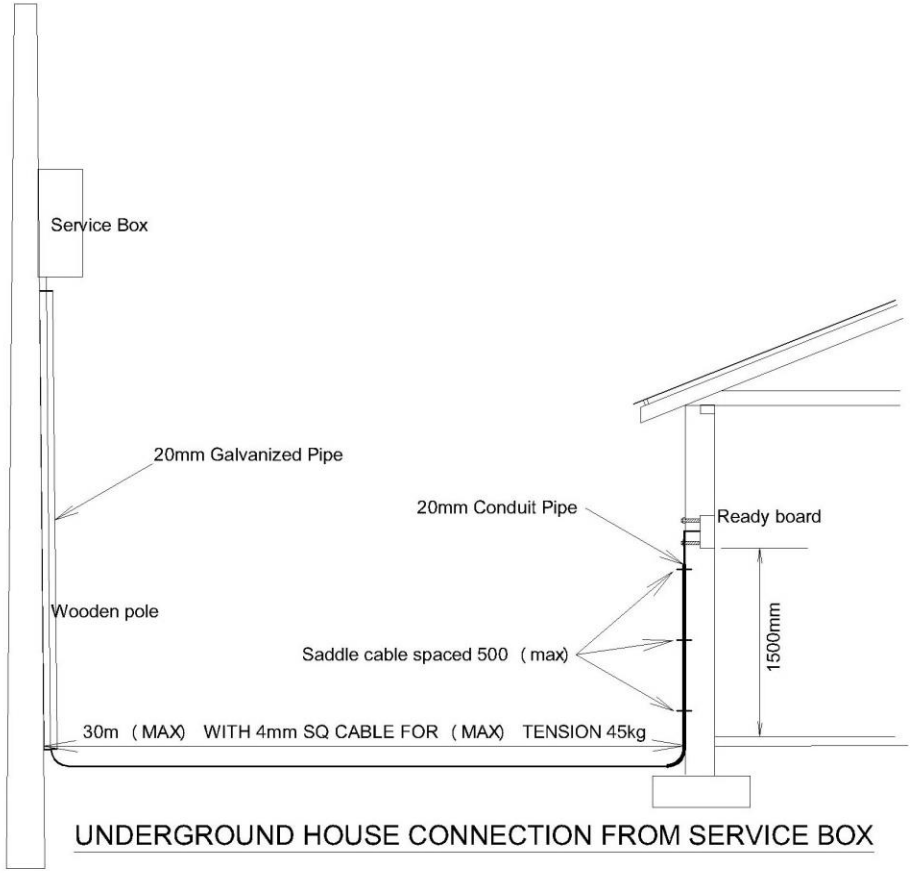

NEW DISTRIBUTION KIOSK – STAND
NEW / EXISTING TRANSFORMER
R Y B N
Supply PVC Cu 600/1000V cable / ABC Conductor
Large frame C/B (JSO, F15D LY603)
Elster A1700 Meter
C/T 10VA
C/T 10VA
C/T 10VA
16mm² Earth Conductor
Busbar size 40mm x 613mm 400A to 500A
4 x Large Frame C/B (JSO, F15D, LY603)
80A C/B
100A C/B
150A C/B
175A C/B
80A ABB 25kA
kWH 80A
5A 5kA C2
Photo Cell PC
Contactor C
N
30A C2 5kA
30A C2 5kA
30A C2 5kA
16mm² Earth Conductor
25mm² ABC
35mm² ABC
50mm² ABC
70mm² ABC
LV Earth Trench 10m to one side


CITY OF
Polokwane
NATURALLY PROGRESSIVE
6-WAY
SPLITMETER BOX
PHASE CONDUCTOR
2.5m x 16mm² UV RES.
TAILS
FROM ABC
CONDUCTOR
40A
40A
40A
40A
40A
40A
ARRESTER
ARRESTER
ARRESTER
DIN
RAILS
4mm² BLACK WIRE x 6
16mm wire
SPLIT METER
SPLIT METER
SPLIT METER
SPLIT METER
SPLIT METER
SPLIT METER
NEUTRAL BAR
NEUTRAL
16mm² AIRDAC
2.5m x 16mm² TAIL
FROM ABC
CONDUCTOR
16mm BRIDGE PIECE
2.5m x 16mm² TAIL
FROM ABC
CONDUCTOR
EARTH BAR
16mm² AIRDAC WITH 2 PILOT WIRES FROM EACH INDIVIDUAL METER

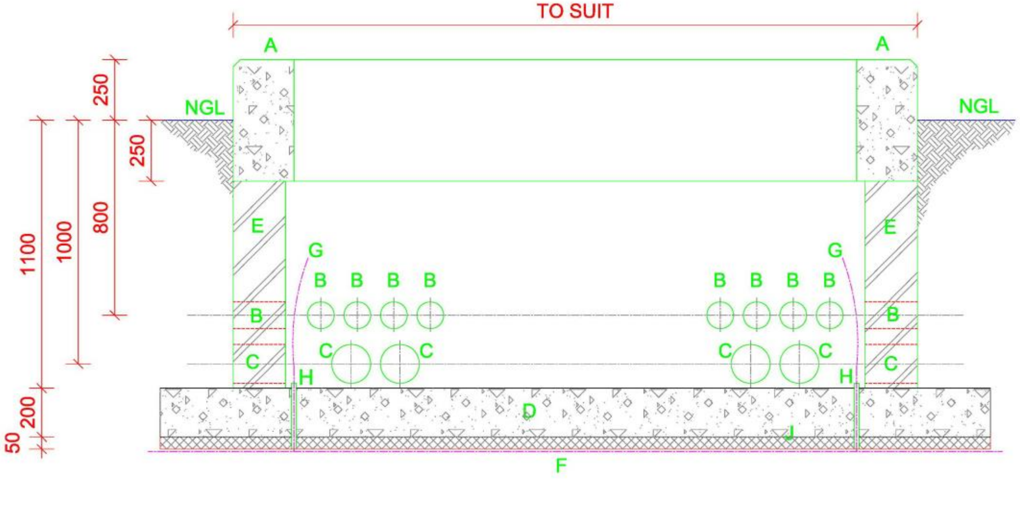
POLOKWANE MUNICIPALITY

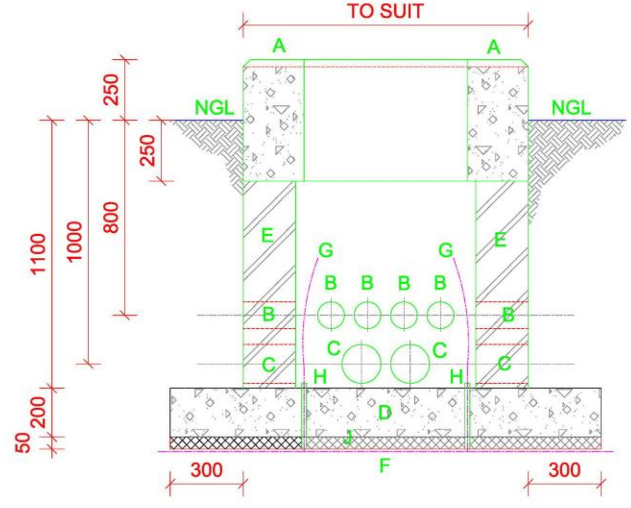
Subject to tender

TITLE	LV-SERVICE CONNECTION (E) (11 of 11)
DESCRIPTION	Service connection to house



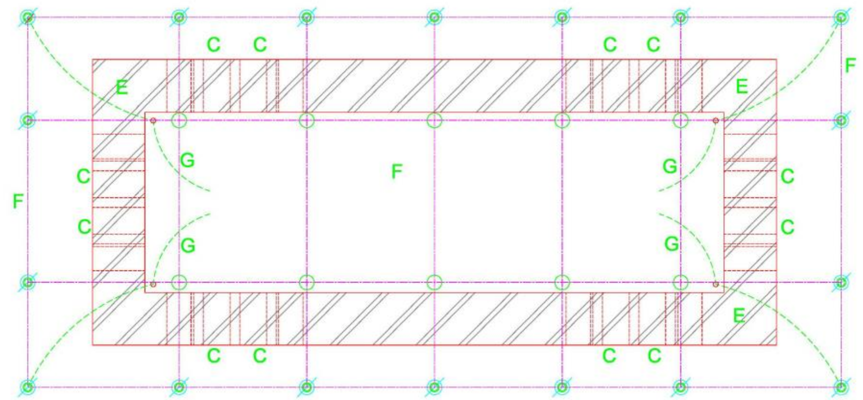
UNDERGROUND HOUSE CONNECTION FROM SERVICE BOX





INFORMATION

MINISUB FOUNDATION
LAY-OUT



HYDRAULICALLY CRIMPED T - FERRULES

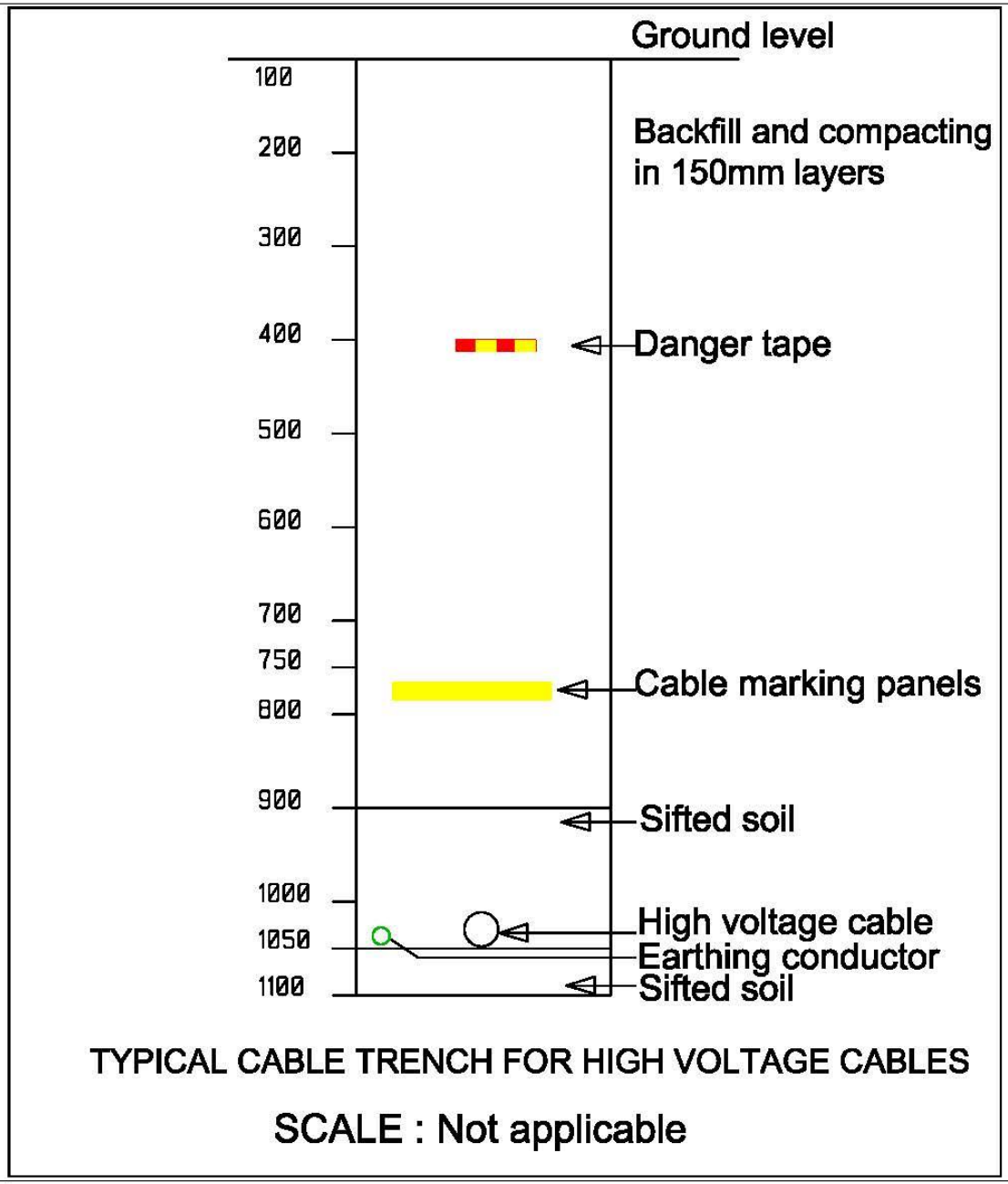
COPPER WIRE BIND

70mm BARE STRANDED COPPER CONDUCTOR.

NOTES OF CONSTRUCTION

A. CONCRETE PLINTH.
B. 4x110mmØ CABLE SLEEVES.
C. 2x160mmØ CABLE SLEEVES.
D. CONCRETE FOUNDATION 200mm THICK.
E. BRICK WORK WITH BRICK FORCE INSTALLED EVERY SECOND LAYER.
F. COPPERWIRE EARTH MAT (70mm)
G. COPPERWIRE JUMPERS TO MINIATURE SUB-STATION EARTHBAR. (70mm)
H. 20mmØ CONDUIT FOR COPPER WIRE JUMPER ACCESS
J. 50mm THICK DAMPENED COMPACTED SOIL

DETAIL OF MINIATURE SUBSTATION BASE WITH EARTHMAT



TYPICAL CABLE TRENCH FOR HIGH VOLTAGE CABLES

SCALE : Not applicable

INFORMATION

DRAWN | CHECKED

DESIGNED | APPROVED

PROJECT LEADER | DATE

AS BUILT | DATE

CITY OF Polokwane

NATURALLY PROGRESSIVE

RECOMMENDED | DATE

APPROVED | DATE

PROJECT TITLE

TYPICAL TRENCH FOR MEDIUM VOLTAGE CABLES

SCALE: N/A

DEPT. PLAN NO.

MV TRENCH

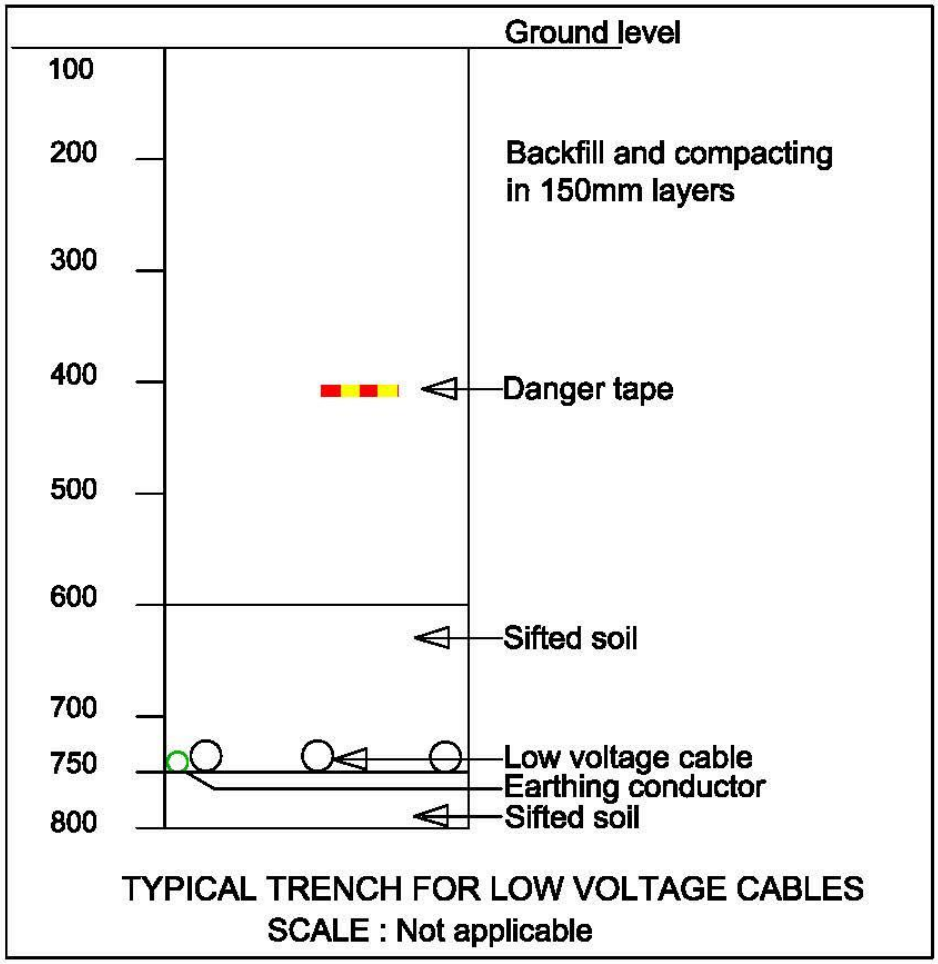
SHEET 1 OF 1

INFORMATION

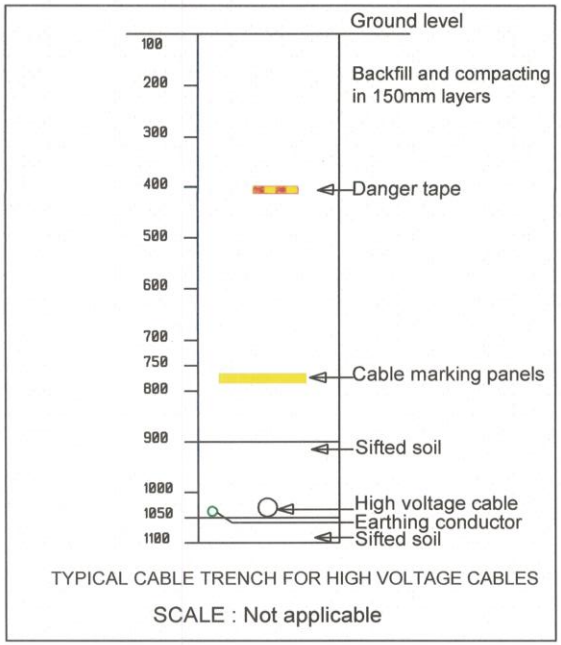
CITY OF Polokwane
NATURALLY PROGRESSIVE

TYPICAL TRENCH FOR LOW VOLTAGE CABLES

SCALE: N/A
DEPT. PLAN NO.: LV_TRENCH
SHEET 1 OF 1

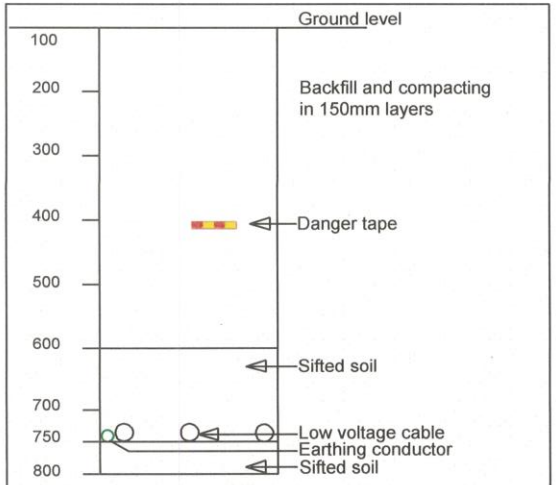


TYPICAL TRENCH FOR LOW VOLTAGE CABLES
SCALE : Not applicable



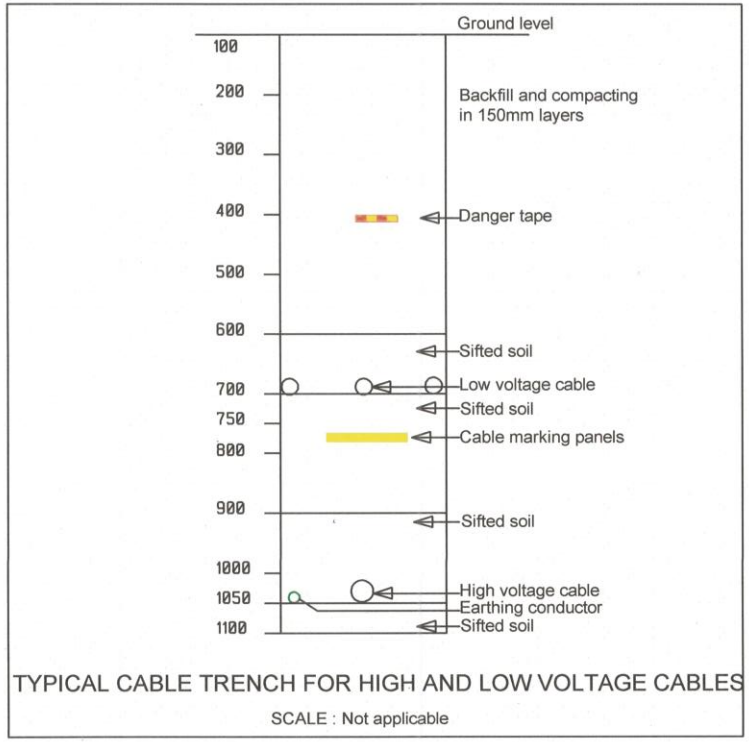
TYPICAL CABLE TRENCH FOR HIGH VOLTAGE CABLES

SCALE : Not applicable



TYPICAL TRENCH FOR LOW VOLTAGE CABLES

SCALE : Not applicable



TYPICAL CABLE TRENCH FOR HIGH AND LOW VOLTAGE CABLES

SCALE : Not applicable

INFORMATION

DRAWN	CHECKED
DESIGNED	APPROVED
PROJECT LEADER	DATE
AS BUILT	DATE

CITY OF Polokwane
NATURALLY PROGRESSIVE

RECOMMENDED	DATE
APPROVED	DATE

PROJECT TITLE
TYPICAL TRENCH FOR HIGH & LOW VOLTAGE CABLES

SCALE: N/A

DEPT. PLAN NO.
MV & LV TRENCH

SHEET 1 OF 1