ELECTRICITY

HV OPERATIONS

PROCUREMENT DOCUMENT

PROFESSIONAL SERVICES

CONTRACT No: E.9717

TITLE: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Issued by: ELECTRICITY

Date of Issue: June 2021

Document Version : 01/04/2021

NAME OF TENDERER : .....

INDEX

PART T1 : TENDERING PROCEDURES
T1.1 : TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited for the works to to install high and medium voltage cables including the associated pilot and/or fibre optic ducts as required.

The scope of the contract covers the laying of high and medium voltage cables for:

a) Cable fault repairs; and

b) Minor existing route diversions.

The Employer is the eThekwini Municipality as represented by:	Deputy Head : HV OPERATIONS

Tenders must be submitted on official tender documentation issued (either in hard copy or in electronic format) by the eThekwini Municipality.

- Electronically downloaded documentation is obtainable from the National Treasury's eTenders website or the eThekwini Municipality's Vendor Portal. The entire document should be printed and suitably bound by the tenderer.

A non-refundable tender charge is payable by bank guaranteed cheque made out in favour of the Employer, or cash, and is required on collection of the tender documents:	Nil
(F.2.7) There will be a **Non-compulsory clarification meeting** and site inspection with representative(s) of the Employer:	**The non compulsory clarrificacation meeting will** be held virtually on Microsoft Teams. Bidders who wish to attend the clarification meeting shall send an email to Mbusiseni Kubheka (KubhekaM@elec.durban.gov.za) and copy Siboniso Mngomezulu (MngomezuluS@elec.durban.gov.za) requesting to attend the clarification meeting. The subject of the email shall be "Request to Attend Non Compulsory Clarification Meeting for Tender E.9717". The email shall provide the following; • Name of the bidder, • Name of the bidders representative, • Email address to which the invitation must be sent. The request shall be sent on or before Friday, 18 June 2021. Invitations for a non compulsory clarification meeting to be held on 25 June 2021 will be sent to bidders who sent their requests by 18 June 2021 ONLY. Bidders are requested to submit email queries related to the bid. All email queries are to be submitted by 2021-06-28. Email questions and answers will be consolidated and posted on eTenders/Municipal website for the benefit of all tenderers by 2021-07-01 25 June 2021

	10:00
(F.1.4) Queries relating to these documents, up to 3 days prior to the close of tenders, may be addressed to the Employer's agent whose contact details are:	Mbusiseni Kubeka 031 322 1100 (t) mbusiseni.kubeka@durban.gov.za
(F.2.13) Tender offers shall be delivered to:	Municipal Building, 166 K.E. Masinga Road (formerly Old Fort Road) DURBAN **and placed in the tender box located in the ground floor foyer**
(F.2.15) Tender offers shall be delivered:	on or before Friday, 09 July 2021 at or before 11:00

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

PART T1 : TENDERING PROCEDURES
T1.2: TENDER DATA

T1.2.1 STANDARD 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 (July 2015) as published in Government Gazette No 38960, Board Notice 136 of 10 July 2015.

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

T1.2.2 TENDER DATA

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

F.1.1 **The employer :** The Employer for this Contract is the eThekwini Municipality as represented by: Electricity Unit

F.1.2 **Tender documents:** The Tender Documents issued by the Employer comprise the documents as per the INDEX of this Tender Document.

Tenders must be submitted on official tender documentation issued (either in hard copy or in electronic format) by the eThekwini Municipality.

- Electronically downloaded documentation is obtainable from the National Treasury's eTenders website or the eThekwini Municipality's Vendor Portal. The entire document should be printed and suitably bound by the tenderer.

In addition, Tenderers are advised in their own interest, to obtain their own copies of the following acts, and regulations or standard documents, referred to in the this document:

- The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations 2014.
- The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (January 2017).
- The Construction Industry Development Board Act No 38 of 2000 and the Regulations (2013)
- CIDB Standard for Uniformity in Construction Procurement (July 2015).
- The Employer's current Supply Chain Management Policy.

F.1.4 **The employer's agent :** The Employer's agent is :

Name : Mbusiseni Kubeka
Tel : 031 322 1100 (t)
Email : mbusiseni.kubeka@durban.gov.za

F.2.1 **Eligibility :** A Tenderer will not be eligible to submit a tender if:

(a) the Tenderer submitting the tender is under restrictions or has principals who are under restriction to participate in the Employer's procurement due to corrupt of fraudulent practices;

(b) the Tenderer does not have the legal capacity to enter into the contract;

(c) The Tenderer does not comply with the legal requirements stated in the Employer's current SCM Policy;

(d) The Tenderer cannot demonstrate that it possesses the necessary expertise and competence, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract;

(e) The Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.

(f) at the time of closing of tenders, the Tenderer is not registered on the National Treasury Central Supplier Database (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture.

(g) If the tenderer is required by law to prepare annual financial statements for auditing, the tenderer must submit their audited annual financial statements:

i) for the past three years; or

ii) since their establishment if established during the past three years;

If the tenderer is not required by law to prepare audited financial statements, then the tenderer must submit a Public Interest (PI) Score, whereby if the PI score is above 350 points then the bidder must submit audited financial statements.

F.2.2.2 **The cost of the tender documents:**

Documents may be obtained, free of charge, in electronic format, from the National Treasury's eTenders website or the eThekwini Municipality's Vendor Portal. The entire electronically downloaded document should be printed and suitably bound by the tenderer.

F.2.7 **Clarification meeting :** The arrangements for a non compulsory clarification meeting are :

Place : The non compulsory clarrificacation meeting will be held virtually on Microsoft Teams. Bidders who wish to attend the clarification meeting shall send an email to Mbusiseni Kubheka (KubhekaM@elec.durban.gov.za) and copy Siboniso Mngomezulu (MngomezuluS@elec.durban.gov.za) requesting to attend the clarification meeting. The subject of the email shall be "Request to Attend Non Compulsory Clarification Meeting for Tender E.9717". The email shall provide the following;

- Name of the bidder,
- Name of the bidders representative,
- Email address to which the invitation must be sent.

The request shall be sent on or before Friday, 18 June 2021. Invitations for a non compulsory clarification meeting to be held on 25 June 2021 will be sent to bidders who sent their requests by 18 June 2021 ONLY. Bidders are requested to submit email queries related to the bid. All email queries are to be submitted by 2021-06-28. Email questions and answers will be consolidated and posted on eTenders/Municipal website for the benefit of all tenderers by 2021-07-01

Date : 25 June 2021

Time : 10:00

F.2.13 **Submitting a tender offer :** The following applies to this tender

- **F.2.13.3:** Tender offers shall be submitted as an original only;
- **F.2.13.5:** Identification details to be shown on each tender offer package, are: Contract No., Contract Title, Tenderers Name, Contact Address;
- **F.2.13.9 :** Telephonic, telegraphic, telex, facsimile, posted or e-mailed tender offers will not be accepted.

If registered on the eThekwini Municipality's Vendor Portal, tender submissions can be made electronically via URL: https://ethekwinivendor.durban.gov.za/tenders/availabletenders/

F.2.15 **Closing time :** The closing time and the address for delivery of tender offers is :

Closing Date :	on or before Friday, 09 July 2021
Closing Time :	at or before 11:00
Delivery Address :	Municipal Building, 166 K.E. Masinga Road (formerly Old Fort Road) DURBAN

F.2.16 **Tender offer validity :** The Tender Offer validity period is 84 Days from the closing time for submission of tenders.

F.2.23 **Certificates :** Refer to Part T2.1.2 for a listing of certificates that must be provided with the tender.

F.3.4 **Opening of Tender Submissions :** Tenders will be opened immediately after the closing time for tenders. No public reading of tenders.

F.3.11 **Evaluation of Tender Offers :** The procedure for evaluation of responsive Tender Offers will be in accordance with the eThekwini Municipality's current SCM Policy, the Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (January 2017).

- The procedure for the evaluation of responsive tenders is **Method 2**;
- The **80/20** preference points system will be used where the financial value (incl. VAT) of one or more responsive tender offers have a value that equals or is less than R 50,000,000. The Formula used to calculate the **Price Points** will be that in F.3.11.3.4(a) and the **Preference Points** will be allocated according to the 2017 PPPFA Regs.
- The minimum number of evaluation points for Functionality is **70.**
- The Functionality criteria and maximum score in respect of each of the criteria are as follows:

Functionality Criteria	Subcriteria	Maximum Number of Points	Threshold Limit of Weighting
Tenderer's experience	Details of Tenderer's involvement in projects of 11 kV to 132 kV cable installation with local stakeholders. Tenderers shall highlight their years of experience with work of a similar nature and the number of projects undertaken within the last 10 years in this regard.	30	21
Proposed organisation and staffing	Details of key staff that comprise of the Supervisors and Cable Layers. Details of administrative headquarters, site offices, depots, etc shall also be highlighted with the respective personnel in charge.	10	7
Experience of key staff	Experience of key staff such as the Supervisors and Cable Layers with respect to their qualifications, experience and involvement of projects of a similar nature shall be highlighted as called for in this schedule.	30	21
Plant and equipment owned by tenderer	Details of plant and equipment owned by Tenderer to assist in the execution of tasks as mentioned in the scope of work shall be provided. The condition of the equipment and storage facilities shall also be assessed.	30	21
Maximum possible score for quality (Ms)		100	70

- Each evaluation criteria will be assessed in terms of five indicators – no response, poor, satisfactory, good and very good. Scores of 0, 40, 70, 90 or 100 will be allocated to no response, poor, satisfactory, good and very good, respectively;

Level	Score	Prompt for judgement
0	0	Failed to address the question / issue
1	40	Less than acceptable – response / answer / solution lacks convincing evidence of skill / experience sought or medium risk that relevant skills will not be available.
2	70	Acceptable response / answer / solution to the particular aspect of the requirements and evidence given of skill / experience sought
3	90	Above acceptable – response / answer / solution demonstrating real understanding of requirements and evidence of ability to meet it.
4	100	Excellent – response / answer / solution gives real confidence that the tenderer will add real value.

- Functionality shall be scored by not less than three evaluators in accordance with the following schedules:
  - Evaluation Schedule: Tenderer's Experience
  - Evaluation Schedule: Proposed Organisation and Staffing
  - Evaluation Schedule: Experience of Key Staff
  - Evaluation Schedule: Plant and Equipment Owned by Tenderer

F.3.13 **Acceptance of tender offer :** In addition to the requirements of Clause F.3.13 of the Standard Conditions of Tender, tender offers will only be accepted if:

(a) The tenderer submits a valid Tax Clearance Certificate OR Tax Compliance Status PIN, issued by the TCS System of the South African Revenue Services, or has made arrangements to meet outstanding tax obligations;

(b) The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;

(c) The tenderer has not:
  - Abused the Employer's Supply Chain Management System; or
  - Failed to perform on any previous contract and has been given a written notice to this effect;

(d) The tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process;

(e) The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound to provide any quantities stipulated in the specification.

F.3.18 **Copies of contract :** The number of paper copies of the signed contract to be provided by the Employer is ONE.

The additional conditions of tender are:

F.2.6 Acknowledge addenda

Acknowledgement of receipt will be by the return of the relevant completed and signed portion of the addenda, to the address / fax number / email address as specified on the addenda. Failure of the tenderer to comply with the requirements of the addenda may result in the tender submission being made non-responsive.

F.2.24 Appeals

In terms of Regulation 49 of the Municipal Supply Chain Management Regulations persons aggrieved by decisions or actions taken by the Municipality, may lodge an appeal within 14 days of the decision or action, in writing to the Municipality. All appeals (clearly setting out the reasons for the appeal) and queries with regard to the decision of award are to be directed to:

The City Manager
Attention Ms S. Pillay eMail: Simone.Pillay@durban.gov.za
P O Box 1394
DURBAN
4000

F2.25 **Prohibition on awards to persons in the service of the state**

Clause 44 of the Supply Chain Management Regulations states that the Municipality or Municipal Entity may not make any award to a person:

(a) Who is in the service of the State;
(b) If that person is not a natural person, of which a director, manager, principal shareholder or stakeholder is a person in the service of the state; or
(c) Who is an advisor or consultant contracted with the municipality or a municipal entity.

Should a contract be awarded, and it is subsequently established that Clause 44 has been breached, the Employer shall have the right to terminate the contract with immediate effect.

F.2.26 **Code of Conduct and Local Labour**

The Tenderers shall make themselves familiar with the requirements of the following policies that are available on web address: ftp://ftp.durban.gov.za/cesu/StdContractDocs/:

- Code of Conduct;
- The Use of CLOs and Local Labour.

PART T2 : RETURNABLE DOCUMENTS
T2.1 : LIST OF RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

T2.1.1 General

The Tender Document must be submitted as a whole. All forms must be properly completed as required, and the document shall not be taken apart or altered in any way whatsoever.

The Tenderer is required to complete each and every Schedule and Form listed below to the best of his ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the Schedules and Forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is not responsive. The same applies to the Targeted Procurement Schedules.

T2.1.2 Returnable Schedules, Forms and Certificates

T2.1.3 Preferential Procurement Schedules and Affidavits

In the event of the Tenderer not being registered with the eThekwini Municipality, the tenderer must register on the internet at www.durban.gov.za by following these links:

- eThekwini Municipality
  - City Government
    - Administration
      - Administrative Clusters
        - Finance
          - Supply Chain Management
            - Accredited Supplier and Contractor's Database.

NOTES

(a) The information for registration as in the possession of the eThekwini Municipality will apply.

(b) It is the Tenderer's responsibility to ensure that the details as submitted to the Municipality are correct.

(c) Tenderers are to register prior to the submission of tenders.

T2.2 : RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

The returnable schedules, forms, and certificates as listed in T2.1.2 can be found on the pages **Error! Bookmark not defined.** to 38

CERTIFICATE OF AUTHORITY

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

(I) COMPANY	(II) CLOSE CORPORATION	(III) PARTNERSHIP	(IV) JOINT VENTURE	(V) SOLE PROPRIETOR

Tenderers are to attach Company / Close Corporation / Partnership / Joint Venture / Sole Proprietor registration certificates.

In the case of a Joint Venture, the Joint Venture Agreement and power of attorney are to be attached.

In the case of one-man concerns, ID certificates are to be attached.

(I) CERTIFICATE FOR COMPANY

I, ..., chairperson of the Board of Directors of

....., hereby confirm that by resolution of the Board (copy attached) taken on

..... 20....., Mr/Ms ....., acting in the capacity of

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

Chairman : .....

Date : .....

As Witnesses : 1. ..... 2. .....

(II) CERTIFICATE FOR CLOSE CORPORATION

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

..... hereby authorise Mr/Ms .....,

acting in the capacity of ....., to sign all documents in connection

with the tender for Contract No. ..... and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

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

(III) CERTIFICATE FOR PARTNERSHIP

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

..... hereby authorise Mr/Ms .....,

acting in the capacity of ....., to sign all documents in connection

with the tender for Contract No. ..... and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

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

(IV) CERTIFICATE FOR JOINT VENTURE

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize Mr/Ms ..... , authorized signatory of the company, ... acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract No. ..... and any contract resulting from it on our behalf.

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

NAME	ADDRESS	SIGNATURE	DATE

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

(V) CERTIFICATE FOR SOLE PROPRIETOR

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

Signature of Sole owner : .....

Date : .....

As Witnesses : 1. .....

2. .....

DECLARATION OF MUNICIPAL FEES

I, the undersigned, do hereby declare that the Municipal fees of

.....
(full name of Company / Close Corporation / partnership / sole proprietary/Joint Venture)

(hereinafter referred to as the TENDERER) are, as at the date hereunder, fully paid or an Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in instalments.

The following account details relate to property of the said TENDERER:

Account	Account Number: to be completed by tenderer.
Consolidated Account No.	
Electricity	
Water	
Rates	
JSB Levies	
Other	
Other	

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears. ATTACHED, to the back inside cover of this document, please find copies of the above account's and or agreements signed with the municipality.

- Where the TENDERER'S place of business or business interests are outside the jurisdiction of eThewini municipality, a copy of the accounts/agreements from the relevant municipality must be attached (to the back inside cover of this document).
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or official letter to that effect is to be attached (to the back inside cover of this document).

NAME : ..... (Block Capitals)

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

COMPULSORY ENTERPRISE QUESTIONNAIRE

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

1) **Name of enterprise**: .....

2) **VAT registration number**, if any: .....

3) **CIDB registration number**, if any: .....

4) **Particulars of sole proprietors and partners in partnerships**

Full Name	Identity number*	Personal income tax number *

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

5) **Particulars of companies and close corporations**

Company registration number, if applicable: .....

Close corporation number, if applicable: .....

Tax Reference number, if any: .....

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

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

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 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 warrant that he/she is duly authorised to do so on behalf of the enterprise:

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

ii) confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercise, 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 of partly 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 bidders or those responsible for compiling the scope of work that could cause or be intrepreted as a conflict of interest;

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 ……

MBD 2 : TAX CLEARANCE CERTIFICATE REQUIREMENTS

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

1) In order to meet this requirement bidders are required to complete the TCC 001 : "Application for a Tax Clearance Certificate" form and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.

2) SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.

3) The original Tax Clearance Certificate must be submitted together with the bid (attached to the inside back cover of this procurement document). Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.

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

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

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

7) Notwithstanding Clauses 1) to 6) above; since 18 April 2016, SARS has introduced a new Tax Compliance Status System (TCS). As part of this enhanced system, tenderers can now submit a Tax Compliance Status PIN instead of an original Tax Clearance Certificate (TCC). This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.
For further particulars please contact your nearest SARS branch, or call the SARS Contact Centre on 0800 00 7277, or log onto SARS eFiling.

Attach a valid Tax Clearance Certificate OR Tax Compliance Status PIN, issued by the TCS System of the South African Revenue Service, to the inside back cover of this procurement document

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 authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.

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 ID Number of bidder or his or her representative .....

3.3 Position occupied in the enterprise (dir, trustee, shareholder[2]) .....

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 / sole proprietors / partners in partnerships, 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 .....

.....

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 .....

.....

[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.

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

3.11 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 directors, 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	Personal income tax number *

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

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

Enterprise Name .....

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.

		Tenderers are to circle applicable	
1.0	Are you by law required to prepare annual financial statements for auditing?	YES	NO
1.1	If YES, you will be required to submit audited annual financial statements (on request during the tender evaluation period) for the past three years or since the date of establishment if established during the past three years.		
2.0	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?	YES	NO
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 on a letterhead. (Attach this letter to the back inside cover of this document).		
3.0	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, provide particulars on a letterhead. (Attach this letter to the back inside cover of this document).		
4.0	Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?	YES	NO
4.1	If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this document).		
5.0	If the tenderer is not required by law to prepare audited financial statements, then the tenderer must submit a Public Interest (PI) Score, whereby if the PI score is above 350 points then the bidder must submit audited financial statements.		

I, the undersigned, 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.

NAME : ..... (Block Capitals)

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

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

MBD 6.1 (Reduced) : PREFERENCE POINTS CLAIM ITO THE PREFERENTIAL REGULATIONS)

1.0 GENERAL

1.1 Preference points for this tender shall be awarded as per the Tender Data (T1.2.2 – F.3.11) and the Preferential Procurement Regulations (2017).

1.2 Failure on the part of a tenderer to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Sworn Affidavit for an EME, or sworn affidavit for a QSE (in line with the revised BBBEE codes of Good Practice), together with the bid will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

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

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

Attach the B-BBEE Verification Certificate to the inside back cover of this document.

2.0 DECLARATION

2.1 B-BBEE Status Level of Contribution claimed: ……..……..
(tenderer to complete)

2.2 Will any portion of the contract be sub-contracted? (circle applicable) YES / NO

2.2.1 If YES, indicate:

(i) what percentage of the contract will be subcontracted? .....……..…%
(tenderer to complete)

(ii) the name of the sub-contractor? ……..
(tenderer to complete)

(iii) the B-BBEE status level of the sub-contractor? ……..
(tenderer to complete)

(iv) whether the sub-contractor is an EME? (circle applicable) YES / NO

2.3 I / we, the undersigned, certify that the B-BBEE status level of contribution indicated in paragraph 2.1 above qualifies the company / firm for preference points and I / we acknowledge that the remedies as per Clause 14 of the Preferential Procurement Regulations (2017) shall apply.

NAME : ..... (Block Capitals)

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

MBD8 : DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

This Municipal Bidding Document must form part of all bids invited. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

The bid of any bidder may be rejected if that bidder, or any of its directors have:

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

In order to give effect to the above, the following questionnaire must be completed.

		Tenderers are to circle applicable
1)	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer / Authority of the institution that imposed the restriction after the audi alteram partem rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page. If yes, furnish particulars ……. ……..…..	YES NO
2)	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page. If yes, furnish particulars ……. ……..…..	YES NO
3)	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	YES NO

Tenderers are to circle applicable

If yes, furnish particulars

……..……..

……..…..

4) Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months? YES NO

If yes, furnish particulars

……..……..

……..…..

5) Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract? YES NO

If yes, furnish particulars

……..……..

……..…..

I, the undersigned, certify that the information furnished on this declaration form true and correct. I accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

NAME : ..... (Block Capitals)

SIGNATURE : ……..…… DATE: .....

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

MBD9 : CERTIFICATE OF INDEPENDENT BID DETERMINATION

This Municipal Bidding Document (MBD) must form part of all bids[1] invited.

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.

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.

The following 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.

In order to give effect to the above, the following 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, in response to the invitation for the bid made by the Electricity Unit eThekwini Municipality : ELECTRICITY UNIT, do hereby make the following statements that I certify to be true and complete in every respect:

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

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

   a) prices;
   b) geographical area where product or service will be rendered (market allocation);
   c) methods, factors or formulas used to calculate prices;
   d) the intention or decision to submit or not to submit, a bid;
   e) the submission of a bid which does not meet the specifications and conditions of the bid;
   f) bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

NAME : ..... (Block Capitals)

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

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

TENDERER'S EXPERIENCE

Tenderers shall provide details of previous experience with key local stakeholders. Details of similar type of work as according to the scope of work should also be provided.

Tenderers should very briefly describe their experience in this regard and attach this to this schedule. Proof of participation and case studies and contact details of clients of the relevant projects must also be provided. Tenderers should include details to cover as many aspects as possible with regards to the duties highlighted in the scope of work. Only Tenderers that have had similar work exposure within the past two years will be eligible to have their bids evaluated in this regard.

The description should be put in tabular form with the following headings:

Employer, contact person and telephone number, where available	**Description of event**	**Detail of work undertaken, nature of work & value**	**Date undertaken**

The scoring of the tenderer's experience will be as follows:

(score 0)	No response or no evidence of experience submitted
Poor (score 40)	Tenderer has less than 2 years experience in relation to the scope of work and has not been involved in a minimum of 5 projects of 11 kV to 132 kV cable installation within the past 10 years.
Satisfactory (score 70)	Tenderer has relevant 2 years experience in relation to the scope of work and has dealt with at least 5 projects of 11 kV to 132 kV cable installation within the past 10 years.
Good (score 90)	Tenderer has extensive experience (more than 2 years) in relation to the scope of work and has dealt with at least 10 projects of 11 kV to 132 kV cable installation within the past 10 years.
Very good (score 100)	Tenderer has outstanding experience (more than 5 years) in relation to the scope of work and has dealt with at least 15 projects of 11 kV to 132 kV cable installation within the past 10 years.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

NAME : ..... (Block Capitals)

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

PROPOSED ORGANISATION AND STAFFING

The tenderer should propose the structure and composition of their team i.e. the main operational areas involved, the key staff member / expert responsible for each area, and the proposed technical and support staff. The roles and responsibilities of each key staff member / expert should be set out as brief job descriptions. In the case of an association / joint venture / consortium, it should, indicate how the duties and responsibilities are to be shared. The tenderer must also indicate where key personnel are based. It is a requirement that a Supervisor and Cable Layer have residence within the eThekwini region. Proof of residence must be attached.

Tenderers are also required to provide details of their admininstrative headquarters, branches, offices, etc. Details of a contact person of whom is available at all times during the working day shall also be provided on the team structure.

The tenderer must attach his / her organisation and staffing proposals to this page.

The scoring of the proposed organisation and staffing will be as follows:

(score 0)	No response or no documents submitted
Poor (score 40)	The organisation chart is sketchy, the staffing plan is weak in important areas. There is no clarity in allocation of tasks and responsibilities. None of the key staff (Supervisor and Cable Layer) are locally based or cannot provide required key staff.
Satisfactory (score 70)	The organisational chart is complete and detailed, the technical level and composition of the staffing arrangements are adequate. Provision has been made for at least one Supervisor and one Cable layer which are locally based.
Good (score 90)	Besides meeting the "satisfactory" rating, staff are well balanced i.e. they show good co-ordination, complimentary skills, clear and defined duties and responsibilities. Provision has been made for a one Supervisor and two Cable Layers. The Supervisor and Cable Layers are locally based.
Very good (score 100)	Besides meeting the "good" rating, the proposed team is well integrated and the key staff members have worked together extensively in the past. Provision has been made for one Supervisor and more than 2 Cables Layers. Key staff and establishment are entirely locally based.

NAME : ..... (Block Capitals)

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

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

PERSONNEL SCHEDULE

Name	Title	Job Description	Qualifications / Years of Experience	Estimated Period of Engagement (Weeks)

EXPERIENCE OF KEY STAFF

The experience of the Cable Layers and Supervisors in relation to the scope of work will be evaluated from three different points of view:

1) General experience, level of education and training and positions held of each operational area team leader.
2) The skills and experience of the assigned staff in the specific operational areas. Linked to the scope of work.
3) The key staff members' / experts' knowledge of issues which the tenderer considers pertinent to events e.g. local conditions, legislation, techniques etc.

CVs of the Cable Layers and Supervisors of **not more than 2 pages each** should be attached to this schedule: (define which CV's are required). Each CV should be structured under the following headings:

Personal particulars	Qualifications	Skills	Name of current employer and position in enterprise	Outline of recent assignments / experience that has a bearing on the scope of work

The scoring of the experience of key staff will be as follows:

Job Title	**Number of Years' Relevant Experience on projects of a similar nature**					**Total Points**
	Level 0 0 pts	Level 1 40 pts	Level 2 70 pts	Level 3 90 pts	Level 4 100 pts	
Cable Layers	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	100
Supervisors	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	100

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

NAME : ..... (Block Capitals)

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

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

PLANT AND EQUIPMENT OWNED BY TENDERER

Tenderers shall note that a minimum level of plant and equipment will be a pre-requisite for qualification under this bid enquiry as according to the scope of work. Accordingly, all Tenderers shall schedule such assets, clearly identifying the size, capacity, type, etc. Items intended for use under hire agreements or under loan, the hire or loan agreements for such items shall be attached to the bid document. The loan period shall cover the duration of the contract.

The Tenderer shall also provide details of the secure storage facilities, depots and site offices and the details of personnel in charge which is an essential requirement of the contract as per the scope of work.

The Tenderer shall list the plant and equipment owned by him and which he intends to use during the course of the contract using the form below. The minimum requirements of eThekwini Electricity are listed in the table. Failure to meet the minimum requirements will result in the rejection of the bid. The Tenderer shall also indicate any additional specialised equipment that he may own as this will influence the scoring during the evaluation of the bid. The condition of the equipment owned by the Tenderer and secure storage facilities shall also be assessed by the Engineer and will contribute to the evaluation of this schedule. The table below shall be completed and attached to this sheet. Failure to complete this form will result in the rejection of the bid.

Minimum Requirements of Items of Plant Owned by Tenderer

Items of Plant and Equipment	**eThekwini's Requirement**		**Tenderer's Offer**
Pulling socks	6 in total	2 small	
		2 medium	
		2 large	
Cable rollers	50		
Water pumps (5 kW, 7m suction head, 75 m^3/h)	3		
Compressors	2		
Jack hammers	4		
Shoring jacks	12 in total	4 small	
		4 medium	
		4 large	
Tar cutters (400 mm blade diameter)	2		
Adequate road traffic signs	20 in total, of various applicable road signs		
Specialised vehicles for transportation of plant and equipment	1 five tonne truck		
Generators	2		
Flood lights	6		
Flash lights	8		
Additional Equipment owned by bidder: (Attach to this sheet if applicable)			

NAME: ..... (Block Capitals)

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

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

PLANT AND EQUIPMENT OWNED BY TENDERER (continued)

The scoring for the plant and equipment owned by the bidder will be as follows:

(score 0)	No response or no documents submitted
Poor (score 40)	No equipment or does not meet minimum requirements. No storage facilities.
Satisfactory (score 70)	Tenderer meets the minimum requirements. Physical condition of equipment satisfactory and storage facilities are adequate and organised.
Good (score 90)	Tenderer not only meets the minimum requirement, but has a few additional pieces of specialised equipment in relation to the scope of work. The physical condition of the equipment is good and secure storage facilities are above satisfactory and well organised.
Very good (score 100)	Extensive schedule of specialised equipment over and above the minimum requirements. Equipment is well maintained and in an excellent physical condition. Ample storage facilities are available with excellent organisation

NAME: ..... (Block Capitals)

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

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

HEALTH AND SAFETY PLAN

It is a requirement of this contract, that a Health and Safety Plan, in accordance with eThekwini Electricity's Safety Rules, the Occupational Health and Safety Act 1993 and the Construction Regulations as amended, be submitted with this bid. The Health and Safety Plan must provide for the procedures and equipment necessary to undertake the scope of work specified in this bid document, in all aspects.

Failure to provide this Safety Plan, would render the submitted bid, technically non-compliant.

Additional Safety Precautions

- Contractors will be digging to depths greater than 1,5 m, so shoring is essential.
- All excavations will be done in close proximity to high voltage cables.
- Traffic regulations need to be conformed to.
- Suitable barricading is to be put in place when excavating to prevent harm to humans and animals.
- Person signalling to traffic must have been trained.

NAME: ..... (Block Capitals)

SIGNATURE: ……..……..…… DATE: .....

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

BIDDER'S JOB COMMENCEMENT AND GUARANTEES

(Note: TO BE COMPLETED IN FULL BY BIDDER)

The bidder must complete and submit the following:

1. BIDDER'S GUARANTEE:

   Do you guarantee a minimum period of notice of 2 Hours required for each particular job to commence on site?

   YES/NO *

2. MINIMUM WAGE RATES:

   Do you comply with the minimum wage rates laid down by your Industries?

   YES/NO *

3. REGISTRATION:

   Are you registered with:

   i) Electrical Industrial Council - Yes/No*
   ii) Electrical Contractors Association - Yes/No*
   iii) Department of Employment and labour –Yes/No*

* Delete that which is not applicable.

NAME: ..... (Block Capitals)

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

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

CONSTRUCTION INDUSTRY DEVELOPMENT BOARD (CIDB) GRADING

It is a requirement that only those Bidders who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a Contractor grading designation equal to or higher than 4EB/4EP are eligible to submit bids.

Joint ventures are eligible to submit tenders provided that:

a) Every member of the joint venture is registered with the CIDB;

b) The lead partner has a Contractor grading designation in the 4EB or 4EP class of construction work; and

c) The combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a or 4EB/4EP class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

Please complete the form below. Failure to furnish details may result in the bid being rejected.

No	Question	Answer	
1	Is your company registered with the CIDB?	Yes	No
2	If Yes, Class of registration:		
3	CRS Number:		

NAME: ..... (Block Capitals)

SIGNATURE: ……..……..…… DATE: .....

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

AGREEMENT WITH SCOPE OF WORK

The Tenderer is required to sign this page as a declaration to indicate that the scope of work of the contract has been read and fully understood. The Tenderer shall indicate whether or not he accepts the conditions as stated in the scope of works and can or cannot provide the services as stipulated in the scope of work.

Should the Tenderer for any reason have an alternate proposal(s) to the contents of the scope of work, this shall be added to the Ammendments, Qualification and Alternatives schedule provided it deems added value to eThekwini Electricity. The Tenderer in this case shall not accept the conditions of the scope of work.

Declaration (Please erase clause/s that are not applicable)

I, the undersigned, ...
(full name of Company /Close Corporation/Partnership/Sole Proprietary/Joint Venture)

do hereby declare that I have fully read and understood the contents of the scope of work in relation to the contract and [ACCEPT / DO NOT ACCEPT] (erase the option not applicable) the conditions thereof.

By accepting the conditions I declare that the technical specification as highlighted by the scope of work can be met in ALL regards with no deviations.

By not accepting the conditions I declare that the technical specification as highlighted by the scope of work cannot be met in any which way/s by methods as stipulated in the scope of work.

I [DO / DO NOT] (erase the option not applicable) have any alternate proposals to the conditions of the scope of work which may allow me to become technically compliant in ALL regards to the contents of the scope of work.

NAME: ..... (Block Capitals)

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

JOINT VENTURES AGREEMENTS

Joint Venture agreement and Power of Attorney Agreements to be attached here.

RECORD OF ADDENDA TO TENDER DOCUMENTS

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

ADD.No	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

NAME : ..... (Block Capitals)

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

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

AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(This is not an invitation for amendments, deviations or alternatives but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Employer).

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below :

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

Notes:

(1) Amendments to the General and Special Conditions of Contract are not acceptable;

(2) The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.

(b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

Notes:

(1) Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.

(2) In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.

(3) Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

Notes:

(1) The Tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced.

NAME : ..... (Block Capitals)

SIGNATURE : ……..……..…… DATE: .....

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

PART C1 : AGREEMENTS AND CONTRACT DATA

C1.1 : FORM OF OFFER AND ACCEPTANCE

C1.1.1 : OFFER

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

Contract No: E.9717

Contract Title: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

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

The offered total of the prices inclusive of Value Added Tax is:

R..... (*In words* .....

.....)

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

For the Tenderer:

Signature *(of person authorized to sign the tender)* **:** .....

Name *(of signatory in capitals)* **:** .....

Capacity *(of Signatory)* **:** .....

Name of Tenderer *(organisation)* **:** .....

Address : .....

: .....

Witness:

Signature : .....

Name*(in capitals)* : : .....

Date : .....

Note : Failure of a Tenderer to complete and sign this form will invalidate the tender

C1.1 : FORM OF OFFER AND ACCEPTANCE

C1.1.2 : FORM OF ACCEPTANCE

This Form will be completed by the Employer

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

The terms of the contract are contained in:

- Part C1 : Agreement and Contract Data, (which includes this Agreement)
- Part C2 : Pricing Data, including the Bill of Quantities
- Part C3 : Scope of Work
- Part C4 : Site Information

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

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

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

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

Signature *(person authorized to sign the acceptance)* **:** .....

Name *(of signatory in capitals)* **:** .....

Capacity *(of Signatory)* **:** .....

Name of Employer *(organisation)* **:** .....

Address : .....

: .....

Witness:

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

Name*(in capitals)* : : .....

C1.1 : FORM OF OFFER AND ACCEPTANCE
C1.1.3 : SCHEDULE OF DEVIATIONS

This form will be completed by THE EMPLOYER and ONLY THE SUCCESSFUL TENDERER

1. Subject : ……..

Details : ……..

: ……..

2. Subject : ……..

Details : ……..

: ……..

3. Subject : ……..

Details : ……..

: ……..

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

FOR THE TENDERER		**FOR THE EMPLOYER**
……..……..	Signature	……..……..
……..……..	Name *(in capitals)*	……..……..
……..……..	Capacity	……..……..
……..……	Name and Address of	……..……
……..	Organisation	……..
……..		……..
……..		……..
……	Witness Signature	……
……..	Witness Name	……..
……..	Date	……..

C1.2 : CONTRACT DATA

C1.2.1 CONDITIONS OF CONTRACT

C1.2.1.1 GENERAL CONDITIONS OF CONTRACT

The Conditions of Contract are the Standard Professional Services Contract (Third edition: July 2009) published by the Construction Industry Development Board. (see www.cidb.co.za - copied for ease of reference in C4.2).

The Contract Data (including variations and additions) shall amplify, modify or supersede, as the case may be, the Standard Professional Services Contract, to the extent specified below, and shall take precedence and shall govern.

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

C1.2.2 CONTRACT DATA

C1.2.2.1 DATA TO BE PROVIDED BY THE EMPLOYER

The Employer is the eThekwini Municipality as represented by : Deputy Head : Electricity Unit

3.4 & The authorised and designated representative of the Employer is: Mbusiseni Kubeka

4.3.2 The contact details of the authorised and designated representative are:

- Telephone : 031 322 1100 (t)
- e-mail : mbusiseni.kubeka@durban.gov.za

The address for the Receipt of communications is: eThekwini Electricity, 11 Electron Road (off Umgeni Road), Building 10

Springfield, Durban, 4001

1 The Project is : E.9717
: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

1 Period of Performance : **36 months**

1 Start Date : **7 days from the date of issue of letter of award.**

3.4.1 Communications by e-mail **is** permitted.

3.5 The location for the performance of the Project is : **eThekwini Electricity area of supply.**

3.6 The Service Provider may not release public or media statements or publish material related to the Services or Project under any circumstances.

3.9.2 The time-based fees used to determine changes to the Contract Price are as stated in the Pricing Data.

3.12 The penalty per Day payable is : **5% of the work order estimate subject to a maximum amount of 35% of the work order estimate.**.

3.16 The time-based fees shall not be adjusted for inflation.

4.3.1(d) The Service Provider is not required to assist in the obtaining of approvals, licenses and permits from the state, regional and municipal authorities having jurisdiction over the Project.

5.4.1 The Service Provider is required to provide Professional indemnity in an amount as set out in the Professional Indemnity Schedule.

1. Insurance against : **Third Party**
Cover is : **R 1 500 000,00**
Period of cover : **from the date of commencement of the contract until the expiration of the contract period.**

2. Insurance against : **Material Loss or Damage**
Cover is : **R 500 000,00**
Period of cover : **from the date of commencement of the contract until the expiration of the contract period.**

7.2 The Service Provider is required to provide personnel in accordance with the provisions of clause 7.2 and to complete the Personnel Schedule.

8.1 The Service Provider is to commence the performance of the Services within **1 Day** of date that the Contract becomes effective.

8.2.1 The Contract is concluded when : **a period of 36 months has passed from the date that the contract became effective.**

8.4.3(c) The period of suspension under clause 8.5 is not to exceed **2 months**.

9.1 Copyright of documents prepared for the Project shall be vested with the **Employer**.

11.1 A Service Provider may subcontract any work which he has the skill and competency to perform.

12.1 Interim settlement of disputes is to be by **Mediation**.

12.2/3 Final settlement is by **Arbitration**.

12.2.1 In the event that the parties fail to agree on a mediator, the mediator is nominated by : **Deputy Head: HV Operations**.

12.4.1 In the event that the parties fail to agree on an arbitrator, the arbitrator is nominated by: **Head: Electricity Unit**.

13.1.3 All parties in a joint venture or consortium shall carry a minimum professional indemnity insurance of **R2 000 000,00**.

13.4 Neither the Employer nor the Service Provider is liable for any loss or damage resulting from any occurrence unless a claim is formally made within **24 months** from the date of termination or completion of the Contract.

13.5.1 The provisions of 13.5 do not apply to the Contract.

13.6 The provisions of 13.6 do not apply to the Contract.

15 The interest rate will be prime interest rate of the Employers bank at the time that the amount is due.

The additional conditions of contract are:

ACC1 **PERFORMANCE MONITORING OF SERVICE PROVIDERS**

For contract awards that are greater than R10m, the Service Provider shall be subjected to "Performance Monitoring" assessments in terms of the applicable Section of the Council's current Supply Chain Management Policy.

ACC2 **EMPOWERMENT INITIATIVE**

It is a condition of contract that the Professional Service Provider / Civil Engineering Consultant must allow for a minimum of 20% of the contract value (excluding PC Sum and Fixed Cost allowances) to be subcontracted to persons who are >76% PPG (Priority Population Group) owned. Proof of payment to the subcontractors will be required to verify that the minimum has been achieved.

To achieve the above requirement, the contractor shall subcontract the following items, but not limited to. Refer to the pricing schedule:

1.13. Transport and dumping of material not suitable for backfill: tar, rock, concrete, soil, etc.
1.17. Bush clearing (including disposal).
1.18. Tree cutting/felling and removal of roots for trenching (including disposal).
5.1. Supply and transportation of materials to site (including surplus to tip).
5.7. Loading, transporting and offloading of concrete cover slabs from EE stores (average distance to site is 30 km) – Slabs free issue from EE (11 kg)
6.1 Reinstatement of road surface.
6.2. Reinstatement of grass and plants in lawned and planted areas.
6.3. Reinstatement of existing kerbing.
6.4. Reinstatement of pavements and driveways.
6.6. Installation of joint and cable route markers.
6.7. Clearing and removal of rubble from site.
8. Use of transport including driver.

It is the responsibility of the contractor to ensure that the subcontracted services meet the minimum specified CPG.

The penalty for not achieving the specified CPG will be 0.5% of the contract value (excluding PC Sum items and Fixed Cost allowances) for every 1% of CPG not achieved.

ACC3 EThekwini Electricity has the right to have any of the Contractor's personnel removed off site without cancelling the contract if, in eThekwini Electricity's opinion, it is warranted.

ACC4 EThekwini Electricity reserves the right to request disciplinary/corrective action if, and when required.

ACC5 The Contractor shall operate under the direction and instructions of the Senior Manager: HV Cables or his/her representative or such person(s) as may be appointed by him.

ACC6 The Contractor shall transport his staff to, and from, site.

ACC7 The Contractor shall comply with all local and statuary labour laws and agreements.

ACC8 The Contractor shall similarly ensure that his staff abide by such rules and regulations.

ACC9 The Contractor shall maintain a high standard of workmanship expected by eThekwini Electricity and shall comply with any quality assurance and quality procedure implemented by eThekwini Electricity.

ACC10 The Contractor shall provide all safety apparel, safety equipment and cleaning materials.

ACC11 ACCIDENTS

In addition to the statutory obligations, the Contractor shall immediately report to the Head: Electricity all accidents and all abnormal situations and occurrences affecting the Works or the execution of this Contract, whether or not such accidents are in respect of damage to the Works, or persons, property or things. If required by the Head: Electricity, the report shall be in writing and shall contain full details of the occurrence. The Head: Electricity shall have the right to make all and any enquiries, either on site of the Works or elsewhere, as to the cause and results of such accidents, situations or occurrences and the Contractor shall give the Senior Manager: HV Cables or his/her representative, full facilities for carrying out of such enquiries.

ACC12 **CARE OF WORKS AND RESPONSIBILITY OF TENDERER**

The Tenderer shall take every responsibility for the proper maintenance of the Works and, shall, at his own cost, repair and make good any damage, loss or injury from any cause whatsoever to the Works or any part thereof arising from his failure to do so.

ACC13 **CARE AND PREVENT DAMAGE**

The Tenderer shall be responsible for any claims arising during execution of the Contract whether in favour of Ethekwini Municipality or Third Parties, for loss or damage which arises directly or indirectly from his poor workmanship, negligence or negligent omission or as consequence of his method of execution of the Contract.

ACC14 **PROTECTION OF WORKS AND INJURY TO PERSONS**

The Tenderer shall, at his own expense, take all precautions requisite for the protection of life and property on, and about, and shall indemnify, and keep indemnified, eThekwini Electricity against losses, claims, demands, proceedings, damages, costs, charges and expenses of whatsoever nature, howsoever arising, in respect of injury to, or death or loss of, or damage to, any property or person at any time during the currency of the Contract.

ACC15 COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993

The Contractor, shall, before commencing execution of his duties under this Contract, produce documentary proof that he has complied in all respects with the provisions of the Compensation for Occupational Injuries and Diseases Act. The Contractor undertakes that he will perform all his obligations and comply with all the provisions of the Compensation for Occupational Injuries and diseases Act and more particularly that he will render all returns and pay all assessments for which he is liable in terms of such Act.

ACC16 OCCUPATION HEALTH AND SAFETY ACT, 1993

The Tenderer shall comply with:

a) The Occupation Health and Safety Act, 1993 and all Regulations made thereunder; and

b) All eThekwini Electricity Safety Rules and System Operating Regulations.

c) Health and Safety Specification

d) Covid 19 Health and Safety Specification.

e) Baseline Risk Assessment

The Tenderer acknowledges that he is fully aware of the requirement of all the above and undertakes to employ only people who have been duly authorised in terms thereof and who have received sufficient safety training to ensure that they can comply therewith.

The Tenderer undertakes not to do, or not to allow anything to be done which will contravene any of the provisions on the Act, Regulations, Safety Rules and System Operating Regulations.

The Tenderer shall sign an agreement acknowledging the responsibility in terms of the Occupational Health and Safety Act.

The Tenderer shall appoint a person who will liaise with the Senior Manager: HV Cables or his/her representative, on all relevant safety issues.

eThekwini Electricity may, at any stage during the currency of this agreement, be entitled to:

a)Do safety audits at the Tenderer's work-places and on its employees; and

b) Refuse any employee access to its premises if such person has been found to commit any unlawful act or unsafe working practice or is found to be not authorised or qualified in terms of the Act.

ACC17 EXECUTION OF WORK

All the Works under this Contract shall be executed to the full satisfaction of the Senior Manager: HV Cables or his/her representative, and shall be carried out in strict accordance with the contract documents.

No alterations or departure from the terms of this contract shall in any way be made without the written order of the Senior Manager: HV Cables or his/her representative.

The decision of the Senior Manager: HV Cables or his/her representative, shall be binding on the Contractor, without appeal, on all matters relating to the quality of workmanship.

ACC18 SECURITY ARRANGEMENTS

The Contractor shall be obliged to abide by all security arrangements and site regulations in force, at any substation he is required to work at. The Contractor shall similarly ensure that his staff abide by such regulations and arrangements. Security guards shall be provided by eThekwini Electricity to guard exposed cables only and not any property owned by the Contractor.

ACC19 **APPOINTMENT OF CONTRACTORS**

EThekwini Electricity reserves the right to accept up to three (3) technically and contractually compliant bids from independant tenderers for part, or the whole contract and to place orders on the basis of price and availability. Tenderers are required to have at least one team dedicated to undertake duties as specified in the scope of work of this document.

C1.2.2.2 DATA TO BE PROVIDED BY THE SERVICE PROVIDER

Ref / Clause Number	Data
1	The Service Provider is: …… …… Address : …… …… …… Telephone : …… Fax : ……
5.3	The authorised and designated representative of the Service Provider is: Name : …… The address for receipt of communications is: Address : …… …… …… Telephone : …… Fax : …… E-Mail : ……
5.5 & 7.1.2	The Key Persons and their jobs / functions in relation to the services are: Name : …… Specific Duties : …… Name : …… Specific Duties : ……

PART C2 : PRICING DATA

C2.1 : PRICING INSTRUCTIONS

C 2.1.1 The Service Provider is required to provide all the services necessary to undertake the project requirements in accordance with the Scope of Work. This includes all things necessary and incidental to providing the Services, including appointment and payment of subcontractors.

C2.1.2 Quantities Reflected in the Pricing Schedule

C2.1.2.1 The quantities given in the Pricing Schedule are estimates only, and subject to re-measuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

C2.1.2.2 The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Pricing Schedule and in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made for waste.

C2.1.2.3 The validity of the contract will in no way be affected by differences between the quantities in the Pricing Schedule and the quantities finally certified for payment.

C2.1.3 Pricing in the Pricing Schedule

C2.1.3.1 All rates and amounts quoted in the Pricing Schedule shall be in Rands and Cents and shall include all levies and taxes (other than VAT). VAT will be added in the Summary of the Bill of Quantities.

C2.1.3.2 The prices and rates to be inserted by the Tenderer in the Pricing Schedule shall be the full inclusive prices to be paid by the Employer for the work described under the specific items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

C2.1.3.3 Each item shall be priced and extended to the "Total" column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Pricing Schedule then these items will be considered to have a nil rate or price.

C2.1.3.4 All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

C2.1.4 Payment

C2.1.4.1 Notwithstanding the period stated in Clause 14.2 of CIDB Standard Professional Services

Contract payment shall be made within 30 days of date of the Engineer's Certificate, which shall be issued within 14 days of a claim for payment being received by the Engineer.

C2.1.4.2 It is a condition of payment by the Municipality to registered VAT vendors that no payment for goods/services supplied shall be processed unless a tax invoice (complying with the requirements of Section 20 of the Value-Added Tax Act, 1991) is received from the supplier.

C2.1.4.3 For the purposes of this clause and provisions of Section 20 of the Value-Added Tax Act, 1991, the Contractor shall be deemed to have received a request for tax invoices upon the date that the goods/services have been supplied.

C2.1.4.4 Payments will be made monthly in arrears, subject to the invoices and verification thereof by the Senior Manager: HV Cables or his/her representative.

C2.1.5 Contract Price Adjustment

C2.1.5.1 Contractors are required to quote rates per Item for Year 1, Year 2 and Year 3 on the Pricing Schedule.

C2.1.5.2 The price submitted on the pricing schedule shall be fixed and firm for EACH twelve month period of the contract.

C2.1.6 Notes to Bill of Quantities

C2.1.6.1 All measurements for Excavation, Supply and Transport of Backfill Material will be carried out inside the trench, i.e. the volume before excavation or after compaction. Price for sieving of excavated soil for backfilling shall include the cost for stockpiling adjacent or in close proximity to trench.

C2.1.6.2 Saw cutting will be measured per metre of cut, i.e. if both sides of the trench are saw cut for a trench length of one metre, the measurement for saw cutting will be (1 + 1) = 2 m. Saw cutting will be carried out subject to approval by the Engineer.

C2.1.6.3 The classification of material not suitable for backfilling will be subject to approval by the Engineer.

C2.1.6.4 Close timbering will be measured per metre of close timbering, irrespective of depth, i.e. if both sides of the trench are close timbered for a trench length of one metre, the measurement for close timbering will be (1 + 1) = 2 m. This will exclude joint bays.

C2.1.6.5 Concrete cover slabs shall be collected from Electricity Main Stores, 11 Electron Road, Springfield.

Approximate weight of cover slabs: 11 kg

Approximate size of cover slabs: (1 395 × 309 × 40) mm
(600 × 380 × 38) mm
(600 × 320 × 38) mm
(600 × 230 × 38) mm

C2.1.6.6 Bidders shall not bind eThekwini Electricity to any minimum quantity per order

C2.1.7 Evaluation

For the purpose of evaluation, eThekwini Electricity shall use the average of the quoted prices per Item for Year 1, Year 2 and Year 3 of the Pricing Schedule.

The Tenderer shall calculate the average price for each item and insert this average price in the column for average prices.

The Tenderer shall further calculate the total amount for each item by multiplying the average price by the estimated quantity and insert this amount in the last column of the Pricing Schedule.

The Tenderer shall add ALL the Total Amounts and insert the sum at the end of the Pricing Schedule and calculate the VAT amount. The total incusive of VAT shall be transferred to the Form of Offer.

C2.2 : PRICING SCHEDULE

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
1	**Excavation**							
1.1.	Excavation of sand or soft soil	m³					1 000	
1.2.	Excavation of hand pickable soil	m³					2 000	
1.3.	Excavation of material requiring compressor	m³					1 000	
1.4.	Excavation of any material with mechanical excavator	m³					2 000	
1.5.	Saw cutting of un-reinforced hardened surface 100-150 mm	m					150	
1.6.	Saw cutting of un-reinforced hardened surface 150-200 mm	m					150	
1.7.	Saw cutting of un-reinforced hardened surface >200 mm	m					150	
1.8.	Saw cutting of reinforced hardened surface 100-150 mm	m					150	
1.9.	Saw cutting of reinforced hardened surface 150-200 mm	m					150	
1.10.	Saw cutting of reinforced hardened surface >200 mm	m					150	

NAME: ..... (Block Capitals)

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

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

C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
1	**Excavation(Continued)**							
1.11.	Removal of stones in a substation yard	m³					200	
1.12.	Double handling of ANY of the above excavated materials (excluding clearing of walkways adjacent to trench).	m³					1 000	
1.13.	Transport and dumping of material not suitable for backfill: tar, rock, concrete, soil, etc.	m³					500	
1.14.	Removal of kerbing	m					500	
1.15.	Removal of concrete cover slabs (11 kg)	each					1 000	
1.16.	Grass and plants removal in lawned areas.	m²					100	
1.17.	Bush clearing (including disposal)	m²					500	
1.18.	Tree cutting/felling and removal of roots for trenching (including disposal)	Per tree					150	
1.19.	Close timbering of trench wall (Timber supplied by Contractor)	m					400	
1.20.	Close timbering of trench wall (Timber supplied by EE)	m					400	
1.21.	Guniting of trench wall (20 mm thickness assumed)	m					100	

NAME: ..... (Block Capitals)

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

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

C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
2	**JOINT BAYS**							
	(a) 33 kV: (4 × 2,4 × 1,5) m	each					15	
	(b) 132 kV: (6 × 3 × 1,5) m	each					9	
	Included in the above price: less cable trench width							
	Excavate and backfill in any type of soil							
	Concrete base of 200 mm thickness - including supply							
	Building brick wall both sides of joint							
	Clean soil around joints up to slab level							
	Bell mouths and sump holes to be dug							
	Clean soil to be put in whole joint bay up to slab level							
	Cable to be supported for 1 m into the trench with sand bags with 30:1 cement mix							
	Close timbering on each side of the joint bay							

NAME: ..... (Block Capitals)

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

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

C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
3	**LAYING OF PIPES IN GROUND (pipes to be supplied by eThekwini Electricity)**							
	a) 50 mm HDPE pipes in ground (approx 100 m lengths) no concrete (for optic fibre cable)	m					200	
	b) 6 m × 160 mm dia. PVC pipes in concrete including concrete	m					200	
	c) 6 m × 100 mm dia PVC pipes in concrete including concrete	m					200	
	d) 6 m × 160 mm PVC pipes to lay (not in concrete)	m					200	
	e) 6 m x 110 mm PVC pipes to lay (not in concrete)	m					200	
4	**FILLING PIPES WITH BENTONITE**							
	(a) Power cable in 160 mm ducts per metre of duct	m					100	
	(b) Power cable in 200 mm ducts per meter of duct	m					100	

NAME: ..... (Block Capitals)

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

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

C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
3	**LAYING OF POWER CABLES (Cables to be supplied by eThekwini Electricity)**							
3.1.	**132 kV XLPE Cables**							
	a) 2 000 mm^2 Al Single core cable – 17,5 kg/m	m					90	
	b) 1 200 mm2 Al Single core cable – 13,2 kg/m	m					90	
	c)1 000 mm2 Cu Single core cable - 16,9 kg/m	m					90	
	d) 900 mm2 Cu Single core cable - 15,6 kg/m	m					90	
	e) 800 mm^2 CU Single core cable - 14,5 kg/m	m					90	
	f) 630 mm^2 AL Single core cable - 8,7 kg/m	m					90	
	g) 500 mm^2 CU Single core cable - 10,9 kg/m	m					90	
	h) 300 mm^2 CU Single core cable - 8,9 kg/m	m					90	

NAME: ..... (Block Capitals)

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

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

C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
3.2.	**132 kV Fluid Filled (FF) Cables**							
	a) 500 mm^2, 3 core AL conductor, FF (ductless)	m					90	
	b) 500 mm^2, S/C AL conductor, FF (hollow conductor)	m					90	
	c) 800 mm^2, S/C AL conductor, FF (hollow core)	m					90	
	d) 0.75 $inch^2$, 3 core AL conductor, FF (ducted)	m					90	
	e) 0.5 $inch^2$, S/C CU, FF (ductless)	m					90	
	f) 0.55 $inch^2$, S/C CU conductor, FF (hollow core)	m					90	
	g) 0,5 $inch^2$, 3 core CU conductor, FF (ducted)	m					90	

NAME: ..... (Block Capitals)

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

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

C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
3.3	**33 kV Fluid Filled (FF) Cables**							
	a) 0.4 inch2 , 3 core conductor, FF (ductless)	m					50	
	b) 240 mm2 , 3 core AL conductor, FF (ductless)	m					50	
	c) 400 mm2 , 3 core AL conductor, FF (ductless)	m					50	
	d) 0.25 inch2 , AL conductor, FF (ductless)	m					50	
	e) 0.2 inch2 , CU conductor, FF (SWA)	m					50	
	f) 0.5 inch2 , CU conductor, FF (ductless)	m					50	
	g) 120 mm2 , 3 core CU conductor, FF	m					50	
3.4.	**33 kV XLPE Cables**							
	a) 630 mm2, S/C, AL conductor	m					50	
	b) 400 mm2, S/C, AL conductor	m					50	
	c) 240 mm2, S/C, CU conductor	m					50	

NAME: ..... (Block Capitals)

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

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

C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
3.5.	**33 kV PILC Cables**							
	a) 150 mm2, 3 core, CU conductor HSL (PILC)	m					50	
	b) 300 mm2, 3 core, CU conductor HSL (PILC)	m					50	
	c) 150 mm2, 3 core, CU conductor HSL (DSTA)	m					50	
	d) 185 mm2, 3 core, CU conductor HSL (DSTA)	m					50	
	e) 240 mm2, 3 core, AL conductor (S.W.A.)	m					50	
	f) 240 mm2, 3 core, AL conductor (DSTA)	m					50	
	g) 300 mm2, S/C, CU conductor	m					50	
	h) 500 mm2, S/C, AL, conductor	m					50	
	i) 0,35 inch2, 3 core, CU conductor (DSTA)	m					50	
	j) 800 mm2, S/C, CU conductor	m					50	

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C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
3.6.	**11 kV PILC Cables**							
	a) 630 mm2, S/C, CU conductor – 9,3 kg/m	m					300	
	b) 240 mm2, 3 core, AL conductor – 10,4 kg/m	m					300	
	c) 240 mm2, 3core, CU conductor – 14,9 kg/m	m					300	
	d) 300 mm2, 3 core, CU conductor – 17,4 kg/m	m					300	
3.7.	**11 kV XLPE Cables**							
	a) 630 mm2, S/C, CU conductor – 7,1 kg/m	m					300	
	b) 185 mm2, S/C, AL conductor – 1,4 kg/m	m					300	
	c) 240 mm2, 3 core, AL conductor – 10,1 kg/m	m					300	
	d) 300 mm2, 3 core, AL conductor – 11,4 kg/m	m					300	

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C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
3.8.	**Pilot Cables**							
	a) 19 Pair – 1,7 kg/m	m					1 000	
	b) 37 Pair – 2,5 kg/m	m					1 000	
4	**HAULING OF FIBRE OPTIC CABLES**							
	a) 12 Wire Fibre Optic Cable	m					1 000	
	b) 24 Wire Fibre Optic Cable	m					1 000	
	c) Placing of Fibre Optic Manholes (including connectors)	each					100	
	d) Hauling in Draw Wire	per					1 000	
	e) Hauling in Ski Rope to Haul in Fibre Optic Cable	per					1 000	
	f) Fitting of straight thruogh couplings on 40 mm pipe	each					100	

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C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
5	**BACKFILLING**							
5.1.	**SUPPLY AND TRANSPORTATION OF MATERIALS TO SITE (including surplus to tip)**							
	a) Fine clean soil for bedding cable	m^3					500	
	b) Crusher stone	m^3					400	
	c) Umgeni sand	m^3					400	
	d) Cement (50 kg bag)	each					500	
5.4	Sieving of existing soil suitable for backfilling through 6 mm^2 screen.	m^3					500	
5.3.	**SPECIAL BACKFILLING (including supply of all materials and including surplus to tip)**							
	a) Weak concrete mix: (30:1 Umgeni sand and cement)	m^3					200	
	b) Concrete mix: 10 MPa (Umgeni sand, cement and crusher stone)	m^3					200	
	c) Concrete mix: 15 MPa (Umgeni sand, cement and crusher stone)	m^3					200	
	d) Cement mix with existing soil at 30:1	m^3					500	
	e) Bidem	m^3					200	

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C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
5.5.	**Sandbags**							
	a) Fine clean soil in sandbags (20 kg)	each					200	
	b) 30:1 soil and cement mix in sandbags (20 kg)	each					200	
5.6.	Trench backfilling.	m^3					1000	
5.7.	Loading, transporting and offloading of concrete cover slabs from EE stores (average distance to site is 30 km) – Slabs free issue from EE (11 kg)	each					1000	
5.8.	Laying of concrete cover slabs (11 kg)	each					1000	
5.9.	Laying of danger tape	m					1000	

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C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
6	**REINSTATEMENT**							
6.1	**Reinstatement of road surface**							
	a) Reinstatement of Category A road surface (240 mm)	m^2					800	
	b) Reinstatement of Category B road surface (160 mm)	m^2					800	
	c) Reinstatement of Category C road surface (240 mm) (80 mm)	m^2					800	
	d) Reinstatement of Category D road surface (50 mm)	m^2					2 500	
	e) Reinstatement of Category E road surface (25 mm)	m^2					2 500	
6.2.	Reinstatement of grass and plants in lawned and planted areas	m^2					200	
6.3.	Reinstatement of existing kerbing	m					500	
6.4.	Reinstatement of pavements and driveways	m^2					200	
6.5.	Reinstatement of stones in substation yard	m^3					200	
6.6.	Installation of joint and cable route markers.	each					1000	
6.7.	Clearing and removal of rubble from site	m^3					200	

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C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
7.	**LABOUR RATES (if required by Engineer)**							
7.1.	**NORMAL RATES**							
	(a) Supervisor	Per hour					100	
	(b) Cable Layer	Per hour					100	
	(c) General Worker	Per hour					100	
7.2.	**OVERTIME RATES (WEEK DAYS AND SATURDAYS) – Refer to Clause C3.3.3**							
	(a) Supervisor	Per hour					100	
	(b) Cable Layer	Per hour					200	
	(c) General Worker	Per hour					200	
7.3.	**SUNDAYS AND PUBLIC HOLIDAYS RATES – Refer to Clause C3.3.3**							
	(a) Supervisor	Per hour					100	
	(b) Cable Layer	Per hour					200	
	(c) General Worker	Per hour					200	

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C2.2: PRICING SCHEDULE (Continued)

Item	Description	Unit	Unit Price Excl VAT (R) Year 1	Unit Price Excl VAT (R) Year 2	Unit Price Excl VAT (R) Year 3	Avarage Price Excl VAT (R) =(Y1+Y2+Y3)/3	Est. Quantity	Total Amount Excl VAT (R) =(Average Price x Est. Quantity)
8.	**USE OF TRANSPORT INCLUDING DRIVER (if required)**							
	(a) Truck: One tonne	Per hour					1440	
	Five tonne	Per hour					480	
	Seven tonne	Per hour					480	
	(b) Small van or car	Per hour					1440	
	(c) Crane Truck	Per hour					1440	
	TOTAL EXCLUDING VAT (for ALL items, i.e. Item 1 to Item 8)							
	VAT							
	TOTAL INCLUDING VAT (this value to be transferred to the Form of Offer)							

NAME: ..... (Block Capitals)

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

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

PART C3 : SCOPE OF WORK

C3.1 BACKGROUND

An unhealthy cable network generally increases the risk of disruption of electricity supply due to failures. Depending on the location of the failure, the consequences could result in outages to large industrial as well as vast number of residential consumers. The outages then result in great losses with respect to revenue generation for eThekwini Electricity. It is therefore essential to have a healthy cable network to ensure the continuous supply of electricity to all consumers to prevent such occurrences and ensure good customer services.

Successful bidders will be required to provide the necessary resources, skills and expertise required to carry out excavations and installations of underground power cables on the eThekwini Electricty's high and medium voltage network.

C3.2 EMPLOYER'S OBJECTIVES

The contract deals with the installation of high and medium voltage cables including the associated pilot and/or fibre optic ducts as required.

The scope of the contract covers the laying of high and medium voltage cables for:

- Cable fault repairs; and
- Minor existing route diversions.

C3.3 TECHNICAL SPECIFICATION

C3.3.1 Supervision and Competancy

C3.3.1.1 The Contractor shall cause all the work to be carried out under the general supervision of a Responsible Person appointed by him in writing in accordance with the requirements of the Occupational Health and Safety Act No. 85 of 1993. The Contractor is permitted to appoint more than one Responsible Person, but at least one shall be resident within the area of the eThekwini Municipality.

C3.3.1.2 Bidders shall indicate their respective supervisory staff complement and list the background, experience and qualifications of said members which must be currently in the permanent employ of the bidder. Where, at the discretion of the Head: Electricity, the supervision level falls below that which would be normally expected to ensure standards of workmanship and safety as defined under the technical specification, the Contractor shall be instructed to replace the Supervisor.

C3.3.1.3 A copy of the letter of appointment and the acceptance thereof shall be lodged with the Senior Manager: HV Cables. NOSA FORM 5.12.01.03, duly completed, is acceptable for this purpose.

C3.3.1.4 Should the person appointed in terms of Clause C3.3.1.3 cease to be in charge before the contract has expired, the Contractor shall make a further appointment immediately and shall lodge a copy of such new appointment with the Head: Electricity.

C3.3.1.5 Work on the site will not be permitted to commence until the documents called for in Clause C3.3.1.3 have been received by the Head: Electricity.

C3.3.1.6 The Contractor shall provide the total infrastructure to competently fulfil the requirements of the contract. This would include adequate management and supervision at all levels.

C3.3.1.7 The Contractor's Supervisor shall have five or more years experience in MV and HV cables installation and must be currently in the permanent employ of the bidder. The Supervisor must be deemed competent in terms of eThekwini Electricity's Codes of Practice and Safety Rules. A second person is also required, who shall be specifically trained as a Cable Layer so that he can witness switching operations and sign permits as the Competent Person.

C3.3.1.8 It will be the Contractor's responsibility to ensure that existing services provided to eThekwini Electricity are not compromised. Hence should a Contractor declare a Supervisor who is already committed to an existing contract then eThekwini Electricity shall **not** consider that Supervisor as being available to execute this contract. EThekwini Electricity is an essential service provider with limited resources and has no intention of redeploying existing resources.

C3.3.1.9 With regard to the execution of work, Bidders are required to indicate in the Pricing Schedule the name of the organisation concerned and to satisfy the Engineer by submission of any additional information necessary, that such organisation is competent to carry out the work and must have had considerable experience in the laying of MV and HV cables.

C3.3.2 Plant and Equipment

Bidders shall note that a minimum level of plant and equipment will be a pre-requisite for qualification under this bid enquiry. Accordingly, all Bidders shall schedule such assets, clearly identifying the size, capacity, type, etc. (Refer to Evaluation Schedule: Plant and Equipment Owned by Bidder and Technical Specification). Items intended for use under hire agreements or under loan, the hire or loan agreements for such items shall be attached to the bid document. The loan period shall be cover the duration of the contract.

C3.3.3 Overtime Working at the Request of the Council

In the event of the Engineer requesting the Contractor to work overtime, the Council will reimburse the Contractor the overtime premium rates applicable to the time of day or week, for each employee involved, unless such overtime has been specified in the specification.

These percentages will be of the employee's normal rate, and not include any living out allowances etc. The rates are as follows:

Weekdays and Saturdays = Normal rate × 1,5
Sundays and Public holidays = Normal rate × 2,0

Copies of the relevant time and wage sheets must be produced to the Engineer if requested.

C3.3.4 Measuring and Measurements

All measurements for the purpose of payment shall be made jointly by representatives of the Contractor and the Engineer, or any person appointed by him. The Contractor shall be responsible for obtaining the Engineer's signature approving the measurements which were made.

All measurements of trenching shall be to the nearest standard unit for which rates are given in the Pricing Schedule, except that measurements of length shall be to the nearest 200 mm, width and depth shall be measured to the nearest 50 mm. Where the trench is timbered it shall be

measured inside the timbers.

Approved trial holes will be paid for at the Pricing Schedule rates except where such trial holes form part of the final trench, in which case they will be measured in the run, unless it is essential that they are back-filled prior to the installation of the cables.

No allowances shall be made in measuring for breaking away of the trench, sinking of earth or other such movements.

Different types of ground shall be measured separately and paid for at the respective rates specified in the Pricing Schedule.

Payment for cable supplied and laid shall be the length laid in the trench from centre to centre of joints.

C3.3.5 Administration and Storage Facilities

C3.3.5.1 All Bidders must clearly state:

C3.3.5.1.1 Their respective Administrative Headquarters, Branch Offices, etc., with accompanying staffing levels; and

C3.3.5.1.2 Site offices and storage facilities (addresses and telephone numbers required and the name(s) and positions of responsible staff.

C3.3.5.2 All materials used in construction will be issued by the Council. Accordingly and in view of the value of such materials, bids will not be accepted from Contractors who cannot provide adequate storage and safe-keeping facilities for such materials.

C3.3.5.3 It will therefore be expected that the successful Contractor(s) have sizeable premises and/or site office(s)/depot(s).

C3.3.5.4 In addition to the requirement of Clause C3.3.5.2, each successful Bidder shall have an administrative centre having secretarial/reception facilities which cater for telephonic and email communication at all times during the working day.

C3.3.6 Standard Dress Code

The Contractor's staff shall be required to comply with standard dress code of two piece red overalls as determined by eThekwini Electricity with company name and telephone number, safety shoes and socks, or an alternative dress code approved by the Engineer, at all times whilst attending to their field duties. It shall be the Contractor's responsibility to provide **two sets** of all necessary safety apparel to each employee to comply with this dress code.

C3.3.7 Control And Safe-Keeping of Materials

C3.3.7.1 In the course of execution of projects as envisaged under the scope of this specification, all materials will be provided by the Council and issued to the Contractor as and when required. Liability for collection, safe-keeping, proper and appropriate use and return to Materials Management Department's Springfield Store of such material shall rest with the Contractor and any shortfall in the quantities so utilized, or any damage sustained whilst in the possession of the Contractor, shall be charged to the account of the Contractor at full replacement value, plus a 20% handling charge.

C3.3.7.2 Bidders need note that quantities of materials which cannot be accounted for will result in

payment(s) being withheld/delayed and/or where appropriate and at the sole discretion of the Head: Electricity, deductions in the amount of the replacement value, plus a 20% handling charge being debited against such payments.

C3.3.7.3 Materials supplied by the Council and issued to the Contractor shall always remain the property of the Council, irrespective of whether the Contractor has been charged, and paid for the material or not. In the event of the Contractor being charged for missing material, and subsequently returning the same to the Materials Management Stores, his account will be credited by the value of the average cost of the material. Council issued material shall only be used on Council projects.

C3.3.8 Issue of Work/Projects

C3.3.8.1 Work as envisaged under this bid enquiry will take the form of a number of separate projects of varying size issued throughout the contract period. As such and as it is not possible to specifically state the monetary value, size and frequency of such projects and, furthermore, as it is not possible to schedule such projects in advance, no guarantees can be given of monthly work allocations to the successful Bidder(s).

C3.3.8.2 In view of the limitations imposed by Clause C3.3.8.1 above, issue of work (on a per project basis) to the successful bidder(s), shall be at the sole discretion of the Head: Electricity and no claims shall be entertained regarding the allocation of such work, notwithstanding this, eThekwini Electricity intends to allocate work to the most responsive Bidder in each instance.

C3.3.8.3 Due recognition shall be given to the competency and resources of the Contractor(s) at the time of issue of work and cognisance will be taken of current/existing workloads, target dates and performance levels.

C3.3.9 Limitation on Allocation of Projects

Taking cognisance of the contents of Clauses C3.3.8, a limitation may be placed on the percentage of work issued to a successful Bidder, such limitation being specified at the commencement of the contract period and at a level deemed appropriate by the Head: Electricity. Contractors need therefore agree to accept such a condition and refrain from expecting work allocation in excess of their limitation and capabilities.

C3.3.10 Past Performance

Contractors who have failed to perform satisfactorily over the past three years may be precluded from consideration under this enquiry. In particular, Contractors who have failed to meet project completion dates through their own inabilities, performed work outside the scope of the Department's Codes of Practice notwithstanding obligation to comply therewith, or failed to keep good and proper control of materials, may be disqualified from the adjudication process.

C3.3.11 Construction Industry Development Board (CIDB)

Only those bidders who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a Contractor grading designation equal to or higher than **4EB/ 4EP** are eligible to submit bids.

C3.3.12 Spare Parts

C3.3.12.1 EThekwini Electricity reserves the right to supply any spare part which may be required by the Contractor in the satisfactory execution of the required scope of work.

C3.3.12.2 Where the Contractor is required to supply the spare part, **a handling fee of 15%** of the cost of the spare part will be payable to the Contractor, provided a copy of the supplier's invoice is submitted with the claim.

C3.3.12.3 Only manufacturer approved spares will be used. When original equipment manufacturer (OEM) spares are unavailable, re-engineered solutions shall be approved by the Senior Manager: HV Cables.

C3.3.13 Response Time

The Contractor will be expected to have a maximum response time of **two hours** for any work that may arise at any time.

C3.3.14 Appointment of Contractors

Ethekwini Electricity reserves the right to accept up to three (3) technically and contractually compliant bids from independant tenderers for part, or the whole contract and to place orders on the basis of price and availability. Tenderers are required to have at least one team dedicated to undertake duties as specified in the scope of work of this document.

C3.4 GENERAL TECHNICAL

C3.4.1 132 and 33 kV Cable Installation – Route Conditions

The Contractor shall, before trenching commences, familiarise himself with the route and conditions on site.

Where the relevant survey pegs of the route are not apparent, the exact location of the trench shall be approved by the Engineer, or any person appointed by him.

C3.4.2 Sign Boards

The Contractor shall at all times display to the approval of the Engineer sufficient signs at the work site with the name of the Contractor doing the work and a telephone number to which any queries or complaints can be directed. If the work is done outside normal working hours, a relevant telephone number shall be displayed.

C3.4.3 Continuity of Work

Every effort must be made to provide continuity of work and avoid delays. Claims for delays or waiting time will be accepted only if they can be shown to be the Council's responsibility. Work undertaken outside normal working hours will be paid at special rates as stated in the Pricing Schedule.

C3.4.4 Barricading of Excavations

Barricading of all trenches and excavations shall be carried out in accordance with the requirements of the Occupational Health and Safety Act.

C3.4.5 Excavations

C3.4.5.1 Excavation shall be carried out in accordance with the requirements of the Occupational Health

and Safety Act and SABS 10198 Part VII.

C3.4.5.2 Trenches shall be kept as straight as possible and shall be excavated to an approved formation and in accordance with the dimensions specified by the Engineer.

C3.4.5.3 The Contractor shall supply and install the shoring timber in accordance with the requirements of the Occupational Health and Safety Act. All trenches shall be close timbered to full depth with a projection of 200 mm above ground level. Installation shall be at rates given in the Pricing Schedule at per metre run of trench, per side inclusive, irrespective of depth. Trench excavation will be measured and paid for, inside timbers.

C3.4.5.4 The bottom of each trench shall be firm and of smooth contour.

C3.4.5.5 Hardened road surfaces shall be machine cut without disturbing the road bond between the adjacent road surface and soil. Where applicable, any associated curbing and channelling shall also be cut if it is not practicable to burrow under the obstruction.

C3.4.5.6 Where trenches pass from one section to another, and where a change of level is necessary, the bottom of the trench shall rise or fall gradually to the approval of the Engineer.

C3.4.5.7 The material from each trench shall be placed adjacent to the trench but leave a walkway of 500 mm width on both sides, in such a manner as to prevent nuisance or damage to adjacent hedges, trees, ditches, drains, gateways and other property and shall be stacked so as to avoid undue interference with traffic. Where, owing to certain conditions, this is not possible, the excavated materials shall, with the approval of the Engineer, be removed from the site and returned for refilling the trench on completion of laying. All surplus material and materials not suitable for backfilling shall be disposed of by the Contractor at the rates quoted in the Pricing Schedule.

C3.4.5.8 In order to facilitate the re-use of excavated material for road foundations and surfacing, the excavated materials shall be separated into hard road material, soil and other material.

C3.4.5.9 Unless otherwise agreed, provision shall be made during excavation and until interim restoration has been completed, for reasonable access of persons and vehicles to property or places adjacent to any excavations.

C3.4.5.10 When the excavations of trenches have been accurately executed, notice shall be given by the Contractor to the Engineer to enable an inspection and measuring up of the trench to be carried out without undue delay. Cable laying shall not commence until the Engineer has approved the trench.

C3.4.5.11 Where necessary, the contractor will be required to clear vegetation or trees on cable routes and sealing end sites as detailed in Clause **C3.4.5.12 to C3.4.5.16** below.

C3.4.5.12 Where trenches cross lawned areas, the grass shall be removed in squares, kept well watered and carefully replaced.

C3.4.5.13 Where trenches cross planted areas, the plants shall be removed, stored with soil and roots intact, kept well watered and carefully replaced.

C3.4.5.14 Where trenches cross the bush, the Contractor shall clear the bush. All cut vegetation and inorganic waste resulting from clearing the bush, irrespective of size or volume shall be gathered and removed from site to eThekwini Municipality dumping site within twenty-four (24) hours.

C3.4.5.15 Where trees are directly on the cable route shall be cut to ground level and roots removed for trenching. All cut vegetation and inorganic waste resulting from cutting trees, irrespective of size or volume shall be gathered and removed from site to eThekwini Municipality dumping site within twenty-four (24) hours. A tree shall be defined for purposes of this contract as single trunk growth having a diameter (measured one metre above ground level) greater than 100 mm.

C3.4.5.16 Trees adjacent to the trench shall NOT be cut and the tree roots shall NOT be cut where this could be detrimental to the tree.

C3.4.5.17 Stone in substation yards shall be removed prior to excavation and placed in a suitable position for re-instatement.

C3.4.5.18 If, during the course of excavating, obstructions are encountered which necessitate alterations to the trench, or the adoption of a special form of trench, such trenching must receive the prior approval of the Engineer.

C3.4.5.19 Trial holes are to be excavated by the Contractor as and when requested by the Engineer, or where reasonable doubt exists regarding the proximity of other services.

C3.4.5.20 The Contractor shall be responsible for obtaining information regarding the positions of electric cables, Telkom cables, water pipes, stormwater pipes and sewers and any other services along the routes to be excavated and he shall be held responsible for damage caused by him to the existing plant and services.

C3.4.6 Joint Bays

The joint bay price (in the Pricing Schedule) shall include the following:

C3.4.6.1 Excavation and backfilling in any type of soil. This is extra over and above the normal trench which will be measured at the rates applicable to the soil.

C3.4.6.2 Close timbering on both sides.

C3.4.6.3 Concrete base - including supply of concrete mix.

C3.4.6.4 When required, building brick wall on each side of joints and slabs - including supply of brick materials.

C3.4.6.5 Bell mouth and sump holes.

C3.4.6.6 The joint bay shall be completely filled with soft soil or sand to the level of the cable including over the joint walls and slabs. Price to include for the supply and placing of sand. This shall be well consolidated before slabbing of the joint bay.

C3.4.6.7 Where the cables leave the joint bay they shall be supported on sandbags containing a sand and cement weak mix (approx 30:1) back to a distance of 1 m into the trench.

C3.4.6.8 If considered necessary by the Engineer, the sand shall be “watered in” around the joint boxes.

C3.4.6.9 If necessary increased joint bay size will be calculated pro-rata on joint bay price.

C3.4.7 Cable laying

Cables shall be laid according to SANS 10198 Part VIII or NRS 079 depending on the voltage level, with the following additional requirements:

C3.4.7.1 The Contractor shall, before installing the cable, at his own expense familiarise himself with the conditions on site.

C3.4.7.2 Before any cables are laid, trenches shall be inspected thoroughly to ensure that it is free from all objects likely to damage the cable either during or after cable laying operations.

C3.4.7.3 The method of laying of cables shall be approved and no cable shall be winch pulled without the use of a dynamometer. The maximum tension on the cables during laying operations must not exceed the figure specified by the manufacturer. A swivel head must be used to avoid any rotation. If necessary, bond pulling techniques must be employed.

C3.4.7.4 Except where ducts, tunnels or pipes are provided and unless instructed to the contrary by the Engineer, the Contractor shall lay cables direct in ground.

C3.4.7.5 The depth of laying of cables in the ground shall be specified by the Engineer. Any variations from the specified depth shall have to be approved by the Engineer.

C3.4.7.6 The Contractor shall maintain an approved means of communication between operators at the winch, pulling eye and the drum end of the cable during laying operations.

C3.4.7.7 A form approved by the Engineer must be used for the recording details of each cable pull. Details must include approximate pulling speed and pulling load.

C3.4.7.8 The spacing of cable circuits must be maintained constant.

C3.4.7.9 All reasonable steps must be taken to maintain the optimum rating of the cable.

C3.4.7.10 The phase position in a trefoil group must remain constant.

C3.4.7.11 Where cables are to be laid under or along a railway line, the Contractor shall ensure that this work is carried out in accordance with the Transnet Freight Rail Electrolysis Regulations.

C3.4.7.12 Where PVC cable pipes are required to be laid by the Contractor, these shall be supplied by eThekwini Electricity and shall be laid and jointed in an approved manner, by the Contractor.

C3.4.7.13 After the cable pipes have been laid, they shall be thoroughly cleaned internally and the ends sealed in an approved manner.

C3.4.7.14 The Contractor shall ensure that all cable pipes are sound and free from "rag" before drawing cables therein.

C3.4.7.15 Where banks of cable pipes exist, the Contractor shall keep a record and advise the Engineer of the particular pipes used for the works. This must be shown on the "as laid" route records/sketches.

C3.4.7.16 If required by the Engineer the pipes carrying power cables shall be filled with "Bentonite". The price for this shall include for the supply and sealing the ends of the pipes with Denso tape or similar material to the satisfaction of the Engineer.

C3.4.7.17 Where the cables leave the pipes they shall be supported on sandbags containing a sand-cement weak mix (approx. 30:1) back to a distance of approximately 500 mm into the trench.

C3.4.7.18 Each length of power cable shall be numbered and after site testing, these numbers shall appear on the test certificate covering the respective length of cable.

C3.4.8 Covering and Backfilling

C3.4.8.1 Filling in of trenches shall not commence until the Engineer has inspected and approved the cables on site. Such inspection shall not be unreasonably delayed.

C3.4.8.2 At least 75 mm of fine clean soil shall be placed to form a bed for the cables. Use of existing soil or import soil shall be at the Engineer's discretion.

C3.4.8.3 Where exisiting soil is to be used, it shall be sieved through a screen having a mesh not greater than 6 mm^2.

C3.4.8.4 Where imported soil is to be used, the Contractor shall supply and deliver the the soil to site at a rate indicated on the Pricing Schedule.

C3.4.8.5 Imported soil for bedding the cable shall be free of ash, sharp stones or any other aggressive soil and shall have a maximum soil thermal resistivity of 1,2 K.m/W. It is the responsibility of the contractor to ensure that the soil supplied meets this requirement. eThekwini Electricity will conduct the soil thermal resisitivity test on site to verify that the soil meets this requirement. If soil supplied does not meet this requirement, no payement will be made.

C3.4.8.6 Payment shall be made against measurements of the fill material in the trench after compaction (i.e. not against delivered uncompacted loads).

C3.4.8.7 The cables shall be thoroughly inspected prior to covering with imported soil to a compacted level of 75 mm above the top of the cable. Hard wooden rammers are to be used.

C3.4.8.8 A layer of protective concrete slabs must then be placed centrally over the cables covering all cables. These concrete slabs will be provided by the eThekwini Electricity.

C3.4.8.9 After the concrete slabs have been laid, the serving of each cable shall be tested according to IEC 60840 prior to filling the trench. The test will be carried out by eThekwini Electricity. Backfilling over the concrete slabs shall be carried out after the serving tets have been completed.

C3.4.8.10 Power driven mechanical rammers shall be used for reinstatement of the excavated materials, after the first 300 mm of soil have been placed over the concrete slabs, and then after every 300 mm of backfill with a final consolidation using a vibrator-roller.

C3.4.8.11 The material used for backfilling above the slabs shall be the in situ material excavated from the trench, when such material is of sufficient grade to meet the Engineer's requirements.

C3.4.8.12 After the trech has been backfilled up to 300 mm below the ground surface, cable danger tape shall be laid directly above the cables. These danger tapes will be provided by the eThekwini Electricity.

C3.4.8.13 The refilled trench shall be maintained in a thoroughly safe condition by the Contractor, at his own expense, for the duration of the contract, or until permanently re-instated by the authority concerned. The Contractor shall notify the Engineer timeously when damaged tarmac and

concrete surfaces can be reinstated and the Engineer will arrange for this to be undertaken.

C3.4.9 Reinstatement

C3.4.9.1 All surfaces disturbed during installation of the cables shall match as closely as possible the original materials removed both in quality and appearance.

C3.4.9.2 The Contractor shall reinstate temporarily and maintain the surface of all excavations in existing hardened roads. The temporary reinstatement shall consist of a weak concrete mix.

C3.4.9.3 Final reinstatement of roads and hardened areas shall be undertaken by eThewini Municipality Roads Department.

C3.4.9.4 In some instances, where only a small area of road is required to be reinstated, the Engineer may request the Contractor to undertake the final reinstatement. The Contractor shall undertake the reinstatement at the rates provided in the Pricing Schedule.

C3.4.9.5 The rate for both temporary and permanent road reinstatement shall cover the supply, placing and compaction of materials to form the new layers as required.

C3.4.9.6 The Contractor shall reinstate all existing kerbs that were disturbed during excavation. The rate shall cover concrete mix and laying of kerbs.

C3.4.9.7 The Contractor shall reinstate all pavements and driveways that were disturbed during excavation. The rate shall shall cover supply of materials and construction.

C3.4.9.8 The Contractor shall carefully replace all grass amd plants removed in lawned and planted areas.

C3.4.9.9 The Contractor shall reinstate stones removed in the substation yard. Any traces of sand shall be sieved out from the stones before re-instatement.

C3.4.9.10 At the completion of the works, the Contractor shall install cable joint or route markers at specified points along the route of the cable. These markers will be provided by the eThekwini Electricity. There are two types of route markers: Type 1: Concrete posts (2100mm x 175mm x 100mm). Type 2: Concrete slabs (230mm x 230mm x 50mm). The type to be used for each specific project will be approved by the Engineer.

C3.4.9.11 At the completion of the works, the Contractor shall clear the site and romve all rubble and waste that resulted from the works of this contract. The Contractor shall notify the Engineer to inspect the site once it has been cleared.

C3.4.11 Incidental Work

C3.4.11.1 The Contractor shall be responsible at his own expense for the removal of accumulated water from whatever cause, so as to prevent any risk of damage to cables, covers and other materials required and shall carry out the necessary pumping and baling.

C3.4.11.2 All concrete work and brickwork shall be approved before fabrication.

C3.4.11.3 The removal of obstructions along the route shall be approved and carried out at pre-determined agreed rates.

C3.4.12 Temporary Road Traffic Signs

C3.4.12.1 The Contractor shall provide, erect and maintain on the site and at all positions on the approaches to the site all road traffic signs necessary for the direction and control of traffic.

C3.4.12.2 The details of all such signs, which shall conform to the current Road Ordinance and Regulations, must be approved by the Engineer before erection. A departmental publication entitled "Safety in Road Construction" will form part of the bid documents when applicable.

C3.4.12.3 The signs shall be reflectorised or adequately illuminated at night in a manner approved by the Engineer and kept clean and legible at all times. The Contractor shall reposition, cover or remove signs as required during the progress of the works.

C3.4.12.4 Labour must be provided for traffic control (stop/go and red flags) when approved by the Engineer and will be paid at labour rates according to the Pricing Schedule.

C3.4.12.5 The Contractor shall have the following temporary road traffic signs as a minimum;

Sign Name	Road sign (Picture)	Sign Name	Road sign (Picture)
Temporary Left lane ends		One way left	
Temporary right lane ends		No entry	
Temporary sharp curve chevron (triple)		Stop/Go-Ry road sign c/w swlvel stand	
Temporary danger plate/ Delineator plate		Temporary turn right road sign	
Temporary traffic stop control ahead		Temporary turn left road sign	
Temporary road narrows from left side only		Temporary proceed right only	
Temporary road narrows from right side only		Temporary proceed left only	

Temporary “STOP/GO” control ahead.		Temporary keep right	
Temporary roadworks		Temporary keep right	
One way right			

C3.4.12.6 The Contractor shall provide metal stands to erect the signs.

ANNEXURES

1. **STANDARD CONDITIONS OF TENDER**

2. **CIDB STANDARD PROFESSIONAL SERVICES OF CONTRACT**

ANNEXURE 1 : STANDARD CONDITIONS OF TENDER – CIDB SFU (2015)

Annex F
(normative)

Standard Conditions of Tender

F.1 General

F.1.1 Actions

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

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

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

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

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

F.1.2 Tender Documents

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

F.1.3 Interpretation

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

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

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

a) **conflict of interest** means any situation in which:
   i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
   ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or

ANNEXURE 2 : CIDB STANDARD PROFESSIONAL SERVICES OF CONTRACT

STANDARD PROFESSIONAL SERVICES CONTRACT

(July 2009)
(Third Edition of CIDB document 1014)

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	Client	Electricity Unit – HV Cables
	Document Type	Risk Assessment
	Title	Baseline Risk Assessment
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Project Name

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Compiled by:	**Approved by:**
Name: Andile Mtuemban	Name: Nabusisehi Kubeka
Signature:	Signature:
Date: 04/03/2021	Date: 08/03/2021

Baseline Risk Assessment

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Introduction

An unhealthy cable network generally increases the risk of disruption of electricity supply due to failures. Depending on the location of the failure, the consequences could result in outages to large industrial as well as vast number of residential consumers. The outages then result in great losses with respect to revenue generation for eThekwini Electricity. It is therefore essential to have a healthy cable network to ensure the continuous supply of electricity to all consumers to prevent such occurrences and ensure good customer services. This Risk Assessment covers the hazards and risks that should be observed by all the stakeholders that will be involved in the Installation of High and Medium Voltage Underground Power Cables and the precautionary measures that should be implemented or are already implemented.

The Electricity Unit has a legal and moral obligation to ensure the safety of its employees and any other persons who may be affected by its acts or omissions at the workplace. Invariably, workplace safety also has financial implications for the Unit, as additional avoidable costs negatively impact on the financial resources of the Unit.

Section 5(1) (a) of the Construction Regulations requires the Unit to prepare a baseline risk assessment for an intended construction work project. In so doing, the Unit is mandated with identifying hazards attached to construction work, and to implement measures to mitigate the risks, as far as is reasonably practicable.

In order to determine the extent of reasonableness, the following needs to be considered:

- severity of the outcome,
- likelihood of the occurrence of the identified risk,
- rate of exposure to the risk,
- potential seriousness of the harm to be guarded against,

The risk evaluation method requires risks to be ranked in terms of severity of outcome, frequency of occurrence, and probability of exposure to the risk.

The Electricity Unit is responsible for the distribution of electricity, including the construction of electrical infrastructure and/or maintenance of electrical equipment within its vast area of supply. Infrastructure to supply electricity is developed in accordance with best practices within the industry in order to ensure a safe and reliable supply to consumers across a broad voltage spectrum.

In order to achieve the above responsibility, employees and contractors are required to perform construction work. There is a probability that persons undertaking construction work might be exposed to potentially life threatening hazards. This risk assessment aims to quantify and rank the hazards and risks which could be experienced when performing construction work, so that management is able to exercise their responsibility and duties in terms of Section 8 of the Occupational Health and Safety Act (85 of 1993).

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Glossary of Terms

Severity (S):	extent of potential harm/loss/damage
Exposure (E):	percentage of a workforce exposed to a hazard/risk and/or duration of exposure
Frequency (F):	how often and/or how long persons may be affected within a defined time period
Hazard:	source of or exposure to danger
Raw risk:	risk without taking any mitigation or control into account, i.e. S x F x E
Residual risk:	risk that remains after considering the effectiveness of controls
Risk:	probability that an injury and/or damage will occur
Risk Assessment:	process of evaluating risks arising from hazards, taking into account adequacy of existing controls, and deciding whether or not the risk/s is acceptable

Objective

To provide a uniform methodology whereby risks are evaluated and ranked and record proof of the analysis of the risks associated with specific tasks.

Scope

The following should be considered:

- workplace
- all operational activities
- tasks being performed
- legal requirements

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

1. Severity, i.e. extent of potential harm/loss/damage	Value
Catastrophic	**5**
Serious	**3**
Negligible	**1**

2. Frequency, i.e. how often and/or how long persons may be affected within a defined time period	Value
Frequent	**5**
Occasional	**3**
Rarely	**1**

3. Exposure, i.e. percentage of a workforce exposed to a hazard/risk and/or duration of exposure	**Value**
Extensive	**5**
Significant	**3**
Negligible	**1**

4. Risk Classification	Values
Low risk	0 – 24
Moderate risk	25 - 74
High risk	75 - 125

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Risk Assessment: Client Baseline Risk Assessment Activity: Construction Work Task: General Construction - Site Conditions											Revision: 1
Hazards	**Associated Risk**	**Effect**	**Pure Risk before rating**				**Engineering Controls**	**Administrative Controls**	**PPE Controls**	**% Control**	**Residual Risk**	**Action Needed**
			S	**F**	**E**	**R**						
Unauthorised access	Injury to trespassers Possibility of theft Possibility of assault to employees	S	3	3	3	27	Adequately barricade restricted work areas	1) Clear restriction signage for all unauthorised persons 2) Ensure effective barricades/warning signs are displayed		0.8	5.4	Access control Security guard must be present at all times
Uneven terrain	Slip, trips and falls	S	3	3	3	27		1) Employees conduct site Pre Task Risk Assessments (PTRA) 2) Employees attend Health and Safety induction	Employees are issued with steel toe capped footwear with ankle support	0.6	10.8	Employees are encouraged to be vigilant at all times and to be aware of underfoot conditions
Working in close proximity to/on public roads	Knocked by vehicles Injury to employees	S	3	3	3	27		1) Employees trained on Safety at Road Works 2) PTRA 3) Health and Safety Induction	1) Road/traffic signage 2) Reflective PPE worn by employees	0.6	10.8	
Extreme weather conditions (WBGT index ≥ 30)	Heat stroke Heat stress	SH	3	1	3	9		1) Medical surveillance 2) PPE is issued to employees – floppy hats, sunblock, etc. 3) ERW 2(4)(a)-(v) procedure is applied		0.6	3.6	Relevant personnel encouraged to monitor and report extreme weather conditions
Contaminated work site	Asbestos, HCS, Methane, hazardous waste, etc.	SHE	3	3	5	45	Adequate ventilation	1) Medical surveillance 2) Material Safety Data Sheets (MSDS) 3) PTRA 4) Employees are trained on HCS handling 5) Disposal of hazardous waste according to local regulations through licensed service provider	Employees issued with suitable PPE - eye protection, gloves, masks/respirators	0.8	9	1) Issue all employees with suitable PPE 2) Train employees on use thereof 3) Always wash hands post handling HCS 4) Only allow decanting in approved containers and clearly label to indicate the product inside the container

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Presence of animals, insects and reptiles on site	Allergic reaction Animal bites Insect stings Rabies Fatality	SHE	5	1	3	15		1) Employees attend snake awareness presentation 2) Employees are trained on First Aid Level 1 by an Accredited Service Provider 3) Employees have emergency numbers readily available	Employees are to be issued with appropriate PPE and insect repellent	0.6	1) Employees are to be cautious when entering areas where it is suspected that there might be insects and pests 2) Employees to ensure they are fully clad in PPE 3) Employees to be encouraged to attend First Aid Level 2

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Risk Assessment: Client Baseline Risk Assessment
Activity: Construction Work
Task: Operating Construction Vehicles and Mobile Plant

Revision: 1

Hazards	Associated Risk	Effect	Pure Risk before rating				Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E	R						
Loss of control Overturning Road surfaces Gradients	Injury Property damage Fatality	S	5	3	3	45	1) Roll over protection structure (ROPS) on all mobile plant 2) Shatterproof glass on mini diggers	1) All drivers are assessed before being issued with vehicles and/or mobile plant 2) Construction vehicle or mobile plant not to climb inclines too steep 3) Ensure vehicles are used only for the proper purpose	Seat belts are to be worn by all operators	0.8	9	Employees must drive with caution and within the speed limit
Collisions with other vehicles, fixed objects or pedestrians	Injury Property damage Fatality	S	5	3	3	45	1) Suitable protective barriers for structures at risk. 2) Amber flashing beacons to be used.	1) Induction given on pedestrians routes. 2) Traffic management plan in operation.	High visibility clothing worn by all construction workers	0.8	9	
Operating construction vehicles and/or mobile plant for extended periods	Whole body vibration	H	3	1	1	3	1) Construction Vehicles and Mobile Plant or any other equipment is fitted with anti-vibration technology	1) Procure equipment with lowest vibration levels 2) Minimise the time individuals use the equipment (e.g. job rotation) 3) Medical surveillance on all employees who utilize vibrating equipment 4) Employees are trained on General Safety Induction which incorporate use of construction vehicles/mobile plant	1) Employees are issued with the relevant PPE when they are handling or working with vibrating equipment	0.8	0.6	Tool box talks to emphasize the importance of PPE usage

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Risk Assessment: Client Baseline Risk Assessment
Activity: Construction Work
Task: Manual Handling
Revision: 1

Hazards	Associated Risk	Effect	Pure Risk before rating				Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E	R						
Heavy lifting	Musculoskeletal disorders Work-related neck and upper limb disorders (WRULD) Carpal tunnel syndrome Tenosynovitis Tennis elbow	SH	3	3	3	27	1) Lifting equipment such as pallet jacks, crane trucks and overhead cranes are provided for employees to use	1) PTRA 2) Employees are trained on the safe procedure for both manual and mechanical lifting 3) Assistants are made available to assist when lifting or moving heavy equipment 4) Trained Riggers are available to move heavy or irregular loads		0.8	5.4	1) Use lifting equipment when possible 2) Improve workplace layout to improve efficiency 3) Reduce the amount of twisting and stooping 4) Avoid lifting from floor level or above shoulder height, especially heavy loads 5) Avoid repetitive handling 6) Vary the work allowing one set of muscles to rest while another is used 7) Push a load rather than pull a load
Manual handling / Ergonomics Working posture and position Tasks performed in one position for a long time Repetitive or frequent tasks performed in an uncomfortable position	Muscle strain Cumulative back injuries e.g. slipped disc (prolapsed inter vertebral disc) External injuries e.g. - cuts, bruises, abrasions and crush injuries Internal injuries e.g. muscle and ligament strains and tears, hernias	SH	3	1	3	9	1) Lifting equipment such as pallet jacks, crane trucks and overhead cranes are provided for employees to use	1) PTRA 2) Employees are trained on the safe procedure for both manual and mechanical lifting 3) Assistants are made available to assist when lifting or moving heavy equipment 4) Trained Riggers are available to move heavy or irregular loads		0.8	1.8	1) Carry out work in a comfortable position with regular changes in position and posture 2) Try to improve workplace layout to improve efficiency 3) Position tools, controls, equipment and furniture to allow work to be done in a comfortable, upright position 4) Hold loads close to body 5) Carry out most work at waist level within easy reach
Load location and distances moved	Stress on muscles increases risk of injury	S	3	3	3	27	1) Lifting equipment such as pallet jacks, crane trucks and overhead cranes are	1) PTRA 2) Employees are trained on the safe procedure		0.8	5.4	1) Store loads at an approximate height in close proximity to where they will be used

Long distance load movement Load positioning to awkward or specific location	External injuries e.g. cuts, bruises, abrasions and crush injuries Internal injuries e.g. muscle and ligament strains and tears, hernias Cumulative back injuries e.g. slipped disc (prolapsed inter vertebral disc)						provided for employees to use	for both manual and mechanical lifting 3) Assistants are made available to assist when lifting or moving heavy equipment 4) Trained Riggers are available to move heavy or irregular loads				2) Provide adequate space to facilitate ease of loading 3) Try to improve workplace layout to improve efficiency 4) Position tools, controls, equipment and furniture to allow work to be done in a comfortable, upright position 5) Hold loads close to body 6) Carry out most work at waist level within easy reach
Duration and frequency Repetitive tasks performed for long periods, or at high speed, without a break	Muscle fatigue increases risk of injury Psychological impact External injuries e.g. cuts, bruises, abrasions and crush injuries Internal injuries e.g. muscle and ligament strains and tears, hernias Cumulative back injuries e.g. slipped disc (prolapsed inter vertebral disc)	SH	3	1	3	9	1) Lifting equipment such as pallet jacks, crane trucks and overhead cranes are provided for employees to use	1) Employees are trained on how to conduct a pre-task risk assessment 2) Employees are trained on the safe procedure for lifting and moving loads 3) Electricians are provided with Assistants to assist when lifting or moving heavy equipment 4) Trained Riggers are available to move heavy or irregular loads		0.8	1.8	1) Perform a variety of work tasks during the day or take regular breaks 2) Try and improve workplace layout to improve efficiency 3) Position tools, controls, equipment and furniture to allow work to be done in a comfortable, upright position 4) Hold loads close to body 5) Carry out most work at waist level, within easy reach

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Risk Assessment: Client Baseline Risk Assessment Activity: Construction Work Task: Use of Tools											Revision: 1	
Hazards	**Associated Risk**	**Effect**	**Pure Risk before rating**				**Engineering Controls**	**Administrative Controls**	**PPE Controls**	**% Control**	**Residual Risk**	**Action Needed**
			S	**F**	**E**	**R**						
Hand held tools	Injuries - Cuts, splinters, abrasions, puncture impact, flying particles / objects	S	3	3	3	27		1) Employees trained on basic hand skills 2) All hand tools are inspected prior to use and any defects are reported to the supervisor for replacement 3) All hand tools are kept in safe operating condition 4) Employees instructed to use the right tool for the job	1) Employees are issued with the appropriate PPE – gloves, safety glasses, safety footwear and overalls	0.6	10.8	
Portable electric equipment	Electric shock, cuts, splinters, abrasions, puncture injuries, impact, flying particles / objects	S	3	3	3	27	1) Portable earth leakage units are used when operating portable electric tools 2) Double insulated tools are used where not earthed	1) Employees trained on safe use of portable electric tools 2) All portable electric tools are inspected prior to use and any defects are reported to the supervisor for replacement 3) All portable electric tools are kept in safe operating condition 4) Employees advised not to wear loose clothing, jewelry and loose hair as it may be entangled onto the moving parts of the machinery	1) Employees are issued with the appropriate PPE – gloves, eye protection, safety footwear, gloves	0.8	5.4	
Power Tools	Hand arm vibration White finger syndrome Puncture wounds	S	3	1	3	9	1) Regular maintenance of power tools to ensure vibration is reduced	1) Employees trained on the safe use of power tools 2) All power tools are inspected prior to use	1) Employees issued with the appropriate PPE - safety footwear, gloves,	0.8	1.8	Employer to supply the lowest vibration emitting equipment

E.9717: Instaliation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

	Noise induced hearing loss							and any defects are reported to the supervisor for replacement 3) Job rotation and regular breaks to reduce time exposure to vibration 4) Medical surveillance for all employees exposed to vibration	eye protection and hearing protection			

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Risk Assessment: Client Baseline Risk Assessment Activity: Construction Work Task: Energised Sources											Revision: 1	
Hazards	**Associated Risk**	**Effect**	**Pure Risk before rating**				**Engineering Controls**	**Administrative Controls**	**PPE Controls**	**% Control**	**Residual Risk**	**Action Needed**
			S	**F**	**E**	**R**						
UGM work	Electric shock Electrocution Electrical fires Electrical arcing Electric burns	S	3	3	3	27		1) Employees trained and deemed competent to isolate LV UGM 2) Only Authorized Persons to undertake switching on MV UGM 3) All employees to adhere to the UGM COP, Safety Rules and Operating Regulations when undertaking work on UGM 4) Distribution Layout (DL) used and digging of proving trenches by employees to avoid damaging underground utilities	1) Employees issued with the appropriate PPE when working on UGM - safety footwear, gloves, rubber glover for Electricians, arc rated Conti-Suits, Arc flash suit for Authorized Persons	0.6	10.8	
Presence of underground mains	Electric shock Electrocution Electrical fires Electrical arcing Electric burns	S	5	1	5	25	1) Dig proving trenches to determine underground installations	1) Distribution Layouts obtained from Network Drawing Office 2) PTRA 3) Supervision of worksite by Competent Person 4) Work permits 5) Emergency preparedness plan 6) Competency card	1) Fire blankets and extinguishers 2) Arc rated conti-suits	0.8	5	Never to use conductive material near live mains

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Risk Assessment: Client Baseline Risk Assessment Activity: Construction Work Task: Fire Protection and Prevention											Created on: 3.9.2018 Compiled by: SHERQ Division Revision: 1	
Hazards	**Associated Risk**	**Effect**	**Pure Risk before rating**				**Engineering Controls**	**Administrative Controls**	**PPE Controls**	**% Control**	**Residual Risk**	**Action Needed**
			S	**F**	**E**	**R**						
Arson	Burns Explosions Fire Smoke inhalation	S	5	3	3	45	1) Security presence to prevent trespassers from deliberately or accidentally starting a fire	1) Liaison with the local police where possible 2) Limit the number of combustibles on site 3) Properly stored flammable liquids, LPG and other combustible materials 4) Reducing potential fuel sources 5) Good housekeeping practices 6) Emergency request for assistance cards provided to employees 7) Employees trained on basic fire fighting	1) All employees are issued with arc rated PPE 2) Fire extinguishers and first aid kits are provided for all sites	0.8	9	
Explosion due to damaged electrical cable	Burns Explosions Fire	S	5	1	3	15		1) DL's are used prior to trenching and digging proving trenches is implemented	1) All employees are issued with arc rated PPE 2) Fire extinguishers and first aid kits are provided for all sites	0.6	6	

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Risk Assessment: Client Baseline Risk Assessment
Activity: Construction Work
Task: Hazardous Chemical Substances

Revision: 1

Hazards	Associated Risk	Effect	Pure Risk before rating				Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E	R						
HCS - Solids, dust, fibres, fumes, gases, mists, vapours, liquids, asbestos	Occupational Dermatitis Occupational Asthma Headaches Dizziness Nausea Unconsciousness, Silicosis Cancer Irritant	SH	3	3	3	27	1) Local exhaust ventilation, ducted extraction systems collection hoods to draw mists and vapours away from operator	1) Medical surveillance 2) Employees are trained in the safe use and handling of all chemicals that they may be exposed to using the relevant MSDS 3) PTRA	1) Employees are issued with the appropriate PPE - chemical cartridge respirators, face shield, solvent resistant gloves, boots, aprons	0.8	5.4	1) All employees must be formally trained to understand what precautions they are required to take to avoid being negatively affected 2) Wear face shield to protect against splashes to face and eyes 3) Wear solvent resistant gloves, boots and aprons. 4) Work with chemical aerosols in a well-ventilated area 5) Store chemicals in tightly-closed, original container in a dry, cool, well-ventilated area 6) Always wash hands before breaks and immediately after handling the product 7) Aerosol cans must not be exposed to direct sunlight or temperatures above 50°C 8) Keep away from sources of ignition
Chemical Hazards	Asphyxiation Fumes (CO_2) Suffocation Methane Explosion	SH	3	3	3	27			1) Employees are issued with the appropriate PPE when working with chemicals in confined spaces	0.4	16.2	

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Risk Assessment: Client Baseline Risk Assessment Activity: Construction Work Task: Physical and Psychological Health Hazards											Revision: 1	
Hazards	**Associated Risk**	**Effect**	**Pure Risk before rating**				**Engineering Controls**	**Administrative Controls**	**PPE Controls**	**% Control**	**Residual Risk**	**Action Needed**
			S	**F**	**E**	**R**						
Noise	Noise induced hearing loss	SH	3	1	1	3	1) Equipment is fitted with exhaust mufflers to limit the noise generated by the machinery	1) Employees are required to undergo annual medicals and be deemed medically fit before being allowed to work with noise generating equipment 2) Baseline and Periodic Audiometric examinations conducted by Occupational Health and Safety (OHS) Unit	1) Employees are issued with the appropriate PPE - ear muffs, plugs	**0.8**	0.6	Employees must be encouraged to maintain a safe working distance from noise sources
Equipment	Vibration-induced disease White finger syndrome	SH	3	1	1	3	1) Equipment is fitted with rubber engine mounts and rubber handles to limit the transmission of vibration to the user	1) Annual medical surveillance on all employees who utilize vibrating tools/equipment	1) Employees are issue with the relevant PPE when they are handling or working with vibrating equipment	**0.8**	0.6	Tool box talks to emphasise the importance of PPE

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Risk Assessment: Client Baseline Risk Assessment **Activity:** Construction Work Task: Excavation Work											Revision: 1
Hazards	**Associated Risk**	**Effect**	**Pure Risk before rating**				**Engineering Controls**	**Administrative Controls**	**PPE Controls**	**% Control**	**Residual Risk**	**Action Needed**
			S	F	E	R						
Collapse of sides	Fractures Suffocation due to engulfment Damage to equipment Fatality	S	5	3	3	45	1) Bracing and shoring all excavation, where relevant 2) Batter and slope the sides and ends of the trench	1) Shoring where required, or when conditions are dangerous, e.g. soft sand is required as per CR requirements 2) Stability of the ground is evaluated prior to excavation 3) No load (spoils), materials, plant or equipment is placed near the edge of any excavation		0.8	9	1) Ensure all excavation work is carried out under the Supervision of a Competent person 2) Ensure all excavations, including bracing and shoring are inspected by Competent Person
Access Egress	Fracture Sprains Strain Soft tissue Contusion Laceration	S	3	3	3	27	1) Provision of safe means of access/egress points (ladder) to every excavation for every 6 meters with at least 1 meter above ground	1) All excavations are inspected by Competent Persons		0.8	5.4	
Biological hazards	Infection Poisonous gases Leptospirosis Contamination	SH	3	1	1	3	1) Portable pumps are used to remove stagnant water	1) Employees undergo medical surveillance annually	1) Employees are issued with the appropriate PPE to work with when working in excavations	0.8	0.6	
Materials Vehicles falling into excavations	Damage to property and equipment Fractures Cuts and lacerations Fatality	S	5	1	1	5	1) Excavated material (spoils) to be deposited at least 300mm from the side of the trench 2) Use barricading, guard-rails and toe boards and where possible the use of stop blocks to	1) All excavations, including bracing and shoring are inspected by Competent Person	1) Employees are issued with the appropriate PPE to work with when working in excavations	0.8	1	

							prevent vehicles from running into excavations				
Open excavations	Fall risk Cuts and lacerations Suffocation due to engulfment Fractures Fatality	S	5	3	3	45	1) Road signs to direct traffic away from excavation in order to reduce vibration	1) Compliance with CR 13 2) Signage indicating the presence of excavations is displayed 3) Employees trained on safety at road works		0.8	9	
Members of Public	Fatality Injuries from falling into excavation, i.e. fractures, etc.	S	5	3	3	45	1) Barriers or a fence of at least 1 meter in height to be erected around the excavation 2) Provision of illuminants and security guards on all deep excavations that are left overnight 3) Signage indicating the presence of excavations to be displayed			0.8	9	
Underground services	Burns Electrocution Damage to property Loss of supply	S	3	3	3	27		1) Using mains records, DL's to ascertain the location and presence of underground services 2) Digging proving trenches to ascertain the route of underground services	1) Employees are issued with the appropriate PPE to work with when working in the vicinity of live mains	0.6	10.8	Employees are to constantly work under the supervision of a competent / Specifically trained person

Risk Assessment: Client Baseline Risk Assessment Activity: Construction Work Task: Working in Confined Spaces											Revision: 1	
Hazards	Associated Risk	Effect	Pure Risk before rating				Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E	R						
Oxygen deficient environments Build-up of exotic gases	Asphyxiation Explosive atmospheric environments	SH	3	1	3	9	1) Substations are fitted with positive pressure fans which ensure that there is a fresh supply of air into the basement areas 2) Teams are issued with portable purging fans to ensure that fresh air is always circulated into the confined space	1) PTRA 2) Before employees undertake any work in confined spaces the atmosphere is tested to evaluate the air quality within that environment	1) Employees issued with appropriate PPE for tasks	0.8	1.8	1) A comprehensive procedure for Entry into Confined Spaces needs to be developed 2) Employees to be trained on the procedure 3) All equipment which generates noxious gases must not be allowed into confined spaces 4) Alternative methods to undertake the work must be investigated 5) All lighting installed, used or introduced into the confined space to be Ex rated
Inadequate lighting	Falls, slips and trips Touching of incorrect equipment Operating incorrect equipment Compromised sight and co-ordination	5	5	3	3	45		1) PTRA 2) Electrical Inspectors undertake routine planned inspections	1) Employees are issued with portable headlights to increase illumination at night or in confined spaces	0.6	18	1) Emergency lighting must be made available in the event that all other methods of illumination have failed 2) All defective luminaries must be repaired/replaced 3) All lighting installed, used or introduced into the confined space to be Ex rated
Combustible environments: exotic gases Methane LPG	Explosions Fire Burns Fatality Damage to equipment and property Exposure to toxic gases and fumes	SH	5	1	3	15	1) Substations are fitted with positive pressure fans which limits the quantity of dust entering the facility 2) Purge fans to be used for circulating/purging air within the confined space	1) PTRA 2) Electrical inspectors undertake routine cleaning of the substation on a planned maintenance schedule		.0.8	3	1) Entry into Confined Spaces procedure must be followed 2) Approved gas detectors must be used to analyse the atmospheric properties 3) Personal air monitors must be used to ensure that the atmosphere in the confined space is monitored continuously

												4) Fire extinguishers must be close at hand to extinguish any fires 5) Hot work permits must be issued before any hot work is undertaken
Noise Amplification of noise in the confined space Impact noises from hammering activities Drilling noises	Temporary threshold shift Tinnitus Noise induced hearing loss	SH	3	1	3	9	1) Employees undergo annual medicals and are deemed medically fit before being allowed to work with noise generating equipment 2) Baseline and Periodic Audiometric examinations are conducted by the OHS Unit		1) Employees are issued with the appropriate PPE for tasks	0.8	1.8	1) Purchasing specifications need to be developed/revised to ensure that all equipment generates minimum noise (below 85dBA) 2) If noise levels are a nuisance then longer service lines can be purchased to further increase the distances between the employees and the noise generating equipment
Dust and debris falling from overhead positions, structures and equipment	Eye irritation Inhalation of dust/fumes	S	3	3	1	9	1) Substations are fitted with positive pressure fans which limits the quantity of dust entering the facility 2) Electrical Inspectors undertake routine cleaning of the substation on a planned maintenance schedule	1) PTRA 2) Smoking is prohibited in confined spaces	1) Employees are issued with appropriate PPE for tasks	0.8	1.8	1) If there is excessive dust or dirt in the confined space then this must be cleaned to an acceptable level before work is permitted to be undertaken 2) Dust inhalation – use of FFP1 masks 3) Installation of "No Smoking" signs in all confined spaces
Temperature extremes Hot environments WBGT exceeds 30°c	Dehydration Cramps Heat stress Heat stroke	SH	3	3	3	27	1) Purge fans to be used for circulating/purging air within the confined space	1) PTRA 2) Employees are required to follow the guidelines for Heat Stress Prevention	1) Employees are issued with appropriate PPE for tasks	0.8	5.4	1) Employees need to be trained in the Heat Stress Prevention guidelines
Temperature Extremes Cold environments	Hyperthermia Frostbite Chilblains	SH	3	3	1	9		1) PTRA 2) Employees are required to follow the guidelines for Cold Stress Prevention	1) Employees are issued with appropriate PPE for tasks	0.6	3.6	1) Temperature studies have shown that there is a low risk of temperatures reaching below freezing point in the eThekwini Municipality area 2) If the temperature is severely cold then entry into

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												that confined space environment must be postponed until favourable weather conditions 3) If the work is to be completed under emergency conditions the appropriate steps need to take to ensure that the employees do not suffer the effects of cold air temperatures
Stagnant water/sludge	Legionnaires Disease Airborne diseases Lung infections Asthmatic attacks Falls, slips and trips	SH	5	3	3	45	1) Basements are installed with sump pumps to ensure any excess water is drained	1) PTRA 2) Electrical Inspectors undertake routine cleaning of the substation on a planned maintenance schedule	1) Employees are issued with the appropriate PPE	0.8	9	If there is stagnant water or sludge in the confined space then this must be cleaned to an acceptable level before work is permitted to be undertaken
Access Egress Basement entrance ladders Manholes for cable tunnels	Falls, slips and trips Falls from height Cuts and lacerations Fractures Fatality	SH	5	3	3	45	1) New substation basements are being designed to have access stairs and not ladders	1) PTRA 2) Electrical Inspectors undertake routine cleaning of the substation on a planned maintenance schedule and to also ensure access points are secured	1) Employees are issued with the appropriate PPE	0.8	9	Non slip strips are to be retrofitted to basement access ladders/steps

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Risk Assessment: Client Baseline Risk Assessment Activity: Construction Work Task: Housekeeping and General Safeguarding											Revision: 1	
Hazards	Associated Risk	Effect	Pure Risk before rating				Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E	R						
Substandard housekeeping: On site In vehicles	Slips, trips and falls Struck by falling objects Puncture wounds Contaminants/fluid spills	SE	3	3	3	27	1) Clearing of worksite (waste material/scrap)	1) PTRA 2) Employees/ Contractors conduct visual safety and housekeeping inspections regularly	1) Employees are issued with the appropriate PPE – non-slip protective footwear	0.8	5.4	Employees are to ensure: 1) Prompt and proper disposal of waste material/scrap 2) Protruding nails to be bent over or removed 3) Material required for use on site do not obstruct workplace access, egress and walkways 4) Tool box talks emphasise the importance of housekeeping
Stacking and storage of: Equipment Material Tools	Struck by falling objects Contusions Damage to material	S	3	3	1	9	1) Designated storage areas	1) Designated stacking and storage supervisor 2) Compliance with permissible stacking requirements (stack height not exceed 3 times the base smaller dimension) 3) Employees/ Contractor conduct visual inspections	1) Employees are issued with the appropriate PPE	0.8	1.8	1) Employees to keep storage areas neat and under control 2) Equipment, material and tools to be secured or properly stored in toolboxes, shelves to prevent movement and flying around

Client	Electricity Unit – HV Cables
Document Type	Specification
Title	COVID-19 Health and Safety Specification
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Project Name

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Compiled by:	**Approved by:**
Name: Andile Mthembu	Name: Mbusiseni Kubheka
Signature:	Signature:
Date: 04/03/2021	Date: 08/03/2024

Health and Safety Specification

1. Definitions

"BCEA" means the Basic Conditions of Employment Act (Act No. 75 of 1997).

"Contractor" wherever used in the contract documents and in this specification, shall have the same meaning as Contractor as defined in the General Conditions of Contract. For the purpose of this contract the Contractor will, in terms of OHSA, be the mandatory of the Employer, without derogating from his status as an employer in his own right.

"COVID-19" means Coronavirus Disease (2019).

"DoEL" means the Department of Employment and Labour (previously Department of Labour).

"DoH" means the Department of Health.

"Disaster Management Act" means the Disaster Management Act (Act No. 57 of 2002).

"Employer" means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as Client as defined in the Construction Regulations (2014). Employer and Client is therefore interchangeable and shall be read in the context of the relevant document.

"OHSA" means the Occupational Health and Safety Act (Act No. 85 of 1993).

"PPE" means personal protective equipment.

"virus" means SARS-Cov-2 virus.

"Worker" means any person who works in an employer's workplace including an employee of the Employer or Contractor, a self-employed person or volunteer.

"Workplace" means any premises or place where a person performs work.

"NICD" means National Institute for Communicable Diseases.

"OHMP" means Occupational Health Medical Practitioner.

2. Background

Corona viruses are a large family of viruses that are found in both humans and animals. Some of these viruses are known to cause illnesses ranging from common cold to severe respiratory diseases. Coronavirus COVID-19 was identified in December 2019 in Wuhan, China. Coronavirus infections have spread to other countries in the world.

Exposure to COVID-19 may cause flu like symptoms such as coughing, sneezing, headaches, fever, fatigue/weakness, sore throat and at times affect the lungs and airways. Symptoms can be mild, moderate, severe or fatal.

COVID-19 is a respiratory disease caused by the SARS-CoV-2 virus. To reduce the impact of COVID-19 outbreak conditions on businesses, workers, customers and the public, it is important for all employers to plan now for COVID19. For employers who have already planned for influenza outbreaks involving many staff members, planning for COVID-19 may involve updating plans to address the specific sources of exposure, routes of transmission, and other unique characteristics of SARS-CoV-2, i.e. compared to influenza virus outbreaks.

3. Introduction

The legislation governing workplaces in relation to COVID-19 is the OHSA, as amended, read with the Hazardous Biological Agents Regulations. Section 8(1) of the OHSA, requires the Employer to provide and maintain as far as is reasonably practicable a working environment that is safe and without risks to the health of employees.

Specifically, section 8(2)(b) requires steps such as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard before resorting to personal protective equipment (PPE). However, in the case of COVID-19, a combination of controls is required, although the main principle is to follow the hierarchy of controls.

While engineering and administrative controls are considered more effective in minimising exposure to COVID 19, PPE may also be needed to prevent certain exposures. While correctly using PPE can help prevent some exposures, it should not take the place of other prevention strategies.

This Health and Safety Specification deals with the current COVID-19 pandemic on work sites and what needs to be adhered to. It covers most scenarios and each Employer or Contractor should consider their own unique circumstances and make the necessary calls in the interest of the health and safety of their workers.

4. COVID-19 Risk Assessment

4.1 The Contractor shall ensure that a COVID-19 Risk Assessment and COVID-19 Health and Safety Plan is developed and submitted to the Client prior to commencement of any work. The plan shall be in line with the Client's COVID-19 Health and Safety Specification.

4.2 The Contractor shall appoint a COVID-19 Compliance Officer to ensure that all necessary COVID-19 safety precautions are implemented.

4.3 If the Contractor employs more than 500 employees, that contractor must submit a record of its risk assessment together with a written policy concerning the protection of the health and safety of its employees from COVID-19 as contemplated in section 7(1) of the OHSA to its health and safety committee established in terms of section 19 and of OHSA and the DoEL.

4.4 The Contractor must ensure that the measures required by the Consolidated Directions on Occupational Health and Safety Measures in Certain Workplaces dated 28 September 2020 and its risk assessment plan are strictly complied with through monitoring and supervision.

5. Training and awareness

5.1 The Contractor shall ensure that all its workers are inducted on COVID-19 risk assessment.

5.2 The Contractor shall ensure that its workers are trained on COVID-19 to prevent the spread of the virus. Training records shall be kept in the safety file.

5.3 Consolidated Directions on Occupational Health and Safety Measures in Certain Workplaces dated 28 September 2020, shall be used as a guideline to the management of COVID-19 at workplaces and work sites.

5.4 The Contractor shall provide its workers with information that raises awareness in any form or manner, including where reasonably practicable leaflets and notices placed in conspicuous places in the workplace informing workers of the dangers of the virus, the manner of its transmission, the measures to prevent transmission such as personal hygiene, social distancing, use of cloth masks, cough etiquette and where to go for screening or testing if presenting with symptoms.

6. Hygiene

6.1 The Contractor shall provide adequate facilities for the washing of hands with soap and clean water on each construction site.

6.2 The Contractor shall provide 70 % alcohol-based hand sanitiser at strategic points of the construction site.

6.3 The Contractor shall provide paper towels to dry hands after hand washing, with bins to dispose of these as may be required.

7. Cleaning and Disinfecting

7.1 The Contractor shall take measures to ensure that all work surfaces and equipment are disinfected before work begins, regularly during the working period and upon completion of the work.

7.2 The Contractor shall ensure frequent cleaning and disinfecting objects and surfaces that are touched regularly, particularly in areas of high use such as shared tools, shared construction vehicles, etc. using appropriate disinfecting solutions such as clean water, soap and bleach.

8. Social Distancing

8.1 The Contractor shall arrange the site to ensure minimal contact between workers and as far as practicable so as to ensure a minimum of 1,5 m distance between workers while they are working. Workers shall be made aware to maintain social distance when working.

8.2 The Contractor shall ensure that social distancing measures are implemented through supervision of both the construction site and in the common areas outside the workplace, through queue control or within the workplace. These measures may include dividing the workers into groups or staggering break times to avoid the concentration of workers in common areas.

8.3 The Contractor shall ensure that where the minimum distance is impossible, workers must always be instructed to wear FFP2 masks or reducing the number of workers present at the site at any time to achieve the required social distancing.

8.4 The Contractor shall ensure that employees working in offices are provided with physical barriers placed between their workstations.

9. **Personal Protective Equipment (PPE)**

9.1 The Contractor shall ensure that every worker is provided with two cloth masks to be worn when in the workplace or public space which comply with the requirements set out in the guideline issued by Department of Trade, Industry and Competition.

9.2 The main benefit of everyone wearing a cloth mask is to reduce the amount of virus droplets being coughed up or becoming airborne during normal conversations by those with infection, and transmitted to others and to surfaces which others may touch.

9.3 The Contractor shall ensure that workers are informed, instructed and trained on the correct use of all masks which may be used.

9.4 The Contractor shall issue face shields/visors, where this is applicable.

10. **Point of entry screening**

10.1 The Contractor shall identify the screening area for each site.

10.2 The Contractor shall ensure that the daily point of entry screening is conducted when entering site by a nominated person.

10.3 The Contractor shall ensure that all workers and visitors are screened and only those with the all clear will be given clearance to carry on within the work site.

10.4 The Contractor shall ensure that during the screening a 1,5 m distance is maintained and an FFP 2 mask to be worn by the nominated person.

10.5 The Contractor shall ensure that the person conducting the screening is trained.

10.6 The Contractor shall ensure that a bottle of sanitiser is available at the screening area.

10.7 The Contractor shall ensure that all workers complete a COVID-19 questionnaire which will be used to screen potential risk personnel entering the site.

11. **Reporting and Investigation of a positive COVID-19 case**

11.1 If a worker has been diagnosed with COVID-19, the Contractor must inform the DoH and DoEL and investigate the cause including any control failure and review its risk assessment to ensure that the necessary controls and PPE requirements are in place.

11.2 The Contractor must give administrative support to any contact-tracing measures implemented by the DoH.

12. **Return to work after testing positive**

If a worker has been diagnosed with COVID-19 and isolated in accordance with the DoH Guidelines, a Contractor may only allow a worker to return to work on the following conditions:

a) the worker has undergone a medical evaluation confirming that the worker has been tested negative for COVID-19;

b) the employer ensures that personal hygiene, wearing of masks, social distancing, and cough etiquette is strictly adhered to by the worker; and

c) the employer closely monitors the worker for symptoms on return to work.

13. **Worker Obligation**

In addition to the obligations of employees under the OHSA, every worker is obliged to comply with measures introduced by their Employer or Contractor as required by the Consolidated Directions on Occupational Health and Safety Measures in Certain Workplaces.

14. **Symptomatic workers**

14.1 The Contractor shall ensure that any person who ticks YES to one or more symptoms will be sent home and be advised to seek testing by a healthcare provider.

14.2 The Contractor shall ensure that workers who are sick with continuous cough, sore throat, difficulty breathing, or a high temperature in the workplace will be encouraged to stay home.

14.3 The Contractor shall ensure that where there is a positive tested COVID-19 case, the worker is on paid sick leave in terms of section 22 of the BCEA or if the worker's sick leave is exhausted, the Contractor shall apply for an illness benefit.

14.4 The Contractor shall ensure that workers confirmed to have COVID-19 will be managed in line with DoH guidelines.

14.5 For workers diagnosed as symptomatic at the workplace, the Contractor shall isolate the worker and issue him/her with an FFP2 or surgical mask, arrange for the worker to be transported safely for further medical examination or testing, in a manner that does not place other workers or members of the public at risk.

14.6 The Contractor shall ensure that the driver who is transporting the Person-Under-Investigation is provided with an FFP2 mask.

14.7 The Contractor must assess the risk of transmission, disinfect the work area and refer those workers who may be at risk for screening to prevent to prevent possible transmission.

14.8 The Contractor shall advise the DoEL and DoH so that other contacts be identified and be investigated.

14.9 The Contractor shall ensure that the positive case is not discriminated in terms of the Employment Equity Act.

14.10 The Contractor shall ensure that if there is evidence that the worker contracted COVID-19 as a result of occupational exposure, lodge a claim for compensation in terms of the Compensation for Occupational Injuries and Diseases Act (No. 130 of 1993) and Directive on Compensation for Workplace-Acquired Novel Coronavirus dated 30 June 2020.

14.11 The Contractor shall ensure that if a worker has been diagnosed with COVID-19 and isolated in accordance with the DoH Guideline, a Contractor may only allow a worker to return to work only when the worker has produces a medical certificate of clearance.

15. Emergency Numbers

15.1 COVID-19 24-hour hotline number: 080 002 9999.
15.2 COVID-19 WhatsApp number: 060 012 3456.
15.3 COVID-19 National Crisis Helpline: 0861 322 322.
15.4 National Institute of Communicable Diseases 24-hour hotline number: 0800 029 999 or 0800 111 132.
15.5 SAPS gender-based violence service complaints: 0800 333 177.
15.6 Gender Based Violence Command Centre: 0800 428 428/ *120*7867# (free from any cell phone)/SMS line: 32312.
15.7 Women Abuse Helpline: 0800 150 150.
15.8 People Opposing Women Abuse: 011 642 4345/ Afterhours cell number: 083 765 1235.
15.9 Child Line: 0800 055 555.
15.10 Lifeline South Africa: 0800 012 322 (free on mobile networks including landlines).
15.11 FAMSA: Advice on family relationships – 011 975 7107.
15.12 Persons with Disabilities: SMS 'help' to 31531.
15.13 National AIDS Helpline: 0800 567 567.
15.14 Substance Abuse Helpline: 0800 12 12 14.

16. Recommended Best Practice

The Contractor shall ensure that vulnerable workers who are 60 years and older are identified and receive special measure for their protection in accordance with the Guidance on Vulnerable Employees and Workplace accommodation in relation to COVID-19 (version 4 dated 25 May 2020). 16.2 The Contractor shall ensure that for communication, Microsoft Teams, Zoom, Skype, etc. are utilised as far as possible to minimise personal interaction.

17. References

a) Disaster Management Act.
b) Occupational Health and Safety - The Department of Employment and Labour: Workplace Preparedness: COVID-19 (SARS-CoV-19 virus).
c) Consolidated Directions on Occupational Health and Safety Measures in Certain Workplaces Hazardous Biological Agents Regulations.
d) National Institute for Occupational Health (NIOH).

COVID-19 ACCESS INTO CONSTRUCTION SITE – POINT OF ENTRY SCREENING QUESTIONNAIRE

Company/Construction Site: _____

Name and Surname: _____ Company Number: _____

Line Manager: _____

1.	Are you currently awaiting a test result for COVID-19?	Yes	No
2.	Are you living in a household with a person who is currently COVID-19 positive and in isolation?	Yes	No
3.	Are you a close contact of a person who is currently COVID-19 positive and you were advised to be in quarantine? *(Close contact either at the workplace or in the community/family)*	Yes	No

4. Do you have sudden onset within the past 24 hours of any of the following symptoms?

Symptom	Yes	No
Fever/chills		
Cough		
Sore throat		
Shortness of breath		
Loss of smell or loss of taste		

Symptom	Yes	No
Redness of the eyes		
Body aches and pains		
Fatigue/weakness		
Nausea/vomiting/diarrhoea		

Entry Cleared: Yes ☐ No ☐

Construction Manager or Supervisor: _____ Signature: _____ Date: 20 _ _

Comments: _____

_____

	Client	Electricity Unit – HV Cables
	Document Type	Specification
	Title	Health and Safety Specification
	Reference Number	HSS04/03/2021
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	Revision Date	

Project Name

E.9717: Installation of High and Medium Voltage Underground Power Cables During a Thirty Six Month Period

Compiled by:	**Approved by:**
Name: Andile Mthembu	Name: Mbusiseni Kubeka
Signature:	Signature:
Date: 04/03/2021	Date: 08/03/2021

Health and Safety Specification

E.9717: Installation of High and Medium Voltage Underground Power Cables

1. INTRODUCTION

An unhealthy cable network generally increases the risk of disruption of electricity supply due to failures. Depending on the location of the failure, the consequences could result in outages to large industrial as well as vast number of residential consumers. The outages then result in great losses with respect to revenue generation for eThekwini Electricity. It is therefore essential to have a healthy cable network to ensure the continuous supply of electricity to all consumers to prevent such occurrences and ensure good customer services.

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety (OHS) Act (85 of 1993) and the Construction Regulations 2014 issued on 7 February 2014. The Contractor is to complete form **'Annexure 2'** (Appointment of the contractor in accordance with CR 5(1)(k) and **'Annexure 3'**(OHS Act Section 37.2 agreement).

For the purpose of this contract the Contractor is required to confirm his status as mandatory to the Employer (Client) and employer in his own right for the execution of the contract, and he/she shall enter into an agreement in respect of the Occupational Health and Safety Act in the form as included in **'Annexure 3'**.

If the Client (Electricity Unit) is engaging the services of the Client Agent, such Agent will be subject to approval by the Employer (SHERQ and Training Division).

Health and Safety Specifications and Plans to be submitted at Tender Stage

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification will be included in the tender documents as part of the Project Specifications.

(b) Tenderer's Health and Safety Plan

The Tenderer shall submit with his/her tender sufficient proof that he/she has a Health and Safety Plan in place. The Contractor will however, have to submit his/her Health and Safety Plan on request by the Client during the tender evaluation stage.

In terms of the Construction Regulations 5(1)(l), the Tender will be disqualified if the tenderer has no Health and Safety Plan.

The Contractor's Health and Safety Plan will be subject to approval by a Contracts Administration, in conjunction with a SHERQ and Training Division Representative prior to commencement of any construction work. The Contractor will not be allowed to commence work or his/her work will be suspended if he/she had already commenced work, before he/she has obtained the written approval of his/her Health and Safety Plan.

The Contractor shall not be entitled to claim for extension of time or standing time and the related costs for any delays due to delayed commencement or suspension of the work arising from the lack of approval of the Health and Safety Plan, or non-compliance with the eThekwini Municipality Health and Safety Specification.

E.9717: Installation of High and Medium Voltage Underground Power Cables

1.1 Definitions

For the purpose of this contract the following shall apply:

(a) "Agent" means a competent person who acts a representative for a client.

(b) "Client" means any person for whom construction work is being performed.

(c) "Construction Manager" means the competent person responsible for the management of physical construction processes and co-ordination, administration and management of resources on any construction site.

(d) "Contractor", wherever used in the contract documents and in this specification, shall have the same meaning as "Contractor" as defined in the General Conditions of Contract.

In this specification the terms "Principal Contractor" and "Contractor" are replaced with "Contractor" and "Sub-contractor" respectively.

For the purpose of this contract the "Contractor" will, in terms of OHS Act (1993), be the mandatory of the Employer, without derogating from his status as an employer in his own right.

(e) "Employer" where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as "Client" as defined in the Construction Regulations (2014). "Employer" and "Client" is therefore interchangeable and shall be read in the context of the relevant document.

(f) "Engineer/Designer" where used in this specification, means the Engineer as defined in the General Conditions of Contract. In terms of the Construction Regulations the Engineer may act as Agent on behalf of the Employer (the Client as defined in the Construction Regulations).

1.2 Scope

An unhealthy cable network generally increases the risk of disruption of electricity supply due to failures. Depending on the location of the failure, the consequences could result in outages to large industrial as well as vast number of residential consumers. The outages then result in great losses with respect to revenue generation for eThekwini Electricity. It is therefore essential to have a healthy cable network to ensure the continuous supply of electricity to all consumers to prevent such occurrences and ensure good customer services.

This specification covers the Health and Safety requirements to be fulfilled by the Contractor to ensure a continued safe and healthy environment for all employees under his control, and for all other persons entering the site of works, including the health and safety of members of the public during the Installation of High and Medium Voltage Underground Power Cables contract.

This specification shall be read in conjunction with the Occupational Health and Safety Act (85 of 1993) and the corresponding Construction Regulations (2014), the eThekwini Electricity OHM, UGM and Substation Codes of Practice, the eThekwini Electricity Safety Rules, the eThekwini Electricity Operating Regulations and all other safety codes and specifications referred to in the said Construction Regulations (2014).

In terms of Section 37(2) of the OHS Act, the status of the Contractor as mandatory to the Employer (Client) is that of an employer in his own right, responsible to comply with all provisions of the OHS Act and the Construction Regulations.

A copy of this Health and Safety Specification, the Contractor's Health and Safety Plan, as well as the Construction Regulations shall be kept on site and made available for inspection by all employees, inspectors, eThekwini Electricity Unit Representatives and any other persons entering the site of works or the Contractors premises.

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1.3 Project Description

Installation of High and Medium Voltage Underground Power Cables project will involve risk and hazards emanating from the following:

-Excavating using hydraulic jack hammers (compressors)
-Excavating using TLB
-Excavation on the side of the road (with traffic)
-Displaying road signs on the road
-Barricading the working area
-Pumping water from flooded trenches and joint bays
-Shoring of trenches and joint bays of sizes up to;
  -6 In length
  -3 in width
  -1.5 m in depth
-Pulling of cables for sizes up to 2500 mm2
-Lifting of heave material by a crane truck (Joints, Cable drums, concrete barricades)
-Use of fuel generators for power supply to the equipment used on site

1.4 Tenders

The Contractor shall make available the following during the tender evaluation:

(a) A documented Health and Safety Plan as stipulated in Regulation 7(1)(a) of the Construction Regulations. The Health and Safety Plan must be based on the Construction Regulations (2014) and the eThekwini Electricity Unit's Health and Safety Specification. The Health and Safety Plan will be subject to approval as mentioned above.

(b) A declaration to the effect that he/she has the competence and necessary resources to carry out the work safely in compliance with the OHS Act, Construction Regulations, the eThekwini Electricity OHM, UGM and Substation Codes of Practice, the eThekwini Electricity Safety Rules and the eThekwini Electricity Operating Regulations.

(c) The Contractor shall make a provision on the tender documents to ensure that the cost for health and safety is adequately catered for.

Failure to submit the foregoing with his/her tender or during tender evaluation, will lead to the conclusion that the Contractor is not able to carry out the work under the contract safely in accordance with the OHS Act, Construction Regulations, the eThekwini Electricity OHM, UGM and Substation Codes of Practice, the eThekwini Electricity Safety Rules and the eThekwini Electricity Operating Regulations and will result in his/her tender being disqualified.

1.5 Cost of Health and Safety Measures

All Contractors when making a bid for contracts shall provide a breakdown list of all PPE requirements, safety equipment and facilities requirements, training and other health and safety measures required for the project and the costing of such requirements.

2. MINIMUM ADMINISTRATIVE REQUIREMENTS

2.1 Notification of Construction Work

After award of the contract, but before commencement of construction work, a contractor that is issued with construction work shall, in terms of Regulation 4, notify the Provincial Director of the Department of Labour in writing at least 7 days before the work is carried out, if the following work is involved:

(a) the demolition of structure;
(b) the use of explosives;
(c) excavation work;
(d) working at a height where there is risk of falling.

The notification must be done in the form of the pro-forma included in Annexure 2 of the Construction Regulation (2014).

One copy of the stamped notification form must be kept in the contractors health and safety file. Where it is impractical to notify the Provincial Director of the Department of Labour as a result of Maintenance and/or Emergency work, the contractor must apply for Exemption under Section 40 of the OHS Act.

2.2 Occupational Health and Safety Act (85 of 1993)

All Contractors shall have an up to date copy of the OHS Act (85 of 1993) and supporting regulations kept in a safety file which will be available to all relevant parties.

2.2.1 Section 37(2) Agreement

A section 37(2) agreement must be signed between the eThekwini Electricity Unit and all contracting parties. All Contractors must ensure that a section 37(2) agreement is complied with. A copy of the 37(2) agreement must be kept in the health and safety file.

2.3 Compensation for Occupational Injuries and Diseases Act (130 of 1993)

All Contractors shall be registered with an appropriate employment Compensation commissioner and have available valid letters of good standing from such commissioner. A copy of this letter shall be filed in the Contractors health and safety file.

2.4 Legislative Compliance

All contractors shall comply with the following legislation and eThekwini Electricity standards:

- The Constitution of the Republic of South Africa (particularly Section 24 of the Bill of Rights)
- Occupational Health and Safety Act (85 of 1993) and Regulations
- National Environmental Management Act (107 of 1998)
- National Road Traffic Act (93 of 1996)
- Compensation for Occupational Injuries and Diseases Act (130 of 1993)
- Applicable South African National Standards (SANS)
- eThekwini Electricity OHM, UGM, Substation Codes of Practice
- eThekwini Electricity Safety Rules
- eThekwini Electricity Operating Regulations

2.5 Construction Professional Registration

All Contractors shall be registered in their respective levels as professionals in terms of the requirements of the South African Council for the Project and Construction Management Professions (SACPCMP) and the Construction Regulations (2014). Failure to be in possession of the required SACPCMP professional registration will result in the tender being disqualified.

2.6 Safety, Health, Environment and Quality Policy

All Contractors are required to compile an organizational SHEQ policy in line with their SHEQ responsibilities. The policy must be signed by the organization's CEO or the appointed assistant to the CEO, i.e. OHS Act Section 16(2) appointee.

2.7 Contractor Organogram

All Contractors are required to compile a company organogram, listing the reporting structure from the CEO downwards. The diagram must list the names, positions held and any appointments made. This diagram must be kept up to date and filed in the health and safety file.

2.8 Health and Safety Plan

All Contractors shall demonstrate to the SHERQ and Training Division Representative that they have a suitable and sufficiently documented Health and Safety Plan which complies fully with all applicable requirements of the Health and Safety specification, as well as the necessary competencies, experience and resources to perform the construction work safely. The Health and Safety Plan shall be filed in the health and safety file.

The Contractor shall appoint a suitably qualified person who is registered with a Statutory Body (South African Council for the Project and Construction Management Professions (SACPCMP) to prepare the Health and Safety Plan and to keep it up to date for the duration of the contract. The Contractor could be required to submit the following documentation for perusal and verification by the SHERQ and Training Division Representative prior to all contractors commencing with any work.

- Contractor Organogram
- Environmental Management Plan
- Traffic Accommodation Management Plan
- Medical records for employees
- SHEQ Policy
- eThekwini Electricity Contractor Competencies e.g. OHM, UGM, Substation, Faults man cards
- Health and Safety Competencies of Safety Personnel
- "Letter of good standing" with the Compensation Commissioner or licensed compensation insurer
- Incident Management Procedure
- Medical Surveillance Plan

2.9 Health and Safety File

The Contractor shall in terms of Construction Regulation 7(1)(b) maintain a Health and Safety File on site at all times. The Health and Safety File is a file or other permanent record containing information on aspects of the construction project - which will be necessary to ensure the health and safety of any person who may be affected by the construction work. The Contractor shall appoint a suitably qualified person who is registered with Statutory Body (South African Council for the Project and Construction Management Professions (SACPCMP) to prepare the Health and Safety File and to keep it up to date for the duration of the contract. The Health and Safety file shall include the following information:-

- Application for Construction Work Permit in terms of Construction Regulation 3 (Annexure 1, where applicable)
- Notification of Construction Work in terms of Construction Regulation 4 (Annexure 2, where applicable)
- Copy of OHS Act (updated)
- Proof of Registration and Good Standing with a COID Insurer or licensed compensation insurer
- Copy of health and safety plan
- OHS Programme agreed with Client including the underpinning Risk Assessment and Safe Work Procedures

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- Designs/drawings
- A list of Contractors (Sub-contractors) including copies of the agreements between the parties and the type of work being done by each Contractor
- All Appointments/Designations forms required by the Act and Regulations
- Relevant Equipment and Tools registers and checklists
- Personal Protective Equipment issue register
- Health and Safety Induction Records
- Incidents Recording and Investigation forms and records
- Emergency Preparedness Plans
- Health and Safety Committee Meetings Minutes
- Medical Certificates of Fitness
- SHEQ Policy

The health and safety file shall be handed over to eThekwini Electricity Unit on completion of the contract.

2.01 Risk Assessment

Prior to the commencement of any construction work, the Contractor shall have a risk assessment performed and recorded in writing by a competent person.

Risk is a measure of the likelihood that the harm from a particular hazard will be realized, taking into account the possible severity of the harm. Harm to people includes death, injury (permanent or temporary), physical or mental health or any combination thereof. Risk management in health and safety includes the identification of hazards, assessing risks, taking action to eliminate or reduce the risk, monitoring the effectiveness and performing regular reviews of the entire process. The Contractor shall compile Written Safe Working Procedures to address or handle the following:

- Hazards particulars to contract
- Identify what could go wrong and how
- Identify the likelihood of this happening
- Identify the persons at risk
- Identify the extent of possible harm
- Measures to eliminate or reduce each risk
- A monitoring plan
- A review plan

Contractors must ensure that all sub-contractors conduct risk assessments for their scope of work as well.

The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified.

The risk assessment shall be available on site for inspection by inspectors, employer, engineer, employees, trade unions and health and safety committee members, and must be monitored and reviewed by the contractor on regular intervals agreed to with the Client.

All Contractors must complete a Documented Pre -Task Risk Assessment prior to the commencement of any work or task. Hazards identified and precautionary measures must be discussed before work commences by the Person-In-Charge with all staff concerned. All copies of the Pre-Task Risk Assessment documents must be kept in the health and safety file for inspection by inspectors, eThekwini Electricity Unit Representatives or any other authorised / interested parties.

2.11 Safe Work Procedures

Written safe work procedures must be compiled for the risks and hazards that have been identified during the risk assessments indicating procedures to mitigate, reduce or control the risk sand hazards.
A safe working procedure should be written when:-

- Designing a new job or task;
- Changing a job or task;
- Introducing new equipment or substances; and

Reviewing a procedure when problems have been identified, e.g. from near miss incidents or an accident / incident investigation.
The safe working procedure should identify:

- The supervisor for the task or job and the employees who will undertake the task;
- The tasks that are to be undertaken that pose risks;
- The equipment and substances that are used in these tasks;
- The control measures that have been built into these tasks;
- Any training or qualification needed to undertake the task;
- The personal protective equipment to be worn;
- Actions to be undertaken to address safety issues that may arise while undertaking the task.

2.12 Legal Appointments

All contractors must make the relevant legislative and non-statutory appointments, which will be required to remain valid throughout the life of the project. All appointees shall be suitably trained and found to be competent for the responsibilities assigned. Copies of all the legal letters of appointments must be kept in the health and safety file.

2.12.1 Construction Manager Appointment - CR 8(1) and CR 8(2) Appointments

The Contractor, must in writing, appoint one full-time competent person as the Construction Manager as defined in the Construction Regulation (2014), with the duty of managing all the construction work, including the duty of ensuring the compliance of health and safety, and in the absence of a Construction Manager an alternate must be appointed by Contractor. The Contractor may also have to appoint one or more competent employees to assist the Construction Manager where justified by the scope and complexity of the works.

2.12.2 Construction Supervisor/Assistant Construction Supervisor - CR 8(7) and CR 8(8) Appointments

The Construction Manager shall appoint a full-time Construction Supervisor with the duty of supervising the performance of the construction work.

The Construction Manager may also have to appoint one or more competent employees to assist the Construction Supervisor where justified by the scope and complexity of the works. All Construction Supervisors shall be qualified and competent carded Electricians and/or Specifically Trained Persons who hold a valid eThekwini Electricity competency card. A contractor appointed as a Construction Supervisor in terms of Construction Regulation 8(7) may only supervise one site unless there are a sufficient number of Assistant Construction Supervisor appointed persons, i.e. CR 8(8) Appointees. An Assistant Construction Supervisor can only supervise one site at a time. Depending on the category of work e.g. Dead work, Live LV work, the persons eligible to be appointed as Assistant Construction Supervisors are qualified and competent carded electricians and /or Specifically Trained Persons who hold a valid eThekwini Electricity competency card.

Electrical contractor shall indicate their respective supervisory staff complement and list the background, experience and qualifications of said members which must be currently in the permanent employ of the contractor. Where, at the discretion of the Head: Electricity, the supervision level falls below that which would be normally expected to ensure standards of workmanship and safety as defined under the technical specification, the Contractor shall be instructed to replace the Supervisor.

The Contractor's Supervisor shall have five or more years experience in MV and HV cables installation and must be currently in the permanent employ of the Contractor. The Supervisor must be deemed competent in terms of eThekwini Electricity's Codes of Practice and Safety Rules. A second person is also required, who shall be specifically trained as a Cable Layer so that he can witness switching operations and sign permits as the Competent Person.

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It will be the Contractor's responsibility to ensure that existing services provided to eThekwini Electricity are not compromised. Hence should a Contractor declare a Supervisor who is already committed to an existing contract then eThekwini Electricity shall not consider that Supervisor as being available to execute this contract. EThekwini Electricity is an essential service provider with limited resources and has no intention of redeploying existing resources.

2.12.3 Construction Safety Officer or Client Safety Agent Appointment

Subject to the decision by the Inspector of the Department of Labour and taking into consideration the size of the project and the hazards or dangers that can be expected, the Contractor shall appoint in writing a Construction Safety Officer. The appointed Safety Officer shall be registered with a Statutory Body, i.e. South African Council for the Project and Construction Management Professions (SACPCMP).

If the Client decides to engage an external Safety Consultant, the Client must first check with SHERQ and Training Division to determine the capacity to handle the proposed project, the Safety Consultant will be appointed by the Client and approved by SHERQ and Training Division in terms of his/her qualifications and experience in the field of construction safety. The appointed Client Agent shall be registered with a Statutory Body, i.e. South African Council for the Project and Construction Management Professions (SACPCMP).

2.12.4 Additional Legal Appointments

In accordance with the Construction Regulations (2014) and depending on the project type the Contractor shall appoint, in writing, competent persons responsible for supervising construction work for the following work situations that may be expected on the site of the works.

(a) Risk Assessment (Construction Regulation 9);
(b) Fall Protection (Construction Regulation 10);
(c) Structures (Construction Regulation 11);
(d) Temporal Works (Construction Regulation 12);
(e) Excavation Work (Construction Regulation 13);
(f) Demolition Work (Construction Regulation 14);
(g) Tunnelling (Construction Regulation 15);
(h) Scaffolding Work (Construction Regulation 16);
(I) Suspended Platform Operations (Construction Regulation 17);
(j) Rope Access Work (Construction Regulation 18);
(k) Material Hoists (Construction Regulation 19);
(l) Bulk Mixing Plant (Construction Regulation 20);
(m) Explosive Actuated Fastening Device (Construction Regulation 21)
(n) Cranes (Construction Regulation 22);
(o) Construction Vehicle and Mobile Plant (Construction Regulation 23)
(p) Electrical Installation and Machinery on Construction Site (Construction Regulation 24);
(q) Use and temporary storage of flammable liquids on construction site (Construction Regulation 25);
(r) Water Environments (Construction Regulation 26);
(s) Housekeeping on Construction Sites (Construction Regulation 27)
(t) Stacking and Storage on Construction Sites (Construction Regulation 28);
(u) Fire Precautions on Construction Sites (Construction Regulation 29);
(v) Construction Employee's Facilities (Construction Regulation 30);
(w) Welding, flame cutting, soldering and similar operations (General Safety Regulation 9);
(x) Accident/Incident Investigator (General Administration Regulation 9);
(y) First Aider (General Safety Regulation 3);
(z) Health and Safety Representative (OHS Act Section 17);
(aa) Supervision of Machinery (General Machinery Regulation 2.1);
(bb) Assistant Supervision of Machinery (General Machinery Regulation 2.7a)

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A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work in all the work situations for which he/she has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his/her responsibilities to comply with all requirements of the Construction Regulations.

2.12.5 Principal Contractor Appointment

All Contractors who have been awarded a tender must accept a Principal Contractor's Appointment Letter from eThekwini Electricity Unit in accordance with CR 5(1)(k) of Construction Regulations (2014).

2.13 Health and Safety Induction Training

The Contractor shall ensure that all employees under his/her control attend the eThekwini Electricity health and safety induction training course offered by SHERQ and Training Division. No visitor or other person shall be allowed or permitted to enter any worksite unless such person has undergone eThekwini Electricity's health and safety training pertaining to hazards and risks which may be prevalent on work sites.

The Contractor shall ensure that every employee or visitor on site shall at all times be in possession of proof of the eThekwini Electricity health and safety induction training issued by SHERQ and Training Division prior to commencement of construction work.

The Contractor shall ensure that all Specifically Trained Persons and Competent Persons (carded persons) attend an Introduction to the OHS Act and Construction Regulation training in order to familiarise themselves with the same.

2.14 Medical Certificate of Fitness

Prior to induction, all Contractor employees must undergo a pre-employment medical examination and found to be fit for duty. A copy of the Medical Certificate of Fitness must be presented for permanent record keeping at the eThekwini Electricity Training Centre.

3. GENERAL HEALTH AND SAFETY PROVISIONS

3.1 Incident Management

NOTE: ALL SERIOUS ACCIDENTS MUST BE REPORTED TO THE RELEVANT CONTROL OFFICER.

In the event of a serious accident occurring, including one involving electric shock, first aid treatment must be commenced immediately if the victim's life is to be saved.

Assistance may be obtained as follows:-

3.1.1 Medical Assistance

It is essential to obtain medical assistance for the patient as soon as possible, and another employee who is not performing first aid and/or C.P.R. or if necessary a passerby, shall be requested to:-
Use the facilities most readily available (Departments telephone numbers listed in the Emergency Request for Assistance Notice) to contact the Control Room staff and report that a serious accident has occurred and the exact address at which it happened and if possible the injured person's name

Injuries of a very minor nature shall be attended to by the Person-In-Charge and the injured person shall

continue with his/her normal duties. All injuries that occur after normal working hours must be reported immediately to the appropriate Control Officer. All Contractor vehicles are to have an Emergency Request for Assistance notice prominently displayed.

3.1.2 Accident Investigation

All incidents shall be investigated in terms of the General Administrative Regulations 9. All OHS Act Section 24 and 25 Incidents shall be reported to the Inspector by the Contractor within the prescribed period and in the prescribed manner. Investigations shall be conducted by a competent investigator who shall compile the appropriate incident report form as listed in the General Administrative Regulations Annexure 1.
A comprehensive and detailed investigation report shall be submitted to the eThekwini Electricity Unit Representative within 7 -14 days after the incident. All incidents that were in contravention of any one of eThekwini Electricity Unit Safety Rules, Operating Regulations, Code of Practice must be presented by the relevant contractor management to the eThekwini Electricity Unit Representatives, and where required, to the relevant GMR 2.1 or GMR 2.7(a) Appointee. eThekwini Electricity reserves the right to participate in investigations if the incident is directly linked to any activity within their area of supply and network.

3.1.3 Close out

All incident investigation reports shall be closed out once all the recommendations to prevent further incidents have been carried out and a copy of the investigation report must be handed to the Electricity Unit SHERQ and Training Division.

3.2 First Aid Box and First Aid Equipment

The requirements of the OHS Act General Safety Regulation 3 must be observed. First Aid appointments must be made to meet the requirements. Each work site must have at least one employee trained in First Aid - Level One, at the minimum. When appointing employees for work sites, cognizance must be taken into account regarding the type of work to be performed, the distance teams are working apart and the terrain to be covered if an emergency should arise. All contractor vehicles to have an Emergency Request for Assistance notice displayed prominently, where it can be easily seen. All contractor vehicles or work sites shall have at least one first aid box, and thereafter additional first aid boxes for every 50 or team of workers on site or part thereof, again taking into account the type of work performed, the distance teams are working apart and the terrain to be covered if an emergency should arise. More first aid boxes shall be provided, if the risks dictate. Boxes must be available and accessible for the immediate treatment of injured persons at any particular work site. The appropriate stick-on signage must be placed on the outside of vehicles and/or mobile equipment to indicate where first aid boxes are located.

Boxes and equipment

The following is a list of minimum contents of a first aid box:

_ Item 1: Wound cleaner/antiseptic (100ml);
_ Item 2: Swabs for cleaning wounds;
_ Item 3: Cotton wool for padding (100 g);
_ Item 4: Sterile gauze (minimum quantity 10);
_ Item 5: 1 Pair of forceps (for splinters);
_ Item 6: 1 Pair of scissors (minimum size 100 mm);
_ Item 7: 1 Set of safety pins;
_ Item 8: 4 Triangular bandages;
_ Item 9: 4 Roller bandages (75 mm X 5 m);
_ Item 10: 4 Roller bandages (100 mm X 5 m);
_ Item 11: 1 Roll of elastic adhesive (25 mm X 3 m);

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_ Item 12: 1 Non-allergenic adhesive strip (25 mm X 3 m);
_ Item 13: 1 Packet of adhesive dressing strips (minimum quantity, 10 assorted sizes);
_ Item 14: 4 First aid dressings (75 mm X 100 mm);
_ Item 15: 4 First aid dressings (150 mm x 200 mm);
_ Item 16: 2 Straight splints;
_ Item 17: 2 Pairs large and 2 pairs medium disposable latex gloves;
_ Item 18: 2 CPR mouth pieces or similar devices;
_ Item 19: 1 Burn shield

A content check list must be available with all boxes and boxes shall be checked on a regular basis, kept clean and dust free.

3.3 Fire Extinguishers and Fire-fighting Equipment

Every contractor vehicle and every work site must have at least one Dry Chemical Powder fire extinguisher, each with a minimum capacity of 4.5 kg, taking into account the type of work performed, the distance teams are working apart and the terrain to be covered if a fire should occur. Every contractor must ensure that every employee is familiar with the use of a portable fire extinguisher. All fire extinguishers in contractor vehicles must:

- Be clearly labelled
- Be conspicuously numbered
- Be entered in a register
- Be inspected monthly by a competent person
- Be tested and serviced annually by an accredited supplier
- Have the results entered in the register and signed by a competent person.
- Be mounted in the upright position for ease of access and secured to prevent dislodgement.

3.4 Personal Protection Equipment and Clothing

All Contractors shall recognize that PPE is the last line of defense, therefore the correct use is vital in ensuring that it is effective.

Requirements:
1. The need for PPE shall be identified for all activities and this assessment shall be recorded (PPE Schedule).
2. All PPE shall comply with SANS standards and/or any other specified standards.
3. Employees shall be educated in the correct use, care and storage of PPE and records shall be kept.
4. Critical to the successful use of PPE, is the enforcement by site supervisors, who shall at all times demonstrate the correct use, personally and in addition carry out inspections to ensure compliance.
5. Once the individual has been trained in the correct care and use of the PPE, it shall be the responsibility of the individual to use the PPE correctly.

Contractor's employees at the construction site, including visitors, shall use the following PPE at all times, as a minimum:

- Head protection (Hard hat) with chinstrap
- Steel toe capped safety boots
- Eye protection - wearing of impact safety spectacles with side shields. Prescription glasses must comply with the same standard or cover impact safety spectacles must be worn over them
- 12,4 arc rated flame retardant long sleeved and long pants Conti suits (Red)
- High visibility vests / overalls with reflective strips

However, if there are particular activities/areas/risk assessments that require a specific type of PPE, then that specific PPE requirement must be adhered to (e.g.: for dusty environments – goggles, for welding – welding helmet, etc.).

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Strict non-compliance measures must be administered to any employee not complying with the use of PPE and shall be removed from the work site. When working at height, only double lanyard safety harnesses are allowed and when working on a pole an approved work positioning belt for working at height are to be used. Welders, cutters and aiders shall wear suitable eye protection, gloves and apron spats and screens shall be provided to protect onlookers and passers-by. Suitable impact resistant eye protection shall always be worn for grinding, chipping and chasing, and screens shall be provided to protect onlookers and passers-by.

When working with Hazardous Chemical Substances, e.g. acids, suitable eye protection, gloves and special overalls shall be worn. Suitable respirators shall be provided where gas, vapors, fumes, dust, etc. could pose a hazard. All contractors shall provide PPE free of charge as stipulated in Section 23 of the OHS Act (Certain deductions prohibited) and General Safety Regulations 2(2).

3.5 Housekeeping

All contractors shall maintain a high standard of housekeeping within a worksite, prompt disposal of waste materials, scrap and rubbish is essential. Nails protruding through timber and cable armoring sharp edges shall be bent over or removed so as not to cause injury.

All packaging material including joint boxes, cable drum planks, pallets, crates, etc. to be removed from the work area immediately. On completion of the work, the contractor is responsible for clearing the worksite of all materials, scrap, etc. eThekwini Electricity has the right to instruct the contractor to cease work until the area has been tidied up and made safe. All contractors shall carry out regular safety/housekeeping inspections (at least weekly) to ensure maintenance of satisfactory standards.
Housekeeping on/in vehicles is of paramount importance. If contractor employees are to be transported in the back of construction vehicles, then those vehicles are to be fitted with canopies and have fixed and firmly secured seats with seat belts adequate for the number of passengers being transported, tools, equipment and material to be secured in order to prevent movement. All tools, materials and equipment to be stored in their toolboxes, shelves, etc. No materials, tools and equipment is permitted to be left lying around at the back of construction vehicles.

Employees are not be transported in construction vehicles unless the compartment they are travelling in complies with the requirements of the Road Traffic Act, and tools, equipment and materials are physically separated from the employees by a suitable barrier.

3.6 Thermal Conditions

All contractors must protect their employees against the natural thermal conditions, by providing sufficient and suitable cold weather gear for the winter months and suitable rain wear for the rainy seasons.
In hot conditions, contractors must prevent the effects of heat fatigue and heat exhaustion by providing sufficient rest periods, shaded cover where possible, and re-hydration mineral replenishment fluids.

3.7 Night work

Where any night work is to be performed, then contractors shall provide sufficient lighting to enable the entire worksite to be illuminated to a degree that any employee must not have to work in any dark (un-illuminated) areas. If work is continuing from day light into night, at dusk, a tail gate meeting (Pre-Task Risk Assessment) must be held where all employees must be advised of the hazards of night work and the extra precautions that are required to be taken, i.e. poor housekeeping, stepping on uneven ground, stepping into holes, etc.
The entire work site must be suitably lit to meet the minimum lux guidelines as provided for in the Environmental Regulations for Work Places of the OHS Act.

3.8 Work in confined spaces or enclosures

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Confined spaces include joint holes, cable boxes, vessels, transformer tanks, chambers, oil tank compartments, etc.

Attention is drawn to General Safety Regulation 5 (Work in Confined Spaces) of the Occupational Health and Safety Act, 1993. No person shall enter a confined space or enclosure until the degree of oxygen has been established by utilizing an approved monitor, and as the case may be, it has been adequately cleared of any dangerous liquid or purged with air to clear any dangerous concentration of gas or fumes by using ventilation fans. In the case of vessels, transformer tanks, chambers, etc., at least one other person who is adequately trained in rescue and resuscitation procedures shall remain in attendance, outside of and next to the entrance thereof whilst any person is within; and where there is the possibility of the presence of flammable liquids, gases or fumes, effective precautions must be taken to prevent ignition by the avoidance of open sources of heat or light and the formation of sparks by ferrous tools, the generation of static electricity by clothing or by other means.

3.9 Hot Work (Welding, Cutting, Grinding and Heating)

Contractors must instruct employees in the safe use of welding equipment. Cutting and welding work is carried out in accordance with General Safety Regulation 9 of the OHS Act. Non-combustible or flameproof shields to protect employees from direct rays and air-borne particles must shield arc welding, cutting and grinding operations. Electrode holders or welding guns are maintained in good order, and when they are to be left unattended, the electrodes are removed and the holders are placed or protected so that they cannot make electrical contact with employees or conducting objects.
All arc-welding cables are properly maintained and completely insulated. There are no repairs or splices within 3 meters of the electrode holders, except where splices are insulated equal to the cable. Defective cable is repaired or replaced. The earth cable is connected to the work place. Fuel gas hose and oxygen hose is of an approved type, be easily distinguishable and must not be interchangeable. Hoses are inspected at the beginning of each day and are repaired or replaced if defective.

Hot Work
- Falling sparks and/or hot cuttings to be contained
- Fire Blankets and Fire Extinguishers are at hand
- Ensure not to carry out any hot work, cutting and/or grinding in the vicinity of flammable liquids
- Combustible floors are wetted down, covered with damp sand or fire proof sheets
- Containers/pipes purged of flammable vapors
- Fire Watch is provided
- Area to be inspected after hot work has been completed
- Fire Watch to stay in place for at least 30 minutes after operation
- Warn all employees working under hot work process

3.10 Water environments

All contractors shall ensure that where construction work is done over or in close proximity to water, provision is made for preventing persons from falling into water and the rescuing of persons in danger of drowning {CR 26(1)(a) and (b)}.
All Contractors shall ensure that workers who are exposed to drowning by falling into water are provided with and wear lifejackets (CR 26.2).

3.11 Permits for National Key Point areas

It is the responsibility of the contracting company to obtain the necessary permits when work is to be undertaken at a National Key Point Area and all related costs shall be paid by the contracting company.

4. MINIMUM PHYSICAL REQUIREMENTS

4.1 Excavations, Trenches and Floor Openings

Digging, excavation, or driving a peg, pile or spike into the ground operations by the contractor may not commence without the written authorization from eThekwini Electricity Unit. Prior to commencing work on any excavation or trench, mains records must be obtained from the Network Drawing Office in order to determine the location of all underground installations; i.e., sèwer, telephone, water, fuel, cable, etc. Proving trenches to be dug by contractors to determine the route of underground installations, i.e., sewer, telephone, water, fuel, cable, etc.

Adequate precautions shall be taken by the contractor to prevent collapsing of excavations, as well as to prevent rocks and loose material falling onto workers. All excavations done by the contractor are to be clearly demarcated and barricaded to prevent accidental access. Only solid barricading will be used at areas where a fall hazard is present. Solid barricading and/or hole covers shall be provided around all holes or openings to prevent any person being injured as a result of a fall. Danger tape may only be used as a pre-warning to make the solid barricading more visible and to prevent persons from coming close to the danger area.

Barricading must be placed as close as possible to the excavation. If an excavation or trench endangers the stability of buildings or walls, shoring, bracing, or underpinning must be provided. Excavations and trenches that are adjacent to backfilled excavations or trenches, or which are subject to vibrations from railroad traffic, road traffic, the operation of machinery (e.g. shovels, cranes, trucks), must be secured by a support system, shield system or other protective systems (i.e. sheet-pile shoring, bracing). Warning signs and flashing warning lights at night shall be displayed in suitable positions to warn any persons approaching the area of the location and extent of any excavation. No material to be within 3 meters of the excavation edges. All excavations must be on register and inspected daily before work commences and after inclement weather by the contractor's appointed competent person, declared safe and his/her findings noted in the said register. eThekwini Electricity Unit to review the said register on a pre-determined frequency not exceeding seven (7) days. Whilst work is being performed in an excavation, there shall be a supervisor, at all times. Every six meters there shall be an escape ladder, in all excavations. Requirements in Construction Regulation 13 shall apply. No work shall commence in an excavation unless the excavation has been declared safe by the competent person.

Excavation shall be carried out in accordance with the requirements of the Occupational Health and Safety Act Construction Regulations 2014 and SABS 0198 Part VII. Trenches shall be kept as straight as possible and shall be excavated to an approved formation and in accordance with the dimensions specified by the Engineer. The Contractor shall supply and install the shoring timber in accordance with the requirements of the Occupational Health and Safety Act. All trenches shall be close timbered to full depth with a projection of 200 mm above ground level. Installation shall be at rates given in the Pricing Schedule at per metre run of trench, per side inclusive, irrespective of depth. The bottom of each trench shall be firm and of smooth contour.

The material from each trench shall be placed adjacent to the trench but leave a walk way on both sides, in such a manner as to prevent nuisance or damage to adjacent hedges, trees, ditches, drains, gateways and other property and shall be stacked so as to avoid undue interference with traffic. Where, owing to certain conditions, this is not possible, the excavated materials shall, with the approval of the Engineer, be removed from the site and returned for refilling the trench on completion of laying. All surplus material from whatever source shall be disposed of by and at cost of the Contractor.In order to facilitate the re-use of excavated material for road foundations and surfacing, the excavated materials shall be separated into hard road material, soil and other material.

Trial holes are to be excavated by the Contractor as and when requested by the Engineer, or where reasonable doubt exists regarding the proximity of other services. The Contractor shall be responsible for obtaining information regarding the positions of electric cables, Telkom cables, water pipes, stormwater pipes and sewers and any other services along the routes to be excavated and he shall be held responsible for damage caused by him to the existing plant and services.

E.9717: Installation of High and Medium Voltage Underground Power Cables

4.1.1 Cable laying

Cables shall be laid according to SANS 0198 Part VIII or NRS 079 depending on the voltage level, with the following additional requirements. The Contractor shall, before installing the cable, at his own expense familiarise himself with the conditions on site. Use of existing soil or import soil shall be at the Engineer's discretion. Before any cables are laid, trenches shall be inspected thoroughly to ensure that it is free from all objects likely to damage the cable either during or after cable laying operations.

The method of laying of cables shall be approved and no cable shall be winch pulled without the use of a dynamometer. The maximum tension on the cables during laying operations must not exceed the figure specified by the manufacturer. A swivel head must be used to avoid any rotation. If necessary, bond pulling techniques must be employed. Except where ducts, tunnels or pipes are provided and unless instructed to the contrary by the Engineer, the Contractor shall lay cables direct in ground.

The depth of laying of cables in the ground shall be as stated. Any variations from the specified depth shall have to be approved by the Engineer.The Contractor shall maintain an approved means of communication between operators at the winch, pulling eye and the drum end of the cable during laying operations.

A form approved by the Engineer must be used for the recording details of each cable pull. Details must include approximate pulling speed and pulling load.

4.1.2 Backfill: Covering, Backfilling and Reinstatement

The concrete cover slabs and cable marker tape will be supplied by eThekwini Electricity. Filling in of trenches shall not commence until the Engineer has inspected and approved the cables on site. Such inspection shall not be unreasonably delayed.The removal of surplus displaced soil must also be carried out and allowed for in the imported soil price in Pricing Schedule: Payment shall be made against measurements of the fill material in the trench after compaction (i.e. not against delivered uncompacted loads).

The cables shall be thoroughly inspected prior to covering with imported soil to a compacted level of 75 mm above the top of the cable. Hard wooden rammers are to be used. A layer of cable cover slabs must then be placed centrally over the cables covering all cables.Power driven mechanical rammers shall be used for reinstatement of the excavated materials, after the first 300 mm of soil have been placed over the concrete slabs, and then after every 300 mm of backfill with a final consolidation using a vibrator roller.

The refilled trench shall be maintained in a thoroughly safe condition by the Contractor, at his own expense, for the duration of the contract, or until permanently re instated by the authority concerned. The Contractor shall notify the Engineer timeously when damaged tarmac and concrete surfaces can be reinstated and the Engineer will arrange for this to be undertaken. After the cable slabs have been laid, the serving of each cable shall be tested according to IEC 60840 prior to filling the trench. The test will be carried out by eThekwini Electricity.

4.2. Public Safety

Legislation requires that employers shall be responsible, as far as reasonably practicable, for safeguarding persons other than those in their employment who may be directly affected by their activities so that they are not exposed to hazards to their health or safety (Section 9 of the OHS Act refers).

A member of the public is any company non-employed person(s) who could be directly or indirectly exposed to eThekwini Municipality Electricity Unit's/contractors' products or activities.

eThekwini Municipality Electricity Unit upholds the rights of the members of the public and maintains an awareness and educational programme to protect the public against the risks that may arise out of, and in the course of eThekwini Municipality Electricity Unit's activities. Similarly, contractors shall share the same respect for the public.

Contractors, where working in any area where members of the public have access or can approach work sites, will be approached by the public for reasons of inquisitiveness, members airing complaints, vandalism, theft,

public unrest, intimidation, stray/wandering animals, etc. and will then implement such measures that will place great emphasis on public safety.

Contractors shall factor in, in their safety plan, how they intend safeguarding/controlling any members of the public against their activities, without damaging eThekwini Municipality Electricity Unit's name and/or reputation.

4.3. Working in close proximity to/on public roads

Due to the nature of the work, the safety of contractor employees and other road users is of paramount importance. The task to be performed shall be properly planned with all the role players. Dependent on the category of road to be worked on, the relevant traffic authorities must be informed of the task.

High-visibility vests shall be worn. If the authorities need to be in attendance, no work shall start until such time as the authorities arrive onsite, irrespective of whether outages are planned and will result in delays.

Work areas shall be adequately barricaded so as to prevent unauthorised access. This rule applies for normal and breakdown work.

The following, from a road safety perspective, shall be carried out:

4.3.1 Planning work and resources

- Some of the resources include:
  1. traffic signs;
  2. red flags;
  3. road cones;
  4. amber rotating lights (on vehicles and on "Workmen ahead" traffic signs);
  5. reflective vests/bibs;

4.3.2 Setting-Out Procedure on Two-Way Roads

When signs are set out, the contractor must start with the warning signs on the side of the road opposite to the work site. Pace out the correct distances and set out the signs, starting with the "Road Workmen" sign and, working back towards the work site, placing the "Road Narrows from One Side Only" sign. Taking care at all times face the oncoming traffic and whilst setting out signs and use a flagman when crossing the road.

Repeat the procedure for traffic approaching on the work site side of the road. Place the first "Keep Right" sign where the taper of cones will begin. If "Stop/Go" signs or traffic lights are to be used, put them into operation at this stage, then cone off the site.

Start placing cones from the beginning of the taper and work towards the worksite. Place the second "Keep Right" sign at the end of the taper of cones. Finally, make allowance for pedestrians, by placing any barricades, cones, lamps and other signs that are needed. When the job has been completed, the signs, cones and barricades will be removed in reverse order.

When using flagmen or "Stop/Go" signs, both men must be able to see each other clearly or must use two-way radios. Flagmen or "Stop/Go" controls are required when the width of the road open to traffic is less than 5.5 meters. The contractor employees must be trained, and must be alert and be able to effectively carry out their duties. Contractor employees must wear high visibility clothing. Flagmen and "Stop/Go" controls should never be used at night. Only use Flagmen when less than 5 vehicles per minute use the road. "Stop/Go" control must only be used when more than 5 vehicles per minute use the road.

4.3.2.1 Night Work

a) When work is carried out at night or left overnight, the following precautions must be taken:
All signs must be fully reflectorized. Lamp batteries should be checked regularly.
Use suitable lamps and barricades to ensure that pedestrians can pass the work site safely.
Flashing amber lamps should be placed at least at the beginning and end of each taper of cones and/or at each corner of the work site. Workers must wear High Visibility Clothing.

b) Incomplete works left overnight:
Cones should be replaced with non-flashing amber lamps on stands. These stands should be chained together and locked for security against theft.

c) Work at night:
Vehicles should be fitted with flashing amber lamps and, if facing oncoming traffic, headlights must not be used. Non-flashing amber lamps on stands should be placed around the works at 25 meters spacing. When floodlights are used, position them so that motorists are not blinded by the glare.
Once a task has been completed, ensure that all equipment is picked up and packed onto vehicles then remove signage and lastly, flags persons.

4.4. Hazardous Chemical Substances

Where HCS are brought onto the site, the appropriate Material Safety Data Sheets (MSDS) shall be available at that worksite. Contractors are to have and maintain a register with all the HCS that they have on site.

4.4.1 Handling of Hazardous Chemical Substances

All HCS containers to be clearly labelled. Containers that are not marked will not be allowed access to site. No HCS to be stored in food or drink containers. Users of HCS to wear/use the correct PPE as per the HCS Material Safety Data Sheet and risk assessment. Users of HCS to be adequately trained in the HCS that they are handling. Where flammable liquids are used, caution must be exercised of the effects of health risks associated with such liquids.

4.4.2 Storage of Hazardous Chemical Substances

All HCS must be stored in terms of the supplier requirements and as listed on the respective MSDS.
Caution must be taken into the hazardous situations (gasses given off, fires and or explosions erupting) that could arise from incorrect storage.

5. PLANT, MACHINERY and EQUIPMENT

5.1. Transport/Mobile Plant Equipment

All motor vehicles driven / operated by contractors shall comply with the National Road Traffic Act.
Designated drivers shall be in possession of the relevant driver's license valid for the class of vehicle being used. The driver's license shall be kept by the person so authorized and shall produce such card on request.
When driving on rural roads, care and caution must be exercised due to rough and uneven terrain and reckless third party drivers. No drivers or operator may text, talk on cell phones or two way radios whilst driving, unless a hands free kit is used. It is the driver's responsibility to ensure that the vehicle and/or equipment they drive on any road is roadworthy and complies with the requirements of the National Road Traffic Act. Contractors are permitted to transport passengers in the back of LDV's and construction vehicles provided that the vehicles are to be fitted with canopies and have fixed and firmly secured seats with seat belts adequate for the number of passengers being transported and tools, equipment and material to be secured in order to prevent movement. All tools, materials and equipment to be stored in their toolboxes, shelves, etc. No materials, tools and equipment is permitted to be left lying around at the back of construction vehicles. All contractor vehicles shall have organizational identification markers on their vehicles, including hired plant, and vehicles.
It is the responsibility of the driver to ensure:

1. He/she and their passengers wear seat belts whilst the vehicle is in motion
2. Comply with all traffic road rules, safety, direction and speed signs

3. Ensure that vehicle loads are properly secured prior to moving off
4. Ensure that vehicles are not overloaded

All drivers of construction vehicles are to have valid medical certificates of fitness. Contractor vehicles may be subject to inspections by an eThekwini Electricity representative. Vehicles which are not roadworthy will not be allowed to undertake work on behalf of the eThekwini Electricity Unit. Loads projecting from vehicles shall be securely loaded and in daytime a red flag and during darkness a red light or red reflective material shall be attached to the extreme end of such projecting material. Contractors are to ensure that visibility (e.g. switching on/off lights, reflectors, etc.) is enhanced on all construction vehicles in order to be easily seen and the location of the vehicles. Construction vehicles over 2 ton, when reversing, must have a hooter/beeper which sounds, whilst the vehicle is reversing. Drivers / operators must not leave vehicles unattended with the engine running unless the engine power is required for ancillary equipment. Where engines are left running, then the vehicle park brake shall be engaged and the wheels chocked. Drivers / operators not to park vehicles in unauthorized zones/areas unless they are performing work. A current maintenance logbook is required for all cranes and large plant equipment, and shall be available for inspection at any time. The logbook shall be located in the cabin of the crane or plant equipment. In the event where contractors do not own the equipment and have hired such, they are still responsible for ensuring all the above requirements for that plant, machine or vehicle is complied with.

5.2 Machinery

All machinery brought to the work sites by contractors must be appropriate to the task being performed, be in a good condition and adequately maintained. Contractors shall ensure that all machinery is to be listed on an inventory list, be inspected regularly and at east monthly or as required by legislation and risk assessments. Machinery should be numbered or tagged so that it can be properly monitored and inspected.

Where required machinery must have the necessary approved test or calibration documentation prior to being brought onto the worksite and the records shall form part of the health and safety plan. Maintenance calibration shall be undertaken in terms of the manufacturer's requirements.

All fuel driven equipment must be properly maintained in accordance with the manufacturer's recommendations and legal requirements.

EThekwini Municipality Electricity Unit reserves the right to inspect items and/or machinery brought to site by contractors. All machine operators shall be certified competent to operate such machines. Copies of their certificate of competencies shall be available at all times for perusal.

5.3 Machine guarding and barricading

Every shaft, pulley, wheel-gear, sprocket, coupling, clutch, friction drum, spindle end screw, key, bolt on a revolving shaft, driving belt, chain rope or similar object shall be securely fenced or guarded. The machines or tool with moving parts should be guarded to prevent limbs or loose clothing from getting under, into, above or around the dangerous moving parts.

Guards should form a permanent part of the machine or tool, easy to remove, non-corrosive, rigged and as far as reasonable, heat resistant.

All machines driven by means of belts, gear wheels, chains and couplings shall be adequately guarded. A machine is guarded when persons cannot gain inadvertent access to the moving parts. All guards must be inspected by a competent person on a monthly basis as well as by users prior to use. These inspections and proof of corrective action taken must be recorded and kept on site.

5.4. Hand tools

All hand tools (hammers, chisels, spanners, etc.) must be recorded on a register and inspected by the construction supervisor on a monthly basis, as well as by users prior to use. Tools with sharp points in tool boxes must be protected with a cover. All files and similar tools must be fitted with handles. No make shift tools are permissible on site.

5.5 Pneumatic tools

It is illegal for a pneumatic tool to be operated by using a compressed gas cylinder. Pneumatic equipment shall only draw supply from mobile air compressors or from compressed air lines installed within the contractor's premises. All pneumatic tools should be numbered, recorded and inspected at least monthly as well as by users prior to use. Where tools have a spindle drive, then the revolutions per minute speed shall be measured in accordance with the manufacturer specifications. When using compressed air hoses with the interlocking type of connection in the hose, connectors shall be secured with wire clips through holes provided to prevent accidental disconnection.

Compressed air shall not be used for any purpose other than that for which it is provided. Compressed air should not be used to remove dust or debris from clothing or for cleaning purposes. Hoses to be orderly routed and elevated if required in order to prevent tripping hazards.

All pneumatic tools operators shall be certified competent to operate such tool. Copies of their of certificate of competencies shall be kept.

5.6 Portable electric tools

All portable electric tools shall be operated through an earth leakage or portable earth leakage system unless they are of the double insulated type. Electrical cords of all portable electrical tools shall be in a good working condition at all times. Any electrical tool that has any defects (including cords) shall be removed from service. All portable electric tool operators shall be certified competent to operate such tool. Copies of their of certificate of competencies shall be kept.

5.7 Lifting machinery

Before using any lifting machinery, the operator should inspect it daily and where the machine appears faulty, it shall be removed from service immediately. All lifting machines shall be examined and subjected to a performance test by an accredited person/company at intervals not exceeding 12 months, as per DMR 18, or more frequently as desired. All hooks shall be fitted with a safety latch/catch, and be in a good operational condition. All lifting machines should be recorded on a register - refer to the requirements of the Driven Machinery Regulations 18.

All lifting machines should be conspicuously and clearly marked with identification particulars and the maximum mass load which it is designed for.

5.7.1 Mobile cranes / Truck Mounted Crane

The mobile crane operator shall be trained for the class of crane they are operating and be in possession of an operators permit. All mobile cranes shall be examined and subjected to a performance test by an accredited person/company at intervals not exceeding 12 months, as per SANS 19 'The Inspection, Testing and examination of Mobile Cranes'. All mobile cranes shall be subjected to an inspection prior to daily use and a record kept of the inspection. Any hydraulic crane leaking fluid must be taken out of service and be repaired prior to further use. This is for safe stable operations and protection of the environment. Outriggers shall be used every time the crane is to be utilised to lift any sort / size load. Mobile crane operators shall ensure that loads are not carried over the heads of any workmen. The rigger will give warning signals. Riggers shall be utilised when lifting loads and shall direct the crane operators with the appropriate signals.

5.8 Lifting tackle

A Pre-Task Risk Assessment shall be conducted prior to commencing with the task to identify that the correct slinging equipment is used for the specific load. All lifting tackle should be examined at intervals not exceeding 3 months by a competent lifting tackle inspector, who shall record and sign off such examination, such lifting tackle shall be stored accordingly to prevent damage or deterioration when not in use. All lifting tackle should be recorded on a register - refer to the requirements of the Driven Machinery Regulations 18. All lifting tackle should be conspicuously and clearly marked with identification particulars and the maximum mass load which it is designed for. All hooks shall be fitted with a safety latch/catch, and be in a good operational condition.

5.9 Material handling

Guide ropes to be used to prevent loads from swinging. Rigging study should be conducted for all critical lifts to ensure the correct equipment is available. Employees shall keep out from under suspended loads and between a load and a solid object where they might be crushed if the load should swing or fall. They shall not pass or work under the boom or any crane or within a barricaded of area. No user of machinery shall require or permit any person to be moved or supported by means of a lifting machine unless such machine is fitted with a man-cage designed and fabricated according to an approved SANS standard and a risk assessment has been done. Hand signals will be displayed and visible on all cranes and the SANS 1029 standard must be used to ensure uniformity and all the crane operators, riggers must be trained according to SANS 1029.

5.10 Boilers, Pressurised systems, and Vessels under pressure

5.10.1 Mobile and fixed compressors

Contractors shall ensure that all vessels under pressure are inspected by an AIA and shall be in possession of the AIA inspection and test certificate. All pressure vessels shall be provided with at least one safety valve and such safety valve should be kept locked. Where required, the vessel under pressure should be provided with a manufacturer's plate. The vessel under pressure should be fitted with a pressure gauge in Pascal and the maximum permissible operation pressure marked with a red line on the dial (marking the glass is not permissible).

6. Omissions from safety and health requirements specification

By drawing up this Health and Safety Specification eThekwini Municipality Electricity Unit has endeavoured to address the most critical aspects relating to Safety, Health and Environmental issues in order to assist contractors in adequately providing for the health and safety of employees on site.

Should eThekwini Municipality Electricity Unit not have addressed all health and safety aspects pertaining to the work that is tendered for, the contractor needs to include it in the health and safety plan and inform eThekwini Municipality Electricity Unit of such issues when submitting the tender.

This document should be read in conjunction with the OHS Act (85 of 1993) and it's supporting Regulations, eThekwini Electricity OHM, UGM and Substation Codes of Practice, eThekwini Electricity Safety Rules and the eThekwini Electricity Operating Regulations.