EASTERN CAPE PROVINCE

DEPARTMENT OF EDUCATION

REQUEST FOR BID

FOR

EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL

3EB

EMIS NO: 200400084

DISTRICT: CHRIS HANI EAST

BID NO: 2023/10/022

Consisting of:
Single Volume: The Request for Bid (Returnable) - This document

BIDDER: ……

CRS NO: ……...

Compiled for:	Compiled by:
SUPPLY CHAIN MANAGEMENT Eastern Cape Department of Education Steve Tshwete Complex, Zone 6 **ZWELITSHA** 5608 Website: https://eceducation.gov.za/	

OCTOBER 2023
PNO:

REQUEST FOR BID

Index

Part 1: BID PROCEDURE

T1.1: Request for Bid Notice and Invitation to Bid (SBD1)

REQUEST FOR BID NOTICE

DEPARTMENT OF EDUCATION
EASTERN CAPE PROVINCE

Bidders are hereby invited by **DoE** for the following contract, relating to the Provision of Generators to EcDoE facilities.

EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL

BID NO: 2023/10/022
[CIDB Grade: 3EB Category or Higher]

Principal Agent
Mr Q Msiwa
Tel: (040) 608 4707

Project Leader (DoE)
Mr Q Msiwa
Tel: (040) 608 4707

Availability of Document – Bid document with the necessary terms of reference could be downloaded from the Eastern Cape Department of Education website: **https://eceducation.gov.za/** as from **Friday, 20 October 2023** to the closing date **Friday, 27 October 2023**.

Completed Request for Bid documents in a sealed envelope endorsed with the project name, request for Bid number and description post to **Bids & Contracts Office, Private Bag X0032, Bhisho, 5605,** or may be deposited in the tender box situated at the Reception area of the **Department of Education, Steve Vukile Tshwete Education Complex, Zone 6, Zwelitsha**, not later than **11h00** on **27 October 2023.**

BRIEFING SESSION – Mandatory Briefing Session will be held at Clarkebury Agricultural School on **Tuesday, 24 October 2023** at **11H00**

Bidders shall take note of the following Bid conditions –

- Single Volume to be submitted
- Priced BoQ to be submitted
- Bidders are required to have a CIDB contractor grading designation **3E**B or higher
- JV Agreements with installers and CIDB graded contractors would be acceptable.
- An approved surety will be required
- Penalties for late completion will be enforced
- Late request for Bids will not be accepted
- Letter of Good Standing from the Compensation Fund or FEMA to be submitted with request for Bid
- Failure to complete all supplementary information and the RETURNABLE SCHEDULES could result in the request for Bid being eliminated
- CIPRO/CIPC Certificate to be submitted with tender

- Adjudication criteria are as follows:

  - **80** Points for Price
  - **20** Points for Specific Goals

Bids with a threshold value up to R50 000 000,00 shall be evaluated on 80/20 principle. Preference points shall be allocated as per below table:

Preferential goals Historically Disadvantaged individuals	**Allocation of Points**
Historically disadvantaged individuals	4
Persons with disabilities	2
Promotion of Youth	3
Woman Participation	3
Enterprises located in the Eastern Cape Province	6
Promotion of Military Veterans	2

1. CLAIMING OF PREFERENCE POINTS

1.1. Preference points allocated Historically Disadvantaged individuals may be claimed by Persons who had no franchise in national elections prior to 1983 and 1993.

1.2. Preference points allocated for women may be claimed if there is sufficient evidence that such woman has ownership of 51% or more of the enterprise shareholding.

1.3. Preference points allocated for persons with disabilities may only be claimed ifthere is sufficient evidence that such person has ownership of 51% or more ofthe enterprise shareholding.

1.4. Preference points allocated for promotion of youth may only be claimed if thereis sufficient evidence that such youth has ownership of 51% or more of the enterprise shareholding.

1.5. Preference points for Locality may be allocated for promotion of enterprises located within the Eastern Cape Province may be claimed by submission of proof that the enterprise is located within the borders of Eastern Cape Province. This includes an enterprise whose head office may be situated in another province but has a fully-fledged branch within Eastern Cape Province. Enterprises located outside the borders

of the Eastern Cape Province and who only appoints agents and or commission warehouses in this municipal area are expressly excluded fromclaiming points for this goal.

1.6. Preference points may be allocated to other RDP goals as follows:

(a) Promotion of south African owned enterprises
(b) Promotion of export-oriented production to create jobs
(c) Creation of new jobs or intensification of labour absorption
(d) Promotion of enterprises located in the rural areas
(e) Promotion of enterprises located in specific municipal area for work to be doneor service to be rendered in that municipal area.

- Tender validity period is 120 (one hundred and twenty) calendar days.
- Tender Forms (Form C1.1: Form of offer and acceptance) that are incomplete or incorrectly completed will result in elimination of that tender
- An original valid SARS Tax Clearance Certificate/Pin must be submitted with the tender, in order to be considered. Failure for submission of Tax Clearance Certificate will result in elimination of tender. In the case of a JV, each partner must present an original SARS Tax Clearance Certificate.
- Form T2.2r (Compulsory Enterprise Questionnaire) must be completed by all or the tender will be eliminated.
- In case of a joint venture a two compulsory enterprise questionnaire must be submitted.

Telegraphic, telexed or faxed tenders will not be considered. The ECDoE does not bind itself to accepting the lowest tenderer. Tender price offered should not pose a commercial risk to the completion of the project.

The BEE may or may not interview the bidder should it deem it necessary.

Procurement Contact Official
Mr P Nxozana
Tel:
Pakamile.Nxozana@ecdoe.gov.za

Infrastructure Contact Official
Mr Q Msiwa
Tel: 040 608 4707
Qiqile.Msiwa@ecdoe.gov.za

PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (*NAME OF DEPARTMENT/ PUBLIC ENTITY*)					
BID NO.:	**2023/10/022**	CLOSING DATE:	**27 October 2023**	CLOSING TIME:	**11h00**
DESCRIPTION	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*					
RECEPTION AREA OF THE DEPARTMENT OF EDUCATION,					
STEVE VUKILE TSHWETE EDUCATION COMPLEX, ZONE 6,					
ZWELITSHA					

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		**TECHNICAL ENQUIRIES MAY BE DIRECTED TO:**	
CONTACT PERSON	**Mr P Nxozana**	CONTACT PERSON	**Mr Q Msiwa**
TELEPHONE NUMBER		TELEPHONE NUMBER	**040 608 4707**
FACSIMILE NUMBER		FACSIMILE NUMBER	
E-MAIL ADDRESS	**Pakamile.Nxozana@ecdoe.gov.za**	E-MAIL ADDRESS	**qiqile.msiwa@edu.ecprov.gov.za**

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		**OR**	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] ☐ Yes ☒ NO		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] ☐ Yes ☒ No	

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐Yes ☐No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.

1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**

1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

1.4. **THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).**

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.

2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.

2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.

2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.

2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER: ……

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……
(Proof of authority must be submitted e.g. company resolution)

DATE: ……...

T1.2 Request for Bid Data

T1.2: REQUEST FOR BID DATA

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**		
Bid No:	**2023/10/022**		
Advertising date:	**20 October 2023**	**Closing date:**	**27 October 2023**
Closing time:	11h00	Validity period	120 Days

Clause number	
	The conditions of Request for Bid applicable to this contract are the Standard Conditions of Tender as contained in Annexure C of the CIDB Standard for Uniformity in Construction Procurement (August 2019) as published in Government Gazette No. 42622, Department of Public Works Notice 423. The Standard Conditions of Bid make several references to the Bid Data for details that apply specifically to this Bid. The Bid Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of Bid. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Bid to which it mainly applies.
C.1.2	The employer is the Eastern Cape Province **Department of Education**
C.1.3.1	The Request for Bid documents issued by the employer comprise: **THE REQUEST FOR BID (SINGLE VOLUME)** **Part 1: Bidding Procedure** T1.1 Request for Bid Notice and Invitation to Bid (SBD1) T1.2 Request for Bid Data **Part 2: Agreement and Contract Data** C1.1 Form of Offer and Acceptance C1.1a Final Summary of Bills of Quantities (C2.2) C1.1b Standard Conditions of Tender C1.2 Contract Data C1.3 Form of Guarantee **Part 3: Returnable Schedules/Documents** T2.1 List of Returnable Documents T2.2 Returnable Documents:

SBD4	Declaration of interest	Mandatory Requirement
SBD6.1	Preference points claim form in terms of Preferential Procurement Regulations 2022	Mandatory Requirement
SBD6.2	Local production and content	Mandatory Requirement
T2.2.1	Certificate of authority for signatory	Mandatory Requirement
T2.2.2	Certificate of authority for joint ventures	Mandatory Requirement
T2.2.5	Record of addenda to Request for Bid documents	Additional documents
T2.2.6	Capacity of Bidder	Additional documents
T2.2.7	Relevant project experience - completed projects	Additional documents
T2.2.8	Relevant project experience - current projects	Additional documents
T2.2.9	Schedule of plant & equipment	Additional documents
T2.2.10	Compulsory enterprise questionnaire	Mandatory Requirement

	T2.2.11	CIDB grading certificate	Mandatory Requirement
	T2.2.12	Other certificates (certified copies to be inserted by Bidder), etc	Mandatory Requirement
		• Certified copy of CIPC company registration certificate • Certified copies of ID's of shareholders, members, partners or sole owner • Letter of Good Standing from Bank where Bidder's primary transaction account is • Letter of Good Standing from Compensation Fund or a licensed insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act 1993 • CSD Registration Summary Report dated not more than thirty (30) days prior to the Request for Bid closing date. • Original valid SARS tax clearance certificate and pin	Mandatory Requirement
	T2.2.13	Completed project reference forms	Additional documents
		• Priced BoQ	Mandatory Requirement

THE CONTRACT
Part 4: Scope of Work
C3.1 Scope of work
C3.2 Health and Safety Specification
C3.4 Contractors Reports
Part 5: Pricing data
C2.1 Pricing instructions
C2.2 Preliminaries / Bill of Quantities / Final Summary
Part 6: Site information
C4 Site information
C5 Drawings

C.1.4 The employer's agent is:

Name:	Q Msiwa (Eastern Cape Province Department of Education)
Capacity:	Principal Agent
Address:	Steve Tshwete Building
Tel:	(040) 608 4707
Fax:	
E-mail:	qiqile.msiwa@ecdoe.gov.za

C.2.1

Only those Bidders who satisfy the following eligibility criteria should submit Request for Bids:

1. Submit an offer only if the Bidder satisfies the criteria stated in the Request for Bid data and the Bidder, or any of his principals, is not under any restriction to do business with the employer.
2. The Bidder is registered with the CIDB, in a **3EB** or higher class of construction work.
3. The Bidder is registered on the National Treasury Central Supplier Data Base (https://secure.csd.gov.za)
4. The Bidder accepts that documents that have correction fluid on them will be deemed non-responsive and the documents must remain intact.

	5. Bidders adhere to the pre-qualification criteria stated in the Request for Bid document, if any.
C.2.1	Joint ventures are eligible to submit Bids provided that: 1. Every member of the joint venture must be registered with the CIDB in the General Building (EB) class of work. 2. The combined contractor grading designation of the members 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 bid for a **3EB or Higher** class of construction work. 3. The members/parties have signed a joint venture agreement.
C.2.7	The arrangements for the compulsory clarification meeting, if any, are as stated in the Request for Bid Notice (T1.1). A Request for Bid will not be considered if the Bidder or their representative has not attended the compulsory briefing session. Bidders must sign the attendance register in the name of the bidding entity. Addenda will be issued to and Request for Bids will be received only from those bidding entities appearing on the attendance register. Request for Bid documents will not be issued at the clarification meeting.
C.2.8	Request clarification at least 3 calander days before the closing time.
C2.11	All documents must be completed and signed in black permanent ink. No correction fluid must be used in the document. Incomplete bid responses may be disqualified or evaluated solely on the information contained in the bid. The ECDoE may disregard any content in the Request for Bid that is illegible and will be under no obligation whatsoever to seek clarification from the bidder.
C.2.12	If a Bidder wishes to submit an alternative Request for Bid offer, the only criteria permitted for such alternative Request for Bid offer is that it demonstrably satisfies the employer's standards and requirements, the details of which may be obtained from the Employer's Agent. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative Request for Bid offer to enable the employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative Request for Bid offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the Bidder, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the employer's standards and requirements. The modified Pricing Data must include an amount equal to 5% of the amount bid for the alternative offer to cover the employer's costs of confirming the acceptability of the detailed design before it is constructed. **Alternative Bid offer permitted:** **Yes** ☐ **No** ☒
C.2.13 C.2.15	The employer's address for delivery of Request for Bid offers and identification details to be shown on each Request for Bid offer package are as per Request for Bid Notice (T1.1) and Invitation to Bid (SBD 1)

C.2.13.5	Request for Bid offers shall be submitted as originals only.
C.2.13.6	A two-envelope system is not required.
C.2.13.9	Telephonic, telegraphic, telex, facsimile, emailed, electronic copy or late offers will not be accepted.
C.2.15	The closing time for submission of Request for Bid offers is as per the Request for Bid Notice (T1.1) and the Invitation to Bid (SBD 1).
C.2.16	The Request for Bid offer validity period is as per the Request for Bid Notice (T1.1) and the Invitation to Bid (SBD 1).
C.2.17	Provide clarification of the Request for Bid offer in response to do so from the employer during the evaluation of Request for Bid offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of Bidders or substance of the Request for Bid offer is sought, offered, or permitted.
C.2.22	Not a requirement
C.2.23	Refer to Parts 1, 2 & 3 for certificates and other documents to be submitted with the Request for Bid.
C.3.4	The time and location for opening of the Request for Bid offers are as per the Request for Bid Notice (T1.1).
C.3.11	Financial Offer and Preference will be evaluated as follows: The 80/20 preference point system will be applicable with 80 points allocated to Price and 20 points towards Specific Goals status level of contribution. The score for price is calculated using the following formula: $$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right)$$ Where: Ps = Points scored for price of bid under consideration; Pt = Price of bid under consideration and Pmin = Price of lowest acceptable bid. A trust, consortium or joint venture will qualify for points for their Specific Goals.
C.3.11	
C.3.13	Request for Bid offers will only be accepted if: 1. The Bidder 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; 2. The Bidder has not: a. Abused the Employer's Supply Chain Management System; or

	b. Failed to perform on any previous contract and has been given a written notice to this effect; 3. The Bidder has completed the compulsory declarations and there are no conflicts of interest, which may impact on the Bidder's ability to perform the contract in the best interests of the employer or potentially compromise the Request for Bid process; 4. The Bidder has registered on the Centralized Supplier Database (CSD) prior to submitting Request for Bids (open Request for Bids). Any prospective Bidder found to have tax matters not in order with SARS during the evaluation process will be eliminated and not be considered further; 5. The Bidder is registered with the Construction Industry Development Board in an appropriate contractor grading designation; The Bidder is in good standing with the Compensation Fund.
C.3.17	The number of paper copies of the signed contract to be provided by the employer is **1 (one)** copy of the signed contract to the successful Bidder.

T1.3 BID EVALUATION CRITERIA

T1.3: BID EVALUATION CRITERIA

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**		
Bid No:	**2023/10/022**		
Advertising date:	**20 October 2023**	**Closing date:**	**27 October 2023**
Closing time:	11h00	Validity period	120 Days

	BID EVALUATION CRITERIA		
	This Bid will be evaluated in two stages that is admin compliance and price and preference compliance. Failure to submit the following completed and signed compulsory documents will result in elimination of the bid documents.		
	SBD4	Declaration of interest	Mandatory Requirement
	SBD6.1	Preference points claim form in terms of Preferential Procurement Regulations 2022	Mandatory Requirement
	SBD6.2	Local production and content	Mandatory Requirement
	T2.2.1	Certificate of authority for signatory	Mandatory Requirement
	T2.2.2	Certificate of authority for joint ventures	Mandatory Requirement
	T2.2.10	Compulsory enterprise questionnaire	Mandatory Requirement
	T2.2.11	CIDB grading certificate	Mandatory Requirement
	T2.2.12	Other certificates (certified copies to be inserted by Bidder), etc	Mandatory Requirement
		• Certified copy of CIPC company registration certificate • Certified copies of ID's of shareholders, members, partners or sole owner • Letter of Good Standing from Bank where Bidder's primary transaction account is • Letter of Good Standing from Compensation Fund or a licensed insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act 1993 • CSD Registration Summary Report dated not more than thirty (30) days prior to the Request for Bid closing date. • Original valid SARS tax clearance certificate and pin	Mandatory Requirement
		Priced BoQ	Mandatory Requirement

Part 2: AGREEMENT AND CONTRACT DATA

C1.1 Form of Offer and Acceptance

C1.1: FORM OF OFFER AND ACCEPTANCE

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

OFFER

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

EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL

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

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

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

……..……

……..……Rand (in words);

R ……..(in figures)

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

Signature(s) ……..…… ……...

Name(s) …… ……...

Capacity …… ……....

for the Bidder ……

……..……..
(Name and address of organization)

Name and signature of witness ……..……... Date …….

ACCEPTANCE

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

The terms of the contract, are contained in:

Part C1 Agreements and contract data, (which includes this agreement)

Part C2 Pricing data

Part C3 Scope of work.

Part C4 Site information and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Request for Bid data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the Bidder and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The Bidder shall within 2 (two) weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

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

Signature(s) …… ……..…

Name(s) ……. ……...

Capacity …… ..…….....

for the Employer ..……..

..……
(Name and address of organization)

Name and signature of witness …. ……..……..…. Date …….

Schedule of Deviations

Notes:

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

1. Subject _____

   Details _____

2. Subject _____

   Details _____

3. Subject _____

   Details _____

4. Subject _____

   Details _____

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

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

C1.1a Final Summary of Bills of Quantities

CLARKEBURY EDUCATIONAL INSTITUTION

PRICE SUMMARY

ITEM	DESCRIPTION	TOTAL AMOUNT
Bill No. 1	PRELIMINARIES & GENERAL	
Bill No. 2	LV DISTRIBUTION BOARDS	
Bill No. 3	MAINS CABLING AND WIREWAYS	
Bill No. 4	GENERAL LIGHTING	
Bill No. 5	LUMINAIRES	
Bill No. 6	POWER	
Bill No. 7	SUNDRY ITEMS	
Bill No. 8A	OVERHEAD SUPPORT & EXCAVATIONS	
Bill No. 8B	LV OVERHEAD	
Subtotal		
Contingencies (10%)		
Subtotal		
VAT (15%)		
TOTAL AMOUNT		

ELECTRICAL INSTALLATIONS PRICE SUMMARY

TOTAL AMOUNT R -

NAME OF FIRM: ……

TENDERER'S SIGNATURE ……..

NAME IN PRINT ……..

ADDRESS ……..

……..

DATE ……..

TEL. NO. ……..

FAX NO. ……..

C1.1b Standard Conditions of Tender

CIDB Standard Conditions of Tender (August 2019 Edition)

(As contained in Annexure C of the CIDB Standard for Uniformity in Engineering and Construction Works Contracts in Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019)

C.1 General

C.1.1 Actions

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

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

Note: 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.
2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

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

C.1.2 Tender Documents

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

C.1.3 Interpretation

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

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

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

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

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

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

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

C.1.4 Communication and employer's agent

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

C.1.5 Cancellation and Re-Invitation of Tenders

C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if:
a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
b) funds are no longer available to cover the total envisaged expenditure; or
c) no acceptable tenders are received.
d) there is a material irregularity in the tender process.

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

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

C.1.6 Procurement procedures

C.1.6.1 General

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

C.1.6.2 Competitive negotiation procedure

C.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, Bidders shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the Bidders who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of Bidders shall not apply.

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

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

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

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

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

conditions of tender.

C.1.6.3.2 Option 2

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

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

C.2 Tenderer's obligations

C.2.1 Eligibility

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

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

C.2.2 Cost of tendering

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

C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

C.2.3 Check documents

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

C.2.4 Confidentiality and copyright of documents

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

C.2.5 Reference documents

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

C.2.6 Acknowledge addenda

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

C.2.7 Clarification meeting

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

C.2.8 Seek clarification

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

C.2.9 Insurance

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

C.2.10 Pricing the tender offer

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

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

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

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

C.2.11 Alterations to documents

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

C.2.12 Alternative tender offers

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

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

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

C.2.13 Submitting a tender offer

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

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

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

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

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

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

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

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

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

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

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

C.2.15 Closing time

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

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

C.2.16 Tender offer validity

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

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

C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer’s agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).

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

C.2.17 Clarification of tender offer after submission

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

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

C.2.18 Provide other material

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

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

C.2.19 Inspections, tests and analysis

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

C.2.20 Submit securities, bonds and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other tender documents

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

C.2.23 Certificates

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

C.3 The employer's undertakings

C.3.1 Respond to requests from the tenderer

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

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

C.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the

tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all Bidders who collected tender documents.

C.3.3 Return late tender offers

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

C.3.4 Opening of tender submissions

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

C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its Specific Goals status level and time for completion for the main tender offer only.

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

C.3.5 Two-envelope system

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

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

C.3.6 Non-disclosure

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

C.3.7 Grounds for rejection and disqualification

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

C.3.8 Test for responsiveness

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

C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer*'s* opinion, would:
a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work*,*

b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
c) affect the competitive position of other Bidders presenting responsive tenders, if it were to be rectified.

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

C.3.9 Arithmetical errors, omissions and discrepancies

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

C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:
a) the gross misplacement of the decimal point in any unit rate;
b) omissions made in completing the pricing schedule or bills of quantities; or
c) arithmetic errors in:
(i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
(ii) the summation of the prices.

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

C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:
a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

C.3.10 Clarification of a tender offer

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

C.3.11 Evaluation of tender offers

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

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

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	**Qualitative interpretation of goal**
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value

	outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

a) Open and record tender offers received
b) Determine whether or not tender offers are complete
c) Determine whether or not tender offers are responsive
d) Evaluate tender offers
e) Determine if there are any grounds for disqualification
f) Determine acceptability of preferred tenderer
g) Prepare a tender evaluation report
h) Confirm the recommendation contained in the tender evaluation report

C.3.11.1 General

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

C.3.12 Insurance provided by the employer

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

C.3.13 Acceptance of tender offer

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:
a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
c) has the legal capacity to enter into the contract;
d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
e) complies with the legal requirements, if any, stated in the tender data; and
f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:
a) addenda issued during the tender period,
b) inclusion of some of the returnable documents and
c) other revisions agreed between the employer and the successful tenderer.

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

C.3.15 Complete adjudicator's contract

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

C.3.16 Registration of the award

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

C.3.17 Provide copies of the contracts

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

C.3.18 Provide written reasons for actions taken

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

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C1.2 Contract Data

C1.2 : CONTRACT DATA : JBCC 2000 PRINCIPAL BUILDING AGREEMENT
(Edition 4.1 of March 2005)

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

	The Conditions of Contract are clauses 1 to 42 of the **JBCC** series 2000 **Principal Building Agreement** (Edition 4.1 of March 2005) prepared by the Joint Building Contracts Committee. Copies of these conditions of contract may be obtained from the Association of South African Quantity Surveyors, Master Builders Association, South African Association of Consulting Engineers, South African Institute of Architects, Association of Construction Project Managers, Building Industries Federation South Africa, South African Property Owners Association or Specialist Engineering Contractors Committee.

	CONTRACT VARIABLES **THE SCHEDULE** The **schedule** contains all the variables referred to in this document and is divided into part 1: contract data completed by the **employer** and part 2: contract data completed by the **contractor.** Part 1 must be completed in full and included in the Bidder documents. Both part 1 and part 2 form part of this **agreement.** Spaces requiring information must be filled in, shown as "**not applicable"** or deleted but not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross referenced to the applicable clause of the **schedule.** Key cross reference clauses are italicised in *[ ]* brackets.

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

42.1	**CONTRACTING AND OTHER PARTIES**
42.1.1 [1.2]	**Employer:** Eastern Cape Province Department of Education **Postal address:** Private Bag X0032 BHISHO 5605 **Tel:** 040 608 4335 **Fax:** 040 – 602 7272 **Physical address:** Steve Tshwete Building Zone 6 Zwelitsha

42.1.2 [1.1, 5.1]	**Principal Agent: TBC** **Tel: Fax:**
42.1.3 [1.1, 5.2]	**Agent (1) - TBC** **Agent's service:** **Postal address:** **Tel:** **Fax:**
42.1.4 [1.1, 5.2]	**Agent (2) - TBC** **Agent's service:** **Postal address:** **Tel:** **Fax:**
42.1.5 [1.1, 5.2]	**Agent (3**) - TBC **Agent's service:** **Postal address:** **Tel:** **Fax:**
42.1.6 [1.1, 5.2]	**Agent (4**) - TBC **Agent's service:** **Postal address:** **Tel:** **Fax:**
42.2	**CONTRACT DETAILS**
42.2.1 [1.1]	**Works** description: Refer to document C3.1 – Scope of Work.
42.2.2 [1.1]	**Site** description: Refer to document C4 – Site Information.
42.2.4 [41.0]	Specific options that are applicable to a State organ only Where so :
[31.1 #] [31.11.2 #] [31.12.2#] [11.2.#]	1) Interest rate legislation: (a) in respect of interest owed by the **employer**, the interest rate as determined by the Minister of Justice and Constitutional Development from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No. 55 of 1975), will apply; and (b) in respect of interest owed to the **employer**, the interest rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), will apply

[31.4.2 #] [40.2.2.#] [26.1.2 #]	2) Lateral support insurance to be effected by the **contractor**: Yes ☐ No ☒ 3) Payment will be made for materials and goods on site: Yes ☒ No ☐ Under no circumstance will deposits due by the **contractor** to any supplier or subcontractor for materials or equipment be paid prior to the delivery to site thereof, after which it will be regarded as materials and goods on site. 4) Dispute resolution by adjudication: Yes ☒ No ☐ 5) Extended **defects** liability period is applicable to the following elements: - all civil works such as roads, parking areas, stormwater & soil drainage - all work done under electrical subcontracts - all work done under mechanical subcontracts
42.2.6 [15.3]	Period for the commencement of the **works** after the **contractor** takes possession of the **site**: Five (5) working days.
42.2.7 [24.3.1] [30.1]	For the **works** as a whole: The date for **practical completion** shall be **SIX (6)** Months (including statutory holidays, but excluding the annual builders' shutdown period) from the date that possession of the site is given to the contractor and the penalty per calendar day shall be **5.75c per R100 of the contract value**.
42.2.9 [1.2]	The **law** applicable to this **agreement** shall be that of the: **Republic of South Africa**
42.3	**INSURANCES**
42.3.1 [10.1 #, 10.2 #, 12.1 #]	Contract **works** insurance to be effected by the **contractor** ☒ To the minimum value of the **contract sum** plus 20% With a deductible not exceeding 5% of each and every claim
42.3.2 [10.1#, 10.2 #, 12.1 #]	Supplementary insurance is required: **Yes** To the minimum value of the **contract sum** plus 20 %
42.3.3 [11.1#, 12.1 #]	Public liability insurance to be effected by the **contractor** ☒ For the sum of R 5 million With a deductible not exceeding 5% of each and every claim
42.3.4 [11.2 #, 12.1 #]	Support insurance to be effected by the **contractor:** **Not Applicable**
42.4	**DOCUMENTS**
42.4.2 [3.7]	Three (3) copies of the construction documents will be supplied to the **contractor** free of charge
42.4.3	**Bills of quantities / ~~Lump sum document~~** ~~schedule of rates~~ drawn up in accordance with: Standard System of Measuring Building Work (seventh edition as amended)
42.4.4 [15.1.1]	The **priced bills of quantities** shall be submitted with the Request for Bid submission : Yes ☒ No ☐

42.4.5 [3.4]	**JBCC** Engineering General Conditions are to be included in the **contract documents: No**

42.4.6 [31.5.3] [32.13]	The **contract value** is to be adjusted using **CPAP** indices: Yes ☐ No ☒ Where **CPAP** is applicable, the **contract sum** will be adjusted in accordance with the **JBCC** Contract Price Adjustment Provisions **(CPAP)** as set out in the **CPAP** Indices Application Manual as prepared by the **JBCC** Series 2000, code 2118, dated May 2005 and any amendments thereto: 1) Glass etc. measured in specialist section Metalwork, will be adjusted in terms of the index for that work group unless specifically stated otherwise in the bills of quantities 2) All electrical installations in buildings and power distribution systems shall be adjusted in terms of the index for Work Group 160 Electrical Installation. In case of uninterruptible power supplies, elevators, escalators and hoists, generating sets, motor-alternator sets and intercommunication systems shall be in accordance with Work Group 170 3) With reference to Work Group 190 a proportion of the value related preliminaries pro rata to the amount of work excluded from adjustment, shall be excluded from Contract Price Adjustment Provisions, if Option A has been selected for the adjustment of preliminaries 4) Further to clause 3.4.4 of the CPAP Indices Application Manual, the listing of additional items for exclusion by Bidders, will not be permitted 5) Where V results in a negative amount after application of the formula in clause 8.3 of the CPAP Indices Application Manual the factor of 0,55 shall be substituted by 1,45 Alternative Indices: **Not Applicable**
42.4.7 [3.10]	Details of changes made to the provisions of **JBCC** standard documentation **Clause** 1.1 **COMMENCEMENT DATE** – means the date that the **agreement,** made in terms of the Offer and Acceptance, comes into effect. **CONSTRUCTION GUARANTEE** – means a guarantee at call obtained by the **contractor** from an institution approved by the **employer** in terms of the **employer's construction guarantee** form as selected in the **schedule.** **CONSTRUCTION PERIOD** – means the period commencing on the date that possession of the site is given to the **contractor** and ending on the date of **practical completion.** **CORRUPT PRACTICE** – means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. **FRAUDULENT PRACTICE** – means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any Bidder, and includes collusive practice among Bidders (prior to and after the Bidder submission) designed to establish Bidder prices at artificial non-competitive levels and to deprive the Bidder of the benefits of free and open competition. **INTEREST** – the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be in terms of the legislation of the Republic of South Africa, and in particular: (a) in respect of interest owed by the **employer**, the interest rate as determined by the Minister of Justice and Constitutional Development from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No. 55 of 1975), will apply; and

(b) in respect of interest owed to the **employer**, the interest rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), will apply

SECURITY – means the form of **security** provided by the **employer** or **contractor**, as stated in the **schedule**, from which the **contractor** or **employer** may recover expenses or loss.

1.6 Any notice given may be delivered by hand, sent by prepaid registered post or telefax. Notice shall be presumed to have been given when:

1.6.4 No clause

3.2.1 A **construction guarantee** in terms of 14.0, where so elected in his Bid.

3.7 Add at the end thereof:

The **contractor** shall supply and keep a copy of the **JBCC** Series 2000 Principal

Building Agreement and Preliminaries applicable to this contract on the **site,** to which the **employer, principal agent** and **agents** shall have access to at all times.

3.10 Replace the second reference to "**principal agent**" with the word "**employer**"

4.3 No clause

5.1.2 under clause 41- Include reference to 32.6.3; 34.3 and 34.4 in terms of which the employer has retained its authority and has not given a mandate to the **principal agent** and in terms of which the employer shall sign all documents

10.5 Add the following as 10.5

Damage to the works

a) Without in any way limiting the **contractor's** obligations in terms of the contract, the **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and **security** measures and other steps for the protection and **security** of the **works** as the **contractor** may deem necessary

b) The **contractor** shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**

c) The **employer** shall carry the risk of damage to or destruction of the **works** and materials paid for by the **employer** that is the result of the excepted risks as set out in 10.6

d) Where the **employer** bears the risk in terms of this contract, the **contractor** shall, if requested to do so, reinstate any damage or destroyed portions of the **works** and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof

10.6 Add the following as 10.6

Injury to Persons or loss of or damage to Properties

a) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or neglect of any person for whose actions the **employer** is legally liable

b) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or neglect of any person for whose actions the **employer** is legally liable

c) The **contractor** shall upon receiving a contract instruction from the **principal agent** cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the **employer** shall be entitled to cause it to be made good and to recover the cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**.

d) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion.**

e) Where the execution of the **works** involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor**, shall and will remain adequately insured or insured against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed

f) The **contractor** shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the **works**

10.7 Add the following as 10.7

HIGH RISK INSURANCE

In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:

10.7.1 **Damage to the works**

The **contractor** shall, from the **commencement date** of the **works** until the date of the **certificate of practical completion**, bear the full risk of and hereby indemnifies and holds harmless the **employer** against any damage to and/or destruction of the **works** consequent upon a catastrophic ground movement as mentioned above. The **contractor s**hall take such precautions and **security** measures and other steps for the protection of the **works** as he may deem necessary

When so instructed to do so by the **principal agent**, the **contractor** shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**, at

the **contractor's** own costs

10.7.2 **Injury to persons or loss of or damage to property**

The **contractor** shall be liable for and hereby indemnifies and holds harmless the **employer** against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above

	The **contractor** shall be liable for and hereby indemnifies the **employer** against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the site, whether belonging to or under the control of the **employer** or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract 10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty one (21) calendar days of the **commencement date** but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so 10.7.4 The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor's** default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the **employer** and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole 14.0 Replace the entire clause 14.0 with the following: 14.0 **SECURITY** 14.1 In respect of contracts with a **contract sum** up to R1 million, the **security** to be submitted by the **contractor** to the **employer** will be as a payment reduction of five percent (5%) of the value certified in the **payment certificate** (excluding VAT) 14.1.1 The payment reduction of the value certified in a **payment certificate** shall be mutatis mutandi in terms of 31.8(A) 14.1.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction **security** or portions thereof to the **contractor** 14.2 In respect of contracts with a **contract sum** above R1 million, the **contractor** shall have the right to select the **security** to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the schedule. Such **security** shall be provided to the **employer** within fourteen (14) calendar days from **commencement date**. Should the **contractor** fail to select the **security** to be provided or should the **contractor** fail to provide the **employer** with the selected **security** within fourteen (14) calendar days from **commencement date**, the **security** in terms of 14.7 shall be deemed to have been selected. 14.3 Where the **security** as a cash deposit of ten percent (10%) of the **contract sum (**excluding VAT) has been selected: 14.3.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to ten percent (10%) of the **contract sum** (excluding VAT) within fourteen (14) calendar days from **commencement date**

	14.3.2 Within fourteen (14) calendar days of the date of **practical completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to three percent (3%) of the contract value (excluding VAT), and refund the balance to the **contractor** 14.3.3 Within fourteen (14) calendar days of the date of **final completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to one percent (1%) of the contract value (excluding VAT) and refund the balance to the **contractor** 14.3.4 On the date of payment of the amount in the final **payment certificate**, the **employer** shall refund the remainder of the cash deposit to the **contractor** 14.3.5 The **employer** shall be entitled to recover expense and loss from the cash deposit in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the cash deposit **security** or portions thereof to the **contractor** 14.3.6 The parties expressly agree that neither the **employer** nor the **contractor** shall be entitled to cede the rights to the deposit to any third party 14.4 Where **security** as a variable **construction guarantee** of ten percent (10%) of the **contract sum** (excluding VAT) has been selected: **NOT APPLICABLE** 14.4.1 The **contractor** shall furnish the **employer** with an acceptable variable **construction guarantee** equal in value to ten percent (10%) of the **contract sum** (excluding VAT) within fourteen (14) calendar days from **commencement date** 14.4.2 The variable **construction guarantee** shall reduce and expire in terms of the Variable **Construction guarantee** form included in the invitation to Bidder 14.4.3 The **employer** shall return the variable **construction guarantee** to the **contractor** within fourteen (14) calendar days of it expiring 14.4.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall issue a written demand in terms of the variable **construction guarantee** 14.5 Where **security** as a fixed **construction guarantee** of five percent (5%) of the **contract sum** (excluding VAT) and a five percent (5%) payment reduction of the value certified in the **payment certificate** (excluding VAT) has been selected: 14.5.1 The **contractor** shall furnish a fixed **construction guarantee** to the **employer** equal in value to five percent (5%) of the **contract sum** (excluding VAT) within fourteen (14) calendar days from **commencement date** 14.5.2 The fixed **construction guarantee** shall come into force on the date of issue and shall expire on the date of the last **certificate of practical completion** 14.5.3 The **employer** shall return the fixed **construction guarantee** to the **contractor** within fourteen (14) calendar days of it expiring 14.5.4 The payment reduction of the value certified in a **payment certificate** shall be in terms of 31.8(A) and 34.8 14.5.5 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall be entitled to issue a written demand in terms of the fixed **construction guarantee** or may recover from the payment reduction or may do both 14.6 Where **security** as a cash deposit of five percent (5%) of the **contract sum** (excluding VAT) and a payment reduction of five percent (5%) of the value certified

	in the **payment certificate** (excluding VAT) has been selected: 14.6.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to five percent (5%) of the **contract sum** (excluding VAT) within fourteen (14) calendar days from **commencement date** 14.6.2 Within twenty-one (21) calendar days of the date of **practical completion** of the **works** the **employer** shall refund the cash deposit in total to the **contractor** 14.6.3 The payment reduction of the value certified in a **payment certificate** shall be mutatis mutandi in terms of 31.8(A) 14.6.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** may issue a written notice in terms of 33.4 or may recover from the payment reduction or may do both 14.7 Where **security** as a payment reduction of ten percent (10%) of the value certified in the **payment certificate** (excluding VAT) has been selected: 14.7.1 The payment reduction of the value certified in a **payment certificate** shall be mutatis mutandi in terms of 31.8(B) 14.7.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction or portions thereof to the **contractor** 14.8 Payments made by the guarantor to the **employer** in terms of the fixed or variable **construction guarantee** shall not prejudice the rights of the **employer** or **contractor** in terms of this agreement 14.9 Should the **contractor** fail to furnish the **security** in terms of 14.2 the **employer**, in his sole discretion, and without notification to the **contractor**, is entitled to change the **contractor's** selected form of **security** to that of a ten percent (10%) payment reduction of the value certified in the **payment certificate** (excluding VAT), whereafter 14.7 shall be applicable 15.1.1 No clause 15.1.4 Add 15.1.4 as follows: An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within fourteen (14) calendar days of **commencement date.** The abovementioned plan shall also address all additional requirements with regard to the Coronavirus pandemic in terms of all Covid-19 legislation, regulations and guidelines as an additional safe work procedure on site. 15.2.1 Under 41: Amend to read as follows: "Give the **contractor** possession of the site within five (5) working days of the **contractor** complying with the terms of 15.1.2 and 15.1.4 17.1.11 Delete the words "and the appointment of **nominated** and **selected subcontractors**" 20.1.3 No clause 21.0 No clause

29.2.5 No clause

31.5.2 Security adjustments in terms of 14.0 and 31.8

31.1.4 Add 15.1.4 as follows:

31.6 The value of materials and goods in terms of 31.4.2 shall be included in the value certified only where, to the satisfaction of the principal agent, the materials and goods are:

31.6.5 Add 31.6.5 as follows:
Covered by an advance payment guarantee or such other security as may be accepted by the employer where stored off the site. Standard JBCC Guarantee wording would be applicable.

31.8 Amend as follows:

31.8(A) Where a **security** is selected in terms of 14.1; 14.5 or 14.6, the value of the **works** in terms of 31.4.1 and of the **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(A).1 Ninety-five percent (95%) of such value in interim **payment certificates** issued up to the date of **practical completion**

31.8.(A).2 Ninety-seven percent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(A).3 Ninety-nine percent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(A).4 One hundred percent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**.

31.8(B) Where **security** is a payment reduction in term of 14.7 has been selected the value of the **works** in terms of 31.4.1 and materials and goods in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(B).1 Ninety percent (90%) of such value in interim **payment certificates** issued up to the date of **practical completion**

31.8(B).2 Ninety-seven percent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(B).3 Ninety-nine percent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(B).4 One hundred percent (100%) of such value in the final **payment certificate** in terms of 34.6 except were the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

31.9 Replace “twenty-one (21) calendar days” with “thirty (30) calendar days”. Should the

	Contractor's tax clearance certificate expire during the contract period, the Employer shall be entitled to withhold payment without incurring any liability for interest, until a valid tax clearance certificate is submitted to the Employer, at which point, upon that date, the thirty (30) day period for due date of payment of the invoice shall commence. 31.12 Delete the following: "Payment shall be subject to the **employer** giving the **contractor** a tax invoice for the amount due." 32.5.1 Add the following to the end of each of these clauses: "…due to no fault of the 32.5.4 **contractor**" and 32.5.7 32.12 Replace "**contractor**" with "**employer**" 33.2 Add the following clauses 33.2.9 to 33.2.13: 33.2.9 the **contractor's** failure or neglect to commence with the **works** on the dates prescribed in the contract 33.2.10 the **contractor's** failure or neglect to proceed with the **works** in terms of the contract 33.2.11 the **contractor's** failure or neglect for any reason to complete the **works** in accordance with the contract 33.2.12 the **contractor's** refusal or neglect to comply strictly with any of the conditions of contract or any contract instructions and/or orders in writing given in terms of the contract 33.2.13 the **contractor's** estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa 34.13 Replace "seven (7) calendar days" with "thirty (30) calendar days" and delete the words: "subject to the **employer** giving the **contractor** a tax invoice for the amount due" as per **PPPFA** 36.3 Remove reference to "No clause", and replace "**principal agent**" with "**employer**" 36.7 Add the following: "Notwithstanding any clause to the contrary, on cancellation of this 37.5 this agreement either by the **employer** or the **contractor**; or for any reason whatsoever and whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a 38.7 date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever" 37.3.5 Replace "ninety (90)" with "one hundred and twenty (120) and 38.5.4 39.3.5 Add the following words at the end thereof: :"within one hundred and twenty (120) **working days** of completion of such report" 40.2.2 under clause 41 – Replace "one (1) year" with "three (3) years" 40.6 under clause 41 – Remove reference to no clause 40.7.1 Change "(10)" to "(15)" Add the following to the end thereof: Whether or not mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and equally share the costs of the mediator and related costs.

42.0	**PART 2: CONTRACT DATA PROVIDED BY THE CONTRACTOR**
42.0.1	The successful **contractor** must have a built environment professional on his staff or he must employ one for the duration of the contract.
42.0.2	All bids shall remain valid for a period of one hundred and twenty (120) calendar days after the Request for Bid closing date.
42.0.3	The successful bidder will be required to submit an Approved Health and Safety File within fourteen (14) calendar days upon receipt of the letter of award.
42.0.4	The successful bidder will be required to submit a letter of good standing from the compensation commission or FEMA within fourteen (14) calendar days upon receipt of the letter of award.
42.0.5	The successful Bidder will be required to submit a construction program and contractor's cash flow within twenty one (21) calendar days upon receipt of the letter of award.
42.0.6	At least thirty percent (30%) of the total labour force employed during the execution of the **works**, shall be from the local community.
42.0.7	Labour rates to be in line with National Minimum Wage Act.
	POST-BID INFORMATION
42.5	**CONTRACT DETAILS**
42.5.1	**Contractor**: …….. Postal address: …… …… …… Tel: …… Fax: …… E-mail: …… TAX / VAT Registration No: …… Physical address: …… …… ……
42.5.2	The accepted **contract sum** inclusive of tax is R…… Amount in words: …… ……
42.5.3 [31.3]	The latest day of the month for the issue of an interim **payment certificate**: ……
42.5.4	The preliminaries amounts shall be paid in terms of: **Alternative A** ☒ **Alternative B** ☐

[32.12]	
42.5.5 [32.12]	The preliminaries amounts shall be adjusted in terms of: **Alternative A** ☒ **Alternative B** ☐
42.5.7 [14]	The **security** to be provided by the **contractor**: (a) in respect of contracts up to R1 million, the **contractor** will provide **security** in terms of 14.1 (b) in respect of contracts above R1 million, the **contractor** will provide, as **security**, one of the following:

(1) cash deposit of 10% of the **contract sum** (excluding VAT)	**Yes** ☐ **No** ☐
(2) payment reduction of 10% of the value certified in the **payment certificate** (excluding VAT)	**Yes** ☐ **No** ☐
(3) cash deposit of 5% of the **contract sum** (excluding VAT) and a payment reduction of 5% of the value certified in the **payment certificate** (excluding VAT)	**Yes** ☐ **No** ☐
(4) fixed **construction guarantee** of 5% of the **contract sum** (excluding VAT) and a payment reduction of 5% of the value certified in the **payment certificate** (excluding VAT)	**Yes** ☐ **No** ☐

NB: Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 35 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

42.5.8 [29.7.2]	The annual building holiday period after the commencement of the construction period: from …….. to ……..

42.6 DOCUMENTS

42.6.1 Contract documents marked and annexed hereto:

Priced bills of quantities:	**Yes** ☐ **No** ☐	Document marked as ……..
Lump sum document:	**Yes** ☐ **No** ☐	Document marked as ……..
Guarantees:	**Yes** ☐ **No** ☐	Document marked as ……..
Contract drawings:	**Yes** ☐ **No** ☐	Document marked as ……..
Other documents	**Yes** ☐ **No** ☐	(attach additional pages if more space is required

……
…

……
…

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…

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…

	…… … …… … …… …

42.8	**SIGNATURES OF THE CONTRACTING PARTIES**
	Thus done and signed at _____ on _____ _____ Name of signatory _____ for and behalf of the **Employer** who by signature hereof warrants authorization hereto _____ Capacity of signatory _____ as Witness Thus done and signed at _____ on _____ _____ Name of signatory _____ for and behalf of the **Contractor** who by signature hereof warrants authorization hereto _____ Capacity of signatory _____ as Witness

C1.3 Form of Guarantee

C 1.3.1: FIXED CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

1. With reference to the contract between _____

_____ (hereinafter referred to as the "**contractor**") and the **Eastern Cape Department of Education** (hereinafter referred to as the "**employer**"). Request for Bid No: **2023/10/022** for the **EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL** (hereinafter referred to as the "contract")

in the amount of R **_____, (_____**

_____) (amount in words)**,** (hereinafter referred to as the **contract sum** excluding VAT**.)**

I/We, _____

in my/our capacity as _____ and hereby

representing _____ (hereinafter

referred to as the **guarantor"**) advise that the **guarantor** hold at the **employer's** disposal the sum of

R _____ (_____**)**

(amount in words) being 5% of the **contract sum** (excluding VAT), for the due fulfilment of the contract.

2. The **guarantor** hereby renounces the benefits of the exceptions non numeratae pecunia, non causa debiti*;* excussionis et divisionis; and all other exceptions which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof i/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed, during the period when the claim is received by the **guarantor**, on receipt of a written demand from the **employer** to do so, and which demand the **employer** may make if the **employer** has a right of recovery against the **contractor** in terms of 33.0 of the contract.

3. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the contract, the said demand can be made by the **employer**, at any stage prior to the expiry of this guarantee.

4. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last final **payment certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor.**

5. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor.** Without derogating from the aforegoing, any compromise, extension of the **construction period**, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.

6. This undertaking is neither negotiable nor transferable, and
   a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or
   b) shall lapse on the date of the last **certificate of practical completion;** and
   c) shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed.

SIGNED AT _____ ON THIS _____DAY OF _____ 20____

AS WITNESS

1. _____

2. _____

_____
By and on behalf of

_____

_____

_____
(insert the name and physical address of the guarantor)

NAME: _____

CAPACITY: _____
(duly authorized thereto by resolution attached marked Annexure A)

DATE: _____

A. No alterations and/or additions of the wording of this form will be accepted.

B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi,* for all purposes arising from this guarantee.

C. This GUARANTEE must be returned to:

_____

_____

_____

Part 3: Returnable Schedules/Documents

T2.1 List of Returnable Documents

2.1: LIST OF RETURNABLE DOCUMENTS

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**		
Principal Agent:	Eastern Cape Province Department of Education	**Bid No:**	**2023/10/022**

1. RETURNABLE DOCUMENTS REQUIRED FOR TENDEER EVALUATION PURPOSES
(Insert a tick in the "Returnable document" column to indicate which documents must be returned with the Bid)

Bid Document Name	Number of pages issued	Returnable Document
Declaration of Interest (SBD4)	3 Pages	☒ Yes ☐ No
Preference points claim form in terms of Preferential Procurement Regulations 2022 (SBD 6.1)	6 Pages	☒ Yes ☐ No
Local Production and Content (SBD 6.2)	7 Pages	☒ Yes ☐ No
Certificate of Authority for Signatory (T2.2.1)	1 Page	☒ Yes ☐ No
Certificate of Authority for Joint Ventures (T2.2.2)	1 Page	☒ Yes ☐ No
Schedule of Proposed Subcontractors (T2.2.3)	1 Page	☐ Yes ☒ No
Final Summary Page of Bills of Quantities (C1.1a)	1 Page	☒Yes ☐ No
Completed Project Reference Forms (T2.2.13)	6 Pages	☒Yes ☐ No

2. OTHER DOCUMENTS REQUIRED FOR REQUEST FOR BID EVALUATION PURPOSES

Bid Document Name	Number of pages issued	Returnable Document
Site Inspection Certificate (T2.2.4)	1 Page	☐ Yes ☒ No
Capacity of the Bidder (T2.2.6)	1 Page	☒ Yes ☐ No
Relevant Project Experience - Completed Projects (T2.2.7)	1 Page	☒ Yes ☐ No
Relevant Project Experience - Current Projects (T2.2.8)	1 Page	☒ Yes ☐ No
CIDB Grading Certificate (T2.2.11)	1 Page	☒ Yes ☐ No
CIPC Company Registration Certificate (T2.2.12)	1 Page	☒ Yes ☐ No
ID's of shareholders, members, partners or sole proprietor (T2.2.12)	1 Page	☒ Yes ☐ No
Letter of Good Standing from Bank (T2.2.12)	1 Page	☒ Yes ☐ No
Letter of Good Standing from Compensation Fund (T2.2.12)	1 Page	☒ Yes ☐ No
CSD Registration Summary Report (T2.2.12)	1 Page	☒ Yes ☐ No
SARS Tax Clearance Certificate and Pin (T2.2.12)	1 Page	☒ Yes ☐ No
Proof of Locality of Head Office (T2.2.12)	1 Page	☒ Yes ☐ No

3. RETURNABLE DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

Bid Document Name	Number of pages issued	Returnable Document
Record of Addenda to Request for Bid Documents (T2.2.5)	1 Page	☒ Yes ☐ No
Schedule of Plant and Equipment (T2.2.9)	1 Page	☒ Yes ☐ No
Compulsory Enterprise Questionnaire (T2.2.10)	1 Page	☒ Yes ☐ No

4. OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

Bid Document Name	Number of pages issued	Returnable Document
Form of Offer and Acceptance (C1.1)	3 Pages	☒ Yes ☐ No
Contract Data (C1.2)	14 Pages	☒ Yes ☐ No
Applicable form of Guarantee (C1.3)	4 Pages	☐ Yes ☒ No
Priced Bills of Quantities including Preliminaries (C2.2)	90 Pages	☒Yes ☐ No

T2.2 Returnable schedules

SBD 4 : BIDDER'S DISCLOSURE

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest[1] in the enterprise,
employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	**Identity Number**	**Name of State institution**

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:
……
……

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract?
YES/NO

2.3.1 If so, furnish particulars:
……
……

[1] the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

3 DECLARATION

I, the undersigned, (name)…… in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 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[2] will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

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

3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.6 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.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS

OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND

COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS

DECLARATION PROVE TO BE FALSE.

……	..……
Signature	Date
……	……
Position	Name of bidder

[2] 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.

SBD 6.1 : Preference Points Claim Form

SBD 6.1

PREFERENCE POINTS CLAIM FORM

In order to claim preference points, Bidders are to note the following:

- The SBD 6.1 form must be completed and duly signed.
- EME's with an annual total revenue of R3 million or less, are required to submit a sworn affidavit (Construction Charter) confirming their level of black ownership, etc to claim points.

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

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

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

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1. GENERAL CONDITIONS

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

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 **To be completed by the organ of state**

(*delete whichever is not applicable for this tender*).

a) The applicable preference point system for this tender is the **90/10** preference point system.

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

c) Either the **90/10 or 80/20 preference point system** will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

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

(a) Price; and

(b) Specific Goals.

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

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

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

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

2. DEFINITIONS

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

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

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

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

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

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

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

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.2.1. POINTS AWARDED FOR PRICE

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

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

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

Where

Ps	=	Points scored for price of tender under consideration
Pt	=	Price of tender under consideration
Pmax	=	Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

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

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

(a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

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

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

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

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

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Historically Disadvantaged individuals	2	4		
Ownership with Disabilities	1	2		
Youth Ownership	2	3		
Woman Ownership	2	3		
Enterprises located in the Eastern Cape Province	3	6		
Ownership by Military Veterans	1	2		

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm…….

4.4. Company registration number: ……...

4.5. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

i) The information furnished is true and correct;

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

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

organ of state that the claims are correct;

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

(a) disqualify the person from the tendering process;

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

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

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

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

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

SBD 6.2: Local Production and Content

SBD 6.2

DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

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

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2022, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

1.1. Preferential Procurement Regulations, 2022 (Regulation 8) make provision for the promotion of local production and content.

1.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

1.3. Where necessary, for tenders referred to in paragraph 1.2 above, a two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and Spesific Goals

1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

LC = [1 - x / y] * 100
Where
x is the imported content in Rand
y is the bid price in Rand excluding value added tax (VAT)
Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) on the date of advertisement of the bid as indicated in paragraph 3.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on http:/www.thedti.gov.za/industrial development/ip.jsp at no cost.

1.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

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

Description of services, works or goods	Stipulated minimum threshold
Reinforcement	100%
Roof coverings	100%
Steel windows, doors and frames	100%
Sundry metalwork and structural steelwork	100%
Gutters and down pipes	100%

uPVC and HDPE pipes	100%
Electrical cables	100%
Fencing	100%

3. Does any portion of the goods or services offered have any imported content?

(***Tick applicable box***)

YES		NO	

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

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

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

Currency	**Rates of exchange**
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

4. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

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

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

IN RESPECT OF BID NO. 2023/10/022

ISSUED BY: (Procurement Authority / Name of Institution):

.....

NB

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

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

I, the undersigned, ……..... (full names),

do hereby declare, in my capacity as …… ……..

of .....(name of bidder entity), the

following:

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

(b) I have satisfied myself that:

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

(c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

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

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.
The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E.

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

(e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2022 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE:_____

WITNESS No. 1 _____ **DATE:** _____

WITNESS No. 2 _____ **DATE:** _____

Annexure C

Local Content Declaration – Summary Schedule

(C1)	Tender No.						
(C2)	Tender Description:						
(C3)	Designated product(s)						
(C4)	Tender Authority:						
(C5)	Tender Entity Name:						
(C6)	Tender Exchange Rate:	Pula:		EU:		GBP:	
(C7)	Specified local content %						

Note: VAT to be excluded from all calculations

Calculation of Local Content								Tender Summary			
Tender item no's	List of items	Tender price – each (excl. VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local contend % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total imported content
(C8)	*(C9)*	*(C10)*	*(C11)*	*(C12)*	*(C13)*	*(C14)*	*(C15)*	*(C16)*	*(C17)*	*(C18)*	*(C19)*

(C20) Total tender value		
(C21) Total Exempt imported content		
(C22) Total tender value net of exempt imported content		
*(C23)*Total Imported content		
(C24) Total local content		
(C25) Average local content % of tender		

Signature of Bidder from Annex B

_____

Date: _____

Annexure D

Imported Content Declaration – Supporting Schedule to Annex C

(D1)	Tender No.						
(D2)	Tender Description:						
(D3)	Designated product(s)						
(D4)	Tender Authority:						
(D5)	Tender Entity Name:						
(D6)	Tender Exchange Rate:	Pula:		EU:		GBP:	

Note: VAT to be excluded from all calculations

A. Exempted imported content

Tender Item no's	Description of imported content	Local supplier	Overseas supplier	Foreign currency value as per commercial invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl. VAT	Summary: Tender QTY	Summary: Exempted imported value
(D7)	*(D8)*	*(D9)*	*(D10)*	*(D11)*	*(D12)*	*(D13)*	*(D14)*	*(D15)*	*(D16)*	*(D17)*	*(D18)*

(D19) Total exempt imported value

This total must correspond with Annex C - C21

B. Imported directly by Tenderer

Tender Item no's	Description of imported content	Unit of measure	Overseas supplier	Foreign currency value as per commercial invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl. VAT	Summary: Tender QTY	Summary: Total imported value
(D20)	*(D21)*	*(D22)*	*(D23)*	*(D24)*	*(D25)*	*(D26)*	*(D27)*	*(D28)*	*(D29)*	*(D30)*	*(D31)*

(D32) Total imported value by tenderer

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

Description of imported content	Unit of Measure	Local Supplier	Overseas supplier	Foreign currency value as per commercial invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl. VAT	Summary: Tender QTY	Summary: Total imported value
(D33)	*(D34)*	*(D35)*	*(D36)*	*(D37)*	*(D38)*	*(D39)*	*(D40)*	*(D42)*	*(D42)*	*(D43)*	*(D44)*

(D45) Total imported value by 3rd party

D. Other foreign currency payments

Type of payment	Local Supplier making the payment	Overseas beneficiary	Calculation of foreign currency: Foreign currency value paid	Calculation of foreign currency: Tender Rate of Exchange	Summary of Payments: Local value of payments
(D46)	*(D47)*	*(D48)*	*(D49)*	*(D50)*	*(D51)*

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

Signature of tenderer from Annex B

_____

Date: _____

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

This total must correspond with Annex C – C23

Annexure E

Local Content Declaration – Supporting Schedule to Annex C

(E1)	Tender No.	
(E2)	Tender Description:	
(E3)	Designated product(s)	
(E4)	Tender Authority:	
(E5)	Tender Entity Name:	

Note: VAT to be excluded from all calculations

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

(E10)	Manpower costs	(Tenderer's manpower cost)	
(E11)	Factory overheads	(Rental, depreciation & amortisation, utility costs, consumables etc.)	
(E12)	Administration overheads and mark-up	(Marketing, insurance, financing, interest etc.)	
		(E13) Total local content	
		This total must correspond with annex C – C24	

Signature of tenderer from Annex B

_____

Date: _____

T2.2.1 Certificate of Authority for Signatory

T2.2.1: CERTIFICATE OF AUTHORITY FOR SIGNATORY

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

NOTE: This returnable document must be on a company letterhead

Signatory for companies shall confirm their authority hereto by attaching a duly signed and dated copy of the relevant resolution of the board of directors to this form on the company's letterhead.

An example is given below:

"By resolution of the board of directors passed at a meeting held on _____

Mr/Ms_____, whose signature appears below, has been duly authorised to

sign all documents in connection with the bidder for Contract No. _____

and any Contract which may arise there from on behalf of (Block Capitals) _____

_____

_____

SIGNED ON BEHALF OF THE COMPANY: _____

IN HIS/HER CAPACITY AS: _____

DATE:_____

SIGNATURE OF SIGNATORY: _____

WITNESSES:

1._____ SIGNATURE: _____

2. _____ SIGNATURE: _____

T2.2.2 Certificate of Authority for Joint Ventures

T2.2.2: CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

This returnable schedule is to be completed by joint ventures.

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

Name of Firm	**Address**	**Duly Authorised Signatory**
Lead Partner _____		Signature: _____ Name:_____ Designation:_____
_____		Signature: _____ Name:_____ Designation:_____
_____		Signature: _____ Name:_____ Designation:_____
_____		Signature: _____ Name:_____ Designation:_____

T2.2.4 Site Inspection Certificate

T2.2.4: SITE INSPECTION CERTIFICATE

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

I/We have visited the site for the above-mentioned works at the date specified below.

I/We have thoroughly studied the site, plans and contract documents and I/We have brought myself/ourselves fully conversant with all aspects which could possibly influence the construction of the works.

I/We further certify that I/We am/are satisfied with the description of the works and the explanation given to me/us by the Representative/Agent at the inspection and I/We fully understand the extent of the work to be done as specified and implied for the execution of this contract.

Date of Inspection:

Time of Inspection:

_____
Name of Tenderer

_____
Signature of Tender

_____
Signature of Representative/Agent

_____
Date

T2.2.5 Record of Addenda to Request for Bid Documents

T2.2.5: RECORD OF ADDENDA TO BID DOCUMENTS

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

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

	Date	**Title or Details**
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

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

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

Bidder .....

T2.2.6 Capacity of Bidder

T2.2.6: CAPACITY OF THE BIDDER

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

WORK CAPACITY: (The Bidder is requested to furnish the following capacity particulars and to attach additional pages if more space is required. Details of project team including CV, qualifications and proof of registration completed for each individual to be provided by Bidder. Failure to furnish the particulars may result in the Bid being disregarded.)

Artisans and Employees: (Artisans and Employees to be, or are, employed for this project)

Quantity / No. of Resources	Categories of Employee - Key Personnel (part of Business Enterprise)	Professional Registration No.	Date of Employment
	Site Agent		
	Project Manager		
	Foreman		
	Quality Control & Safety Officer-Construction Supervisor		
	Artisans		
	Unskilled employees		
	Others		

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

Signed:	……	Date:	……
Name:	……	Position:	……

Bidder: ……..……..

T2.2.7 Relevant Project Experience - Completed Projects

T2.2.7: RELEVANT PROJECT EXPERIENCE – COMPLETED PROJECTS

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

Bidders must submit a max one-page description of at least three projects successfully completed.

Attach a Completion Certificate for each of the project provided.

The description of each project must include the following information:

1. Essential introductory information:
   1.1. Name of project.
   1.2. Name of client.
   1.3. Contact details of client.
   1.4. Contact details (including telephone numbers and email addresses) of currently contactable references.
   1.5. The period during which the project was performed, and also, if this is different, the period during which the Bidder's team members were contracted.
   1.6. Cost of works and/or contract value (making it clear in broad terms what this cost/value purchased, and to what extent (if any) this cost/value was part of a larger project budget or programme budget).

NO.	NAME OF PROJECT	NAME OF CLIENT	CONTACT DETAILS OF CLIENT	PROJECT VALUE	DATE COMPLETED
1					
2					
3					

Attach a separate page to address this issue (the above table is just for reference purposes).

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

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

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

Bidder .....

T2.2.8 Relevant Project Experience - Current Projects

T2.2.8: RELEVANT PROJECT EXPERIENCE – CURRENT PROJECTS

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

Bidders must submit a max one-page description of at least three projects under construction/ on hold/ just handed over/ towards completion (if they exist).

Attach an Appointment letter for each of the project provided.

The description of each project must include the following information:

2. Essential introductory information:
   - 2.1. Name of project.
   - 2.2. Name of client.
   - 2.3. Contact details of client.
   - 2.4. Contact details (including telephone numbers and email addresses) of currently contactable references.
   - 2.5. The period during which the project was performed, and also, if this is different, the period during which the Bidder's team members were contracted.
   - 2.6. Cost of works and/or contract value (making it clear in broad terms what this cost/value purchased, and to what extent (if any) this cost/value was part of a larger project budget or programme budget).

NO.	NAME OF PROJECT	NAME OF CLIENT	CONTACT DETAILS OF CLIENT	CONTACT DETAILS OF REFERENCES	PROJECT VALUE	STAGE OF PROJECT
1						
2						
3						

Attach a separate page to address this issue (the above table is just for reference purposes).

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

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

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

Bidder .....

T2.2.9 Schedule of Plant & Equipment

T2.2.9: SCHEDULE OF PLANT AND EQUIPMENT

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

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

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

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

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

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

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

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

Bidder .....

T2.2.10 Compulsory Enterprise Questionnaire

T2.2.10: COMPULSORY ENTERPRISE QUESTIONNAIRE

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

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

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: CSD number:

Section 5: Particulars of sole proprietors and partners in partnerships:

Name*	**Identity number***	**Personal income tax number***

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

Section 6: Particulars of companies and close corporations

Company registration number:

Close corporation number:

Tax reference number:

Section 7: SBD4 issued by National Treasury must be completed for each Bidder and be attached as a Request for Bid requirement.

Section 8: SBD6 issued by National Treasury must be completed for each Bidder and be attached as a Request for Bid requirement.

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

i) authorizes the employer to verify the Bidders tax clearance status from the South African Revenue Services that it is in order;
ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
iv) confirms that I / we are not associated, linked or involved with any other bidding entities submitting Request for Bid 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 interpreted as a conflict of interest; and
v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed		Date	
Name		Position	
Enterprise name			

T2.2.11 CIDB Grading Certificate / Proof of Registration

T2.2.11: CIDB GRADING CERTIFICATE/PROOF OF REGISTRATION

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

Bidders are required to submit with their Request for Bid:

A Certificate of Contractor Registration issued by the Construction Industry Development Board.

NOTE: PROOF OF CIDB GRADING TO BE ATTACHED TO THIS PAGE BY BIDDER
IN THE CASE OF A JOINT VENTURE, SEPARATE CERTIFICATES IN RESPECT OF EACH PARTNER MUST BE SUBMITTED

T2.2.12 Other certificates, etc.

T2.2.12: OTHER CERTIFICATES, ETC TO BE PROVIDED BY BIDDER

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

Bidders are required to submit with their Request for Bid:

- Certified copy of CIPC company registration certificate
- Certified copies of ID's of shareholders, members, partners or sole proprietor
- Letter of Good Standing from Bank where Bidder's primary transaction account is
- Letter of Good Standing from Compensation Fund or a licensed insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act 1993
- CSD Registration Summary Report dated not more than thirty (30) calendar days prior to the Request for Bid closing date
- Original valid SARS tax clearance certificate and pin
- Proof of locality of head office by way of certified copy of municipal account or lease agreement

NOTE: CERTIFICATES, ETC TO BE ATTACHED TO THE RELEVANT PAGE HEREAFTER

Insert certified copy of CIPC certificate

Insert certified copies of ID’s

Insert Letter of Good Standing from Bank

Insert Letter of Good Standing from Compensation Fund

Insert CSD Registration Summary Report

Insert Original Valid SARS Tax Clearance Certificate and Pin

Insert Certified Copy of
Municipal Account or Lease Agreement

T2.2.13 Insert Completed Project Reference Forms

PROJECT REFERENCE RETURNABLE 1 OF 3

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

NOTE: This returnable document must be completed by the person who was the principal agent on a construction project of similar value and complexity that was completed successfully by the Bidder.

I, _____ (name and surname) of

_____ (company name) declare

that I was the principal agent on the following building construction project successfully

executed by _____ (name of Bidder):

Project name: _____

Project location: _____

Construction period: _____ Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Bidder on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5
1. Project performance / time management / programming					
2. Quality of workmanship					
3. Resources: Personnel					
4. Resources: Plant					
5. Financial management / payment of subcontractors / cash flow, etc					

B. Would you consider / recommend this Bidder again:

YES	NO

C. Any other comments:

_____

_____

D. My contact details are:

Telephone: _____ Cellphone: _____ Fax: _____

E-mail: _____

Thus signed at _____ on this _____ day of _____ 2023

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to contact the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points.

_____
Name of Bidder

_____ _____
Signature of Bidder Date

PROJECT REFERENCE RETURNABLE 2 OF 3

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

NOTE: This returnable document must be completed by the person who was the principal agent on a construction project of similar value and complexity that was completed successfully by the Bidder.

I, _____ (name and surname) of

_____ (company name) declare

that I was the principal agent on the following building construction project successfully

executed by _____ (name of Bidder):

Project name: _____

Project location: _____

Construction period: _____ Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Bidder on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5
1. Project performance / time management / programming					
2. Quality of workmanship					
3. Resources: Personnel					
4. Resources: Plant					
5. Financial management / payment of subcontractors / cash flow, etc					

B. Would you consider / recommend this Bidder again:

YES	NO

C. Any other comments:

_____

_____

D. My contact details are:

Telephone: _____ Cellphone: _____ Fax: _____

E-mail: _____

Thus signed at _____ on this _____ day of _____ 2023

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to contact the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points.

_____
Name of Bidder

_____ _____
Signature of Bidder Date

PROJECT REFERENCE RETURNABLE 3 OF 3

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
Bid No:	**2023/10/022**

NOTE: This returnable document must be completed by the person who was the principal agent on an construction project of similar value and complexity that was completed successfully by the Bidder.

I, _____ (name and surname) of

_____ (company name) declare

that I was the principal agent on the following building construction project successfully

executed by _____ (name of Bidder):

Project name: _____

Project location: _____

Construction period: _____ Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Bidder on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5
1. Project performance / time management / programming					
2. Quality of workmanship					
3. Resources: Personnel					
4. Resources: Plant					
5. Financial management / payment of subcontractors / cash flow, etc					

B. Would you consider / recommend this Bidder again:

YES	NO

C. Any other comments:

_____

_____

D. My contact details are:

Telephone: _____ Cellphone: _____ Fax: _____

E-mail: _____

Thus signed at _____ on this _____ day of _____ 2023

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to contact the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points.

_____
Name of Bidder

_____ _____
Signature of Bidder Date

THE CONTRACT

Part 4: Scope of Work

C3.1 Scope of work

C3.1: SCOPE OF WORKS – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
BID No:	**2023/10/022**

C3. Scope of Works

1. GENERAL

a) EXTENT OF THE WORKS

The work comprises of:

- Electrical work to Clarkebury Agricultural School

b) ORDER OF THE WORKS

Commencement of the works after handover, daily progress and completion of the works is critical to the success of the programme and will thus be closely and strictly monitored. Decisive action will be taken against any potential risks that could lead to time over run on the contract period. The bidder is to take specific notice of this, most especially to the penalty clause.

c) BUILDING OCCUPIED

Yes

d) ACCESS – Gravel Road

C3.2 Health and Safety Specification

Province of the
EASTERN CAPE
DEPARTMENT OF EDUCATION

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

FOR

CONSTRUCTION OR REFURBISHMENT OF EC SCHOOLS (SMALL PROJECTS)

EASTERN CAPE DEPARTMENT OF EDUCATION

(THE "CLIENT")

Prepared By:	Dr. Claire Deacon CHSA010/2013
Last revision 02/12/2022 By:	Ntokozo Ngwenya

Province of the
EASTERN CAPE
DEPARTMENT OF EDUCATION

Table of Contents

Province of the
EASTERN CAPE
DEPARTMENT OF EDUCATION

Project Details	
Date of compilation:	Revision number: 00
Value of project:	Commencement date:
	Contract period:
Occupational Health and Safety Agent:	

Professional responsibilities	*Company*	*Contact person*	*Telephone*	*Fax*	*email*
Architects					
Civil Engineers					
Structural Engineers					
Electrical Engineers					
HVAC Engineers & Fire Consultants					
Quantity Surveyors					

Site Details:

Locality of the works:

REFERENCES,

- Occupational Health and Safety Act (OHSA) No. 85 of 1993 and Regulations (as amended);
- Compensation for Injury and Occupational Diseases Act (COIDA) No. 100 of 1993 (as amended);
- South African Council for the Project and Construction Management Professions (SACPCMP) 2013: Scope of services for the OHS Consultant, Manager and Officer;
- Any other internal standards and specifications developed by the Client as they affect the operations, and
- The amended Baseline Risk assessment
- South African Roads Traffic Safety Manual (SARTSM) Chapter 2, Volume 13 of 1999
- Road Traffic Safety Act No. 93 of 1996 (as amended)
- Construction Specifications & Standards 6.0 for Southern Africa. Hans Wegelin 6th Edition 2010
- SANS Code 10400
- SABS 1200

1. LIST OF ABBREVIATIONS

AIA	Approved Inspection Authority
BoQ	Bill of Quantities
CC	Compensation Commissioner
CR	Construction Regulations
CHSO	Construction Health and Safety Officer
DMR	Driven Machinery Regulations
DEL	Department of Employment and Labour
FEMA	Federated Employers Mutual Association
GAR	General Administration Regulations
GSR	General Safety Regulations

HCSR	Hazardous Chemical Substances Regulations
HIRA	Hazard Identification Risk Assessment
H&S	Health and Safety
ER	Engineer's Representative
LI	Labour Intensive
DMA	Disaster Management Act
OH	Occupational Health
OHSA	Occupational Health and Safety Act No. 85 of 1993 (as amended)
SSHSS	Site Specific Health and Safety Specification
PC	Principal Contractor
PPE	Personal Protective Equipment
SANS	South African National Standards (Authority)
SACPCMP	South African Council for Project and Construction Management Professions
SDS	Safety Data Sheet
SMME	Small, Micro, Medium Enterprise
SWP	Safe Work ProcedurePREAMBLE

Each year fatalities, serious injuries and poor attitudes of Contractors mar the reputation of the Construction Industry. The CLIENT has a responsibility to limit its risk by ensuring a zero tolerance and better practice approach to Contractors and those affiliated to a particular project. Thus, a high premium is placed on the health and safety (H&S) of the Client and stakeholders, which include its employees, professional service providers, public and its physical assets.

The responsibilities that the Client and relevant stakeholders have toward its employees are captured in, but not limited to this document. The responsibilities stem from both moral, civil and a variety of legal obligations. The Principal Contractor is to take due cognisance of the above statement.

Where there is an appointed OHS Consultant its behalf, shall provide a site specific Health & Safety Specification (SSHSS) for the project and provide the Principal Contractor/s (PC) making a bid or appointed to perform construction work for the project, or parts thereof.

By drawing up this SSHSS, the Client has endeavoured to address the most critical aspects relating to H&S issues in order to assist the contractor in adequately providing for the health and safety of employees on site.

Should the Client not have addressed all H&S aspects pertaining to the work that is tendered for, the contractor needs to include it in the SSHSP and inform the Client of such issues when submitting the tender, or as soon as identified.

Notwithstanding the above, cognisance needs to be taken of the current Disaster Management Plan, and all the requirements of the current levels of lockdown, standards, guidelines and information published from time to time.

2. Purpose of the Site Specific Health and Safety Specification (SSHSS)

The SSHSS is a performance specification to ensure that the Client and any bodies that enter into formal agreements with the Client, Agents, Professional Designers (Engineers, Quantity Surveyors and Architects), Principal Contractors and Contractors achieve an acceptable level of OHS performance.

No advice, approval of any document required by the SSHSS, such as hazard identification and risk assessments, or any other form of communication from the Client shall be construed as acceptance by the Client of any obligation that absolves the Principal Contractor from achieving the required level of performance and compliance with legal requirements. Furthermore, there is no acceptance of liability by the Client, which may result from the Principal Contractor failing to comply with the SSHSS, i.e. the Principal Contractor remains responsible for achieving the required performance levels.

A Mandatary Agreement in terms of Section 37.2 of the OHSA will be signed between parties prior to any works commencing. If the NEC contract is used a copy of the signed contract shall form part of the H&S file submission.

The SSHSS highlights the aspects to be implemented over and above the minimum requirements of current legislation. Requirements may be changed should new risks or issues are identified that could not have been foreseen during the design phase of the project, or during the construction phase. Any new legislation or standards (legislated or determined by the Client) that are promulgated or accepted during the contract will automatically be applied.

Environmental management shall receive due attention as per the requirements of the Environmental Control Officer (ECO), but will be managed by the ECO directly if applicable to the project.

2.1 Project description/detailed scope of work as it applies to the project (Details as per the scope of work)

The Scope of work as identified by the Stakeholders is as follows:

- Preliminary and General
- Breaking
- Painting
- Carpentry
- Brickwork
- Roof Work
- Asbestos Work

The works shall be done in accordance with the applicable SANS 1200 specifications, Municipal By-laws and Regulations, variations and additions to the standardized specifications applicable to this contract and the technical specifications of the Client for work that falls outside of the standardized specifications.

2.2 Programme Description

Clarification Meeting	*TBA*
Time allowed for preparation of H&S plan/file after tender award	
Approval date of SSHSP	*Within 1 week after submission but subject to content as per this requirement, for more than one review.*
Induction dates	*To be advised after Approvals of H&S Plan/file*
Estimated Commencement date of work on site	*Subject to approval of H&S Plan.*
Estimated Project completion date or project duration	*Dependant on site establishment and site hand over*
Project term	

3. Implementation of the Site Specific Occupational Health and Safety Specifications (SSHSS)

The site specific H&S specification (SSHSS) forms an integral part of the Contract, and PCs are required to make it an integral part of their Contracts with Contractors and Suppliers. A SSHSS will be available for each level of Contract and Contractor and must be complied with.

This specification must be read in conjunction with the OHSA, Regulations (as amended) and any other standards relating to work being done and ensure compliance thereto. The information relative to the scope of the project, the works etc. are detailed in the tender, are to be considered when developing the SSHSP and associated documentation. The summary of risks is included in Section 2 of the SSHSS.

The OHSA S.37.2 Mandatory Agreement must be fully completed by the PC, supplied by the Client. These documents shall be deemed to form part of the returnable Contract Documents.

No work may commence without written approval of the SSHSP by the H&S Agent, or the responsible person of the Client.

Should there be design changes, or change in the scope of works, an amended SSHSS may be issued. Where amended SSHSSs are issued, the PC will be required to ensure a resubmission of an amended SSHSP for approval. Further to this, the PC must ensure that similar information must be provided as it applies to the works to all their Contractors, within 5 working days following notification thereof. Such design changes.

The OHS Consultant will visit the project at least bi-monthly to ensure compliance and limit risk. All activities on the site and all appropriate documentation will be monitored and reported on to the Client and the Designer.

Non-conformances will be issued, and penalties or work stoppage will be issued where appropriate. Communication between the OHS Consultant and the PC will be through the Designer (or Client's responsible person) as determined at the commencement of the project.

3.1 Requirements at Start Up

A site specific H&S Plan (SSHSP) in response to this SSHSS will be subject to approval by the OHS Consultant within the stipulated time period as noted in the tender. This must include all supporting documentation as required to verify the H&S system:

- A declaration to the effect that the PC has the competence and necessary resources to carry out the work safely in compliance with the Occupational Health and Safety Act and its Regulations;
- A valid Letter of Good Standing;
- Detailed technical method statements along with, and aligned with the project programme for review by the Principal Agent, Designer and appropriate risk assessments and safe work procedures for approval by the OHS Consultant or Client:
- Site establishment including:
    - A procedure must be drafted relative to protection/ prevention of injury to persons other than PC employees, during undertaking of such construction activity.
    - Exposure of services, power, telecommunication etc.;
    - Arrangements for hoarding, traffic accommodation if applicable:
    - Excavating for services;
    - An emergency plan indicating how and where emergencies will be handled, and
    - Working at heights (if applicable).

Further method statements are to be submitted prior to, and during the project where changes or new work is required, and the approval of the Principal Agent/Client is required before work on that aspect or activity can commence The construction CHSO (CHSO) is to be included in production planning sessions/meetings to ensure that the appropriate risk assessments, safe work procedures and communication required are available and completed timeously.

Penalties will be applied should this not be adhered to and deemed a serious offence.

4. GENERAL REQUIREMENTS

4.1 Summary of Risks identified during Design

The intention of the summary of findings from the design risk assessment is to highlight the residual risks identified during the design phase. The full design risk assessment can be found in the tender document.

The summary of risks provided is to point the contractor towards some risks he may not be aware of during tendering stage and while developing his formal risk assessments for the project.

The design risks and the management thereof should be included in the PC risk assessments. Where there are other Contractors appointed to do work, the PC is to ensure that Contractors include such information in their risk assessments.

The summary is to be developed following the completion of the Design risk assessment, and to include the residual risks as they apply to the project.

PHASES OF THE PROJECT	RESIDUAL RISKS IDENTIFIED TO BE MANAGED (as applicable)
Site Establishment	Bringing in containers, fitting with electricity, phone and fax, toilet hire. Hoarding, security and access to be managed and in place.
Site Clearance	Traffic accommodation, movement of heavy construction vehicles, use hand tools, chainsaws, use of local labour and contractors.
Earthworks	Open excavations, use of plant and machinery, use of lifting equipment for laying storm water concrete pipes, electrical hand tools plant and equipment during paving. Noise monitoring.
Ancillary Roadworks	Use of chemicals, excavation and use of hand tools.

Housekeeping, stacking and storage	The area is adequate to ensure housekeeping and stacking and storage principles are followed. However, the children need to be kept well away from all work areas including the site camp, and notices to be clear in warning of dangerous construction activities. Care and increased attention to ensure all materials and vehicles are carefully managed and designated routes are used.
General	Use of local labour, and contractors, CLO to do regular information sessions. High winds and inclement weather require monitoring for all working at heights
Painting	Hand mixing may occur, 50kg paint drums are an ergonomic risk from handling. Potential eye, skin and respiratory irritant from paint fumes exposure, chromates.

4.2 Specified Hazardous Chemical Substances

The following lists of products or substances are those which have been identified as likely to be used on the project. This list is not inclusive and other products may be considered. Where the PC is likely to supply the product as the product has not been specified, safety data sheets (SDSs) need to be considered prior to all selections.

PRODUCTS/SUBSTANCES/RISKS	POTENTIAL HEALTH OR OTHER RISKS
Cement	Hand mixing may occur, 50kg bags are an ergonomic risk from handling. Potential eye, skin and respiratory irritant from dust exposure, chromates.
Cement/Silica dust	Caused by cutting, grinding, sanding of any concrete/granite/tiled surface/masonry.
Wood dusts	Caused by cutting, sanding, drilling wooden products treated Viz fencing poles.
Mineral turpentine	Applying paint and cleaning of paint brushes. Potential eye, nose, skin and respiratory irritant.
Paint	Splashes into eyes, onto skin causing irritation.
Cleaning materials	Use of disinfectants and sanitizers

5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

5.1 Structure and Organization of H&S Responsibilities

An organogram will be available to identify key appointments and responsibilities on site and be kept up to date throughout the project.

5.1.1 Notification of Commencement of Construction Work

The PC shall notify the Provincial Director of the Department of Employment and Labour (DEL) in writing, in the form of the Annexure in the CRs. This shall occur within 7 days of the award of the contract. Proof of submission and/or receipt must be provided and kept in the H&S file.

Where changes to the conditions given in the submission are required (i.e. Contractors, completion dates, increase in workers), a revised Annexure A must be submitted to the DEL. The completion date is to include the defect and liability period. A copy of the notification form and any further submissions/correspondence must be kept in the H&S file.

6. HEALTH AND SAFETY PLAN FRAMEWORK

The H&S aspects related to the project outlined in the previous sections are to be taken into account when drawing up the H&S Plan. The PC is required to demonstrate competence by providing an H&S system that will address the requirements of the project.

The current legislative requirements, SABS codes, SANS 10400 and any other standards that may guide practice are to be taken into consideration. The following aspects must be addressed in the SSHSP, as they have been identified in section 2, as playing a role in reducing the overall risk of a particular activity, or section of the project. The OHS Agent may from time to time request additions or systems as they relate to the works or legislative requirements at the time.

The PC is to prepare a site layout drawing to indicate at least the following to submit with the H&S plan:

- The positions of site offices of all Contractors, toilets, drinking water and worker rest areas;
- Indicate the positions of emergency planning and equipment and first aiders;
- Protection of plant and public, indicate parking, designated vehicular routes and access to site;
- Storage areas (materials and equipment, waste etc.), and
- Storage of materials and waste;

Such layouts are to be updated regularly throughout the project.

Cognisance is to be given to those permanent employees who are over 60 years of age, and younger workers who have underlying chronic health issues such as high blood pressure, diabetes, TB, HIV and AIDS etc. Specialised workers who are indispensable will need to be declared fit for work by an occupational health service provider.

Key appointments and succession planning is to be available to ensure those who are playing key roles are able to cover the project at all times.

The project Organogram is to be updated accordingly and signed and dated at each update.

6.1 Appointment of Competent Site Personnel

The CEO (OHSA S16.1 or 16.2) of the PC will take overall responsibility for the appointment of competent site staff for the duration of the project. Should the CEO not be personally involved in the project, the H&S responsibilities are to be delegated to the Site Agent (OHSA 16.2). Knowledge and training in H&S are required and certificates indicating H&S training as well as experience to be included in CVs.

All other legal appointments are to be made with relevance to the type of work required and kept current with the project programme. The construction team is to ensure the appointed CHSO is kept up to date with all planned activities, to ensure all H&S requirements are met.

All construction/technical method statements are to be generated by senior site personnel, and the appropriate risk assessments developed therefrom in conjunction with the CHSO.

The SSHSP shall include the following, but is not limited to the following key appointments:

6.1.1 Construction Supervision

Competent supervisors will be appointed to manage part or all of the works and have training and/or experience in the area of responsibility, regarding CR 8.1, 8.2 and 8.7. All site supervisors must show evidence of appropriate training in H&S, and an understanding or training in areas of responsibility (i.e. risk assessments, method statements etc.).

Curriculum Vitae (CVs) are to be submitted for approval by the Principal Agent, and/or Client. The Supervisor will be held responsible for the safety of working teams and subordinates, housekeeping and stacking and storage of materials.

6.1.2 Construction Health and Safety Officer

The PC shall employ at least one competent, CHSO for the duration of the contract. The CHSO's CV is to be submitted for approval by the OHS Agent or the Client, at time of tender

The PC is to ensure adequate resources are provided in order to undertake all responsibilities (i.e. mobile phone, computer and internet access, etc.).

Qualifications shall include at least Grade 12, SAMTRAC/NEBOSH/Diploma in H&S qualifications or similar, with exposure to civil engineering and similar road construction, with at least 5 years' experience, given the level of project complexity preferably in an OHS capacity. He should also have undergone training in the Act and Regulations. In the case of a contract where contractors are employed, the CHSO must have a competence to evaluate the Contractors Health and Safety plans and be registered with the SACPCMP as a CHSO.

This person may not hold any other position on the site staff. The site supervisor may not act as the CHSO. The CHSO appointed for the project will be held responsible for all H&S on the project.

- Senior site staff and supervision, Contractors are to follow systems, instructions etc. given by the CHSO at all times;
- No new workers or Contractors may commence work without approval or following the SSHSP as submitted;
- No inductions of any Contractors' staff until the H&S documentation is approved by the CHSO, and
- The CHSO may not be removed or replaced without the approval of the H&S Agent, nor may the site be left unattended for more than 1 day without adequate, competent cover.

A monthly report of all H&S activities and incidents is required by the end of the first week of each month, or at a date agreed to by the OHS Consultant /Client and the CHSO. An example of the monthly report is attached as an Annexure D.

The CHSO will be responsible for collating the H&S documentation at the close out of the project in electronic format, properly labeled and filed. A list of the typical aspects that should be provided is available as Annexure B to this document. The PC is to ensure that all Contractors documentation follows the same requirements and closed out. H&S documentation must be completed and be available with the close out of the main contract, or as determined at the time.

Failure to do so will be considered a serious offence and penalties applied. Failure could also result in retentions or project certification not being issued to the PC.

6.1.3 Traffic Safety

The CHSO will be responsible for ensuring that daily traffic management is adequately managed.

No worker may be transported in, or on the rear of construction vehicles (bakkies included), or with plant and materials to, on, or from site. The number of passengers in any vehicle is limited to what is stated on the license disc. Vehicles used to transport workers to, from, or on site, shall have secure seats and be covered. No canopies may be used.

While this is difficult to control by the PC, induction training needs to include such information so workers can protect themselves. An on-site transportation policy needs to be available for how such transportation will be made safe and limit any opportunity for cross infection. Disinfection of vehicles needs to be determined where possible, and sanitizers provided prior to boarding and recommended during transit.

Each worker is to be encouraged to wear a cloth mask while travelling, and this needs to be enforced if using company transport.

Penalties will be issued for non-compliances noted.

6.1.4 Health and Safety Representatives and H&S meetings (if applicable)

H&S Representatives representing workers and Contractors are to be appointed following the start up of the project, irrespective of the number of workers on site. The appointed H&S Representatives are to be actively involved with H&S and will assist the CHSO and site management in meeting legislative duties.

All internal and external OHS Agent audits are to be discussed, as well as all H&S related issues at all internal production or progress meetings.

Failure to do so will be deemed to be a moderate offence.

6.1.5 Appointment of Competent Contractors and Suppliers, short term works (if applicable)

The PC is to ensure compliance with the Clients minimum standards and all legislative requirements. The same H&S standards required of the PC are to be applied to all Contractors. An index of all Contractors and Suppliers is to be on file and kept updated at all times. The PC is to ensure there is sufficient funding for H&S compliance by each Contractor.

The following minimum aspects are applicable to any Contractor appointed:

- The CHSO is to ensure a Contractors appointment and approval of H&S documentation at least seven (7) working days prior to commencing work;
- No Contractor may work under the PCs Compensation registration number. If required, the PC may assist SMMEs with their registration with the Compensation Commissioner (CC). However, such Contractors will not be able to commence work until proof of registration or Letter of Good Standing has been received, and
- No work may commence without Mandatary agreements between parties in place.

Suppliers or short-term works (surveying, repairs, servicing, deliveries etc.) also require H&S Management. Cognisance is to be taken of the level of risk involved and the CHSO is to ensure the level of H&S documentation is appropriate and appropriately managed.

Failure to provide written approval of H&S documentation will be considered a serious offense, and could result in aspects of, or all the activities being stopped, and penalties implemented.

7. GENERAL RISK MANAGEMENT

7.1 Health Risks and Medical Surveillance

The appropriate SDSs are to be obtained for all products and used to develop the H&S documentation as they relate to the works. Many of the processes are labour intensive and ergonomic risks are to be noted. All workers (including Contractors) are to be included in the medical surveillance programme.

Workers will be exposed to noise, dust, and physical risks from extended periods of work of a repetitive nature, materials specified and the general nature of the works.

All permanent workers (including those of Contractors) are required to be in possession of a medical certificate of fitness prior to arrival on site that must be less than 12 months old. An exit medical will be required where the project exceeds 6 months in duration. Arrangements for keeping medical records for the required time are to be noted. A procedure for managing the medical records which require safekeeping for prescribed periods are to be addressed, specifically for the asbestos exposed workers.

Given the potential health risks the following aspects are to be included in each medical surveillance intervention:

- Full medical, surgical and occupational history;
- Full physical examination of all systems, and
- Referral if required for the management of identified health issues that may affect the worker.

Specific testing for existing conditions and limitations relative to exposure could include, but are not limited to:

- Audiometry (hearing tests);
- Spirometry (lung function tests) are not to be done until deemed safe to do so, and
- Any other tests identified as relevant from chemical or specifically identified risks of exposure

Failure to do so will be considered a serious offence.

8. Training

Training of site personnel in H&S in the revised areas of work is required, mainly through induction between the Client and specific groups of employees. The CHSO is to determine training requirements and to report on needs or completed training in their reports and audits.

Records of all training, and acknowledgement of such training by attendees must be kept. Comprehensive records of all employees under the PCs control attending induction or any other training throughout the project shall be included. Amendments to statutes, the SSHSS, PSHSP, policies, procedures, method statements etc. shall require that all those affected shall undergo the relevant re-training.

8.1 Site Induction and other training

The PCs shall ensure that all employees, and contractors have undergone the induction programme for visitors or contractors, or any other that is deemed necessary.

Appropriate time must be set-aside for training (induction and other) for all employees. No person will be able to commence work or visit the site where the induction has not been done.

All employees and visitors on site from either the Client or the PC shall carry the proof of induction training in form of an induction card. Client Induction is valid for a year from the date it was conducted and thereafter refresher induction shall be re-scheduled at least one month before the induction period expires.

Both parties shall keep a database of all records pertaining to induction and will inform Contractors of pending expiry though the overall responsibility of maintaining current induction cards still lies with the principal contractor. All induction cards issued must be returned on completion of the project to the Issuer.

Toolbox talks to be conducted outdoors when possible in order for persons to maintain social distancing. Where inclement weather does not allow for this, toolbox talks to be conducted with smaller groupings of workers in a sheltered area large enough to maintain social distancing.

8.2 Noise Risks

All plant from plant hire companies (suppliers) or that of the PC is to come to site with the appropriate testing completed and be compliant with the Noise Induced Hearing Loss Regulations. Plant identified that has not been tested and marked for noise emissions will result in having to be tested or removed from site. Failure to do so within a reasonable time period will result in such plant being removed from site.

Suitable SANS approved hearing protective equipment shall be issued and worn where noise levels are identified as equal to or greater than 85 dB.

8.3 Asbestos Work

Only a registered asbestos contractor may do work which entails asbestos material. An Approved Inspection Authority must be consulted and Asbestos regulations complied to.

Failure to do so will be considered a serious offence.

9. Emergency Procedures

A simple emergency plan and procedure that is appropriate to the risks is required prior to commencement on site. It is advised that the system should be simple and easy for any worker to follow. The plan may be adapted should new information or risks are identified.

The procedure shall detail the response plan in relation to the works, and include at least (but are not limited to) the following key elements:

Appointment of a competent emergency response co-ordinator

- Fire, public injury, asbestos;
- Falls from heights;

- Serious injury to workers (medical or work-related), and
- Any other major risks identified during risk assessments

The emergency plan is to ensure the inclusion of local service providers. Such arrangements should be made with these persons prior to the commencement of the project. The general principals of emergency management are to be applied as it applies to the hierarchy of control and management.

9.1 Fire, First Aiders and First Aid Equipment

At least 1 first aider will be trained to level 1. First aiders shall be available and accessible on site at all times and be able to work as a team when responding to any emergency on the project. The number of First aiders will be determined by the complexity and exposed risks of the project, not numbers of workers.

Contractors are expected to ensure compliance and provide/manage their own first aiders and equipment. Appropriately stocked first aid kits are to be available at all times and to assure continual availability and access on site.

Fire extinguishers will be appropriate for the risk and in sufficient numbers to deal with the type of fires that could occur. All mobile plant is to have fire extinguishers. Hot work permits are required for any such activities.

Failure to comply with emergency provisions will be considered a serious offence, and the operation or project may be stopped if deemed inadequate for the work at the time of assessment or site inspection.

9.2 Incident Management and Compensation Claims

All incidents and accidents are to be investigated. All serious incidents involving any form of disabling injury or fatality are to be reported to the Principal Agent/Client /OHS Agent immediately. This shall be confirmed in writing following the incident. Full details are to be included in each site meeting or when the Client visits site. A summary of incidents is to be included in the monthly report.

Failure to comply with emergency provisions will be considered a serious offence, and the operation or project may be stopped if deemed inadequate for the work at the time of assessment or site inspection.

10. Personal Protective Equipment (PPE) and Clothing

The PC is to provide a procedure as an addendum to indicate how PPE is managed within the Company. The wearing of the identified SANS approved PPE at all times is non-negotiable and is to be linked to the risk assessments. The PC shall ensure that all workers (Including Contractors) are issued with and shall wear:

- Hard hats;
- Protective footwear;
- Eye protection;
- Hearing protection;
- Reflective jackets (no bibs);
- At least 3 cloth masks (for general wear);
- Respiratory protection (minimum of FFP2) or as deemed required by the AIA, and
- Any other necessary PPE identified from SDSs and/or risk assessments.

Adequate quantities of PPE shall be available. This shall include necessary PPE for visitors. The procedures for managing PPE are to be in a formal procedure submitted with the SSHSP for approval.

Any person (including Client, Agents, etc.) found on site without the necessary PPE will be removed from site until the PPE is supplied and worn.

Failure to comply will result in penalties being applied.

11. Occupational Health and Safety Signage

On-site H&S signage is required as well as standard H&S information. Signage shall be posted up at fixed or temporary working areas, or other potential risk areas/operations. These signs shall be in accordance with the requirements of the General Safety Regulations or SANS requirements as amended. Signage is to be noted on the site drawings indicating where fixed/temporary signage is required and appropriate to the risks identified in risk assessments.

Signs shall be posted at areas of work on site indicating that a construction site is being entered and that persons should take note of H&S requirements.

Failure to comply will result in penalties being applied.

12. Induction of Employees and Visitors, General H&S Training

A simple, formal induction programme is to be submitted as an addendum for approval with the H&S plan. Inductions must be carried out for all workers and visitors (including Client, Designers) to the site.

Daily, pre-task training is required to ensure workers are familiar with the risks and H&S measures of the work or tasks to be done. Records to be kept in the H&S file.

Any person found on site without proof of induction will be removed from site until the proof is supplied and, and a **penalty issued per non-compliance.**

13. Management of Plant and Equipment

The CHSO will ensure control of all plant and equipment, including daily monitoring, prior to commencing work. Full lists of hired and own plant are to be available at the OHS Consultant /Client audit. All daily inspection records are to be kept in the H&S file, or Contractors where plant and equipment is brought onto site. Registers are not to be more than 1 week behind.

Only competent, fit plant operators are to be used. Medical certificates of fitness are required for all operators.

Any plant or slings used to lift plant or material require annual load testing by an AIA, and all certificates must have the testers LMI/E number. Operators are to be adequately trained and certified to operate mobile cranes or crane trucks. Certificates and registers are to be placed in the H&S file.
Failure to do so will be considered a serious offence.

14. Excavations (if applicable)

A procedure for managing excavations is to be provided as an addendum to the SSHSP describing how excavations are to be managed.

A competent person is to be appointed for managing all excavations. A permit system is to be available and used for all excavations. All equipment and ground conditions to be checked daily, and prior to work commencing.

Excavations should preferably not be open beyond what can be closed daily. Where excavations need to remain open, all excavations are to be properly protected. Adequate stakes with 1m high demarcation and berms/spoil are required to be a safe distance from the edge of the angle of repose. Candy tape may not be used to demarcate excavations. Cognisance is required of the surrounding area and increased levels of protection are required where work is in communities, near schools and clinics or churches.

Work will be stopped, and penalties applied to any work in excavations that is not compliant.

15. Working at heights (if applicable)

A fall protection plan is to be available and supplied as an addendum to the H&S plan. The fall protection plan must be appropriate for the project. Proof of competency must be on file for the Fall Protection Plan Developer and the appointment of a Fall Protection Supervisor with competency to be on file. Method statements, appropriate risk assessments, safe work procedures and training (all employees are to be in possession of a valid working at heights certification) are to be available prior to work commencing.

The focus for working at height shall include fall restraint systems where possible except during assembling or dismantling top components or where it is not deemed safe. The relevant SANS codes are to be applied as they apply to the works and the project, such as:

- SANS 10085
- SANS 10333 (parts 1-3)

Should part of the works be contracted out, competent Contractors are to be appointed and submit documentation according to the project requirements. The PC is to note if such work is to be contracted to specialists in the H&S Plan. the plan is to be developed and work managed by a competent person for the duration of the project. The following aspects must be included:

- The public or users of buildings are to be protected at all times by way of hoarding, barricading or fencing
- Notices to be posted
- Restrictions or stoppage when weather conditions are deemed hazardous
- Permit system for working at heights
- Prevention of falling tools or equipment
- Link to emergency plan regarding rescue

All workers are to be in possession of valid certificates of fitness that extend for the duration of the works. Note the requirements in the section relating to medical surveillance.

Registers and all relevant documentation are to be placed in the H&S file.

Work will be stopped, and penalties applied to any work at heights that is not compliant.

16. Cranes and lifting equipment (if applicable)

Lifting devices such as mobile cranes might be used during the project for deliveries, and moving of supplies or equipment,

Appropriate documentation must be made available for the cranes and operators. Method statements, risk assessments, safe work procedures and training are to be available prior to work commencing. A procedure for managing loads and lifting must be made available as an addendum to the H&S Plan.

Chains, slings and webbing to have valid safe working load certification on file, should the documentation not be on site, the operation may be stopped, and fines imposed until such documentation may be delivered.

17. Temporary Works (Scaffolding, support work, formwork) (if applicable)

Temporary works must be properly designed and signed off by the PCs competent person for all temporary scaffolds, support work or formwork. In these instances, a competent person is defined as one who has sufficient experience in the design of the type of temporary work in question to be able to assess the design. The appropriate competent persons are to be appointed to manage and monitor such works to the satisfaction of the Engineer and OHS Agent. Records and registers are to be properly completed and kept in the H&S file. If temporary works are to be erected by a Contractor, this must be notified to the Principal Agent/OHS Agent.

Failure to do so will be considered a serious offence.

18. Auditing

Frequency of external auditing by the OHS Agent or Client will be bi-monthly to conform to the requirements of the Construction Regulations. The site will be inspected, and the documentation audited relative to the activities and H&S plan. The CHSO of the PC must accompany the Client, or the H&S Agent, on all audits and inspections.

The PC will ensure that all their Contractors are audited on a monthly basis, dependent upon the time to be spent on the site. Audit frequency may be increased if Contractors are not performing adequately. Audit results will be acted upon and non-conformances and penalties issued where deemed appropriate. The Client, Designer or OHS Agent may act or require further outcomes if non-compliances are noted or unsafe acts are noted on site.

Internal audits are to include site conditions as well as ensuring H&S files are appropriate, and compliant. Comprehensive audit reports are to be made available the format of the audit reports will be reviewed by the H&S Agent.

The PC will be audited using a template as supplied in the tender document. The audit template will be adjusted from time to time relative to the activities on site. A similar process is to be used by the PC when auditing their Contractors on site. Compliance with legislative requirements and the systems provided by the PC to manage the H&S on site will be measured. Full compliance is required. Time limits for corrective actions will be set and must be adhered to.

Failure to address findings or non-conformances will be considered a serious offence.

19. Communication and Meetings on Site

All H&S communication during the project between the OHS Consultant and the PC will be done through the Principal Agent and be in writing, including the issue and responses to non-conformances and H&S audit results.

Failure to address issues timeously will be considered a serious offence.

20. Care of Workers on Site (Welfare)

Adequate toilets, clean, safe drinking water and weather protected shelter will be afforded workers at all times. Toilets will be within reasonable distance of workers, or placed with each working team in safe, with reasonable privacy.

Hand washing facilities, disinfectants and sanitizers will be provided across the site at common areas and entrances to work areas.

Failure to ensure compliance will be considered a serious offence, work will be stopped if con-conformances noted until corrected.

21. HEALTH AND SAFETY FILE

The documentation submitted and approved following the awarding of the contract will be used to form the H&S file. The H&S file is required to be laid out in a logical manner, and documentation filed within the file is to be easily accessible.

The following completed information shall be included (but not be limited to) as part of the index:

- The SSHSS;
- The SSHSP and the approval by Client;
- Appointment by Client;
- Mandatory agreement with Client;
- Notification of construction work;
- A record of all working drawings, calculations and design where applicable;
- Detailed list of Contractors with contact details, appointments, Mandatories etc., H&S specifications issued;
- Record of Competencies (CVs) and appointments;
- Training Records;
- Permits;
- Method statements;
- Risk assessments;
- Safe work procedures;
- Emergency and injury management;
- Safety data sheets
- Medical surveillance records;
- Registers;
- Records of audits, minutes etc.;
- Plant lists;
- Temporary electrical installations, and
- Employee records (who is on site).

22. NON-CONFORMANCES

Should, at any time, the works, or part of the works, be stopped due to unsafe acts or non-compliance with the Clients or PCs H&S Plan; neither the PC nor any other Contractor shall have a claim for extension of time or any other compensation.

The following constitute examples of the types of non-conformances that will attract penalties:

Minor: **Penalty: R50/count**	**Medium:** **Penalty: R500/count and a non-conformance**	**Severe** **Penalty: R5000/count, a non-conformance and/or activity stoppage**
Non-use of PPE supplied	Toilets not supplied or regularly serviced; lack of drinking water	Contractors working without Health and Safety Plan approval
Non-completion of registers for plant and equipment on site	Contractors not audited	Workers transported in contravention of the OHS plan or legal requirements
Lack of H&S signage at work areas	Working without training or the appropriate, approved H&S method statements	Invalid Letters of Good Standing
Tools and equipment identified in poor condition during inspections	Legal non-conformances identified during the previous audit and not addressed within the agreed time frame	Non-compliance with traffic accommodation requirements: layout or physical conditions
	No monthly OHS report at site meeting to report on	Any serious breach of legal requirements
	No certificates of fitness for workers as required	
	Working without approved method statements	

23. Failure to Comply with Provisions

Failure or refusal on the part of the PC or their Contractors to take the necessary steps to ensure the safety of workers and the general public in accordance with these specifications or as required by statutory authorities or ordered by the engineer, shall be sufficient cause for the engineer to apply penalties as follows:

(i) A penalty as shown in the Table above shall be deducted for each and every occurrence of non-compliance with any of the requirements of the SSHSS,

(ii) In addition, a time-related penalty of R500,00 per hour over and above the fixed penalty may be deducted for non-compliance to rectify any non-conformance within the allowable time after a site instruction to this effect has been given by the Designer. The site instruction shall state the agreed time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

24. Public safety

The Principal Contractor shall ensure at all times that staff, and general public are aware of the dangers and risks involved whilst construction is taking place.

- Safety signage / posters shall be posted at all areas where construction work is taking place;
- Edges, excavations, stockpile areas, material storage areas, will be demarcated and no entry signage appended;
- Safety talks with employees shall be done, all employees shall be involved in keeping the site safe;
- CLO shall be given talks to do with the community members who are directly involved;
- A record of all training shall be kept, and indemnity documents shall be signed by those attending the safety talks.
- Community unrest shall be handled by the local SAPS. CLO shall assist the Contractor should the need arise.

- No visitors to site are allowed unless proper arrangements are made.

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ANNEXURE A
CLOSE OUT REQUIREMENTS

The H&S files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project. The following list is an example of what should be included but is not exhaustive. The OHS Consultant or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are met. Documentation would include all records from the start of the project. Daily or monthly plant inspection records are not required unless they are related to an accident. All records to be in electronic format and submitted to the OHS agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.

Health and Safety close out file requirements include:

a) Client H&S Specification
b) Principal Contractor's OHS Plan(s)
c) Organograms
d) Legal Appointments
e) List of all employees employed on a permanent or contractual basis over the duration of the contract
f) Notification to Department of Labour of commencement of work
g) Letters of Good Standing for the Project
h) Full files for all Contractors as well as their close out reports
   - List of Contractors
   - All employees employed on a permanent or contractual basis over the duration of the contract
   - Letters of Approval of Contractors
   - Mandatary Agreements
   - Letters of Good Standing
   - Appointments
i) Incident Records
j) Non- Conformance records
k) Agent's Audits
l) Method Statements
m) Risk assessments
n) Safe work procedures
o) Medical surveillance certificates of fitness. Medical records are to be kept according to the OH&S Act as amended
p) All drawings for temporary structures (suspended beams/scaffolds etc.)
q) All operating manuals for any systems that require ongoing maintenance
r) Copies of test results, policies and procedures for environmental monitoring (silica, noise, dusts etc.)

Defect and Liability Period

The H&S files are to be kept 'live' for the defect and liability period by the Principal Contractor, including those of their Contractors. Any work required during the defect and liability period will require an assessment of the H&S file by the OHS Consultant to any work commencing.

A copy drawing records for the as-builts are to be placed on file by the Designers once complete

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	HAZARD	RISK	MINIMUM CONTROL MEASURES
1.	Electrical commission	Electrical shock	- Personnel to comply with permits to work issued by client. - Personal protective equipment to be worn by employees to prevent electrical shock. - First aid treatment to be readily available. - Only competent and trained persons may decommission or commission electrical equipment.
2.	Excavations (working in and around	Toxic fumes Collapse of trench walls/trapping Falling into excavation Collapse of adjacent structures	- Deep excavation/ Monitor air for toxic fumes. - Prevent collapse by battering back sides to safe angle or install temporary support. - Protect vehicles from falling into excavations, provide barriers, signage, etc. as necessary. - Beware of undermining of other structures (e.g. building , scaffolds). - Record excavations inspections by competent person on daily basis. - Provide suitable means of access/egress in case of emergency. - Excavations formed by explosives must be accompanied by method statement approved by client.
3.	Explosive actuated fastening devices	Noise Being stuck by cartridge or fixing	- Operators to be trained, competent and wear appropriate protective equipment, e.g. goggles, gloves, ear plugs and head protection. - Cartridge gun to be in good condition, inspected for damages and faults regularly and results entered register. - Used and unused cartridges gun should be kept in a secure place when not in use, maintain register for return and issue.
4.	Explosive use	Injuries to personnel and by-passers Property damage	- Blaster must have all relevant permits, permission and licenses in place before blasting.

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			- Method statement must be approved. - Maintain exclusion zone around perimeter of blasting, warn persons away, erect warning signage and barriers. - Obtain permission from local authority and police. - Blaster must be competent in blasting. - Ensure blasting does not affect stability of adjacent structures/building.
5.	Fire	Injuries to workers, pedestrians, residents, road users, damage to property through fire.	- No littering on site which could become a fire hazard, maintain site in clean condition. - No fires to be lit on site, have a working fire extinguisher at hand all times. - No smoking or naked flames near flammable substances or in unauthorised areas. - Ensure proper storage/use of petrol/diesel/flammable substances, post warning notices
6.	Flammable liquids	Fire Explosion	- No littering on site which could become a fire hazard, maintain site in clean condition - Have a working fire extinguisher at all times.
7.	Asbestos Cement pipes	Release of asbestos fibres	- Ensure safe access and egress is provided. - Erect physical barriers to prevent entry by unauthorised persons, as applicable. - Damp down exposed area to contain fibre release. - Personnel involved to wear asbestos respiratory protection. - Only Department of Labour registered asbestos contractors may work with asbestos, and strictly in accordance with the requirements of the Asbestos Regulations.

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8.	Asbestos Cement removal	Person falling from height Debris falling from height Falling of equipment or tools Release of asbestos fibres	- Notice to be erected informing personnel of fragile roofs, as applicable. - Ensure of safe access and egress in provided. - Erect physical barriers to prevent entry by unauthorised persons and falls from heights, as applicable. - Roof sheets to be sprayed with water to prevent fibre release, where feasible. - Take extreme care to remove sheets whole. Where breakage occurs damp down exposed area to contain fibre release. - Personnel involved to wear respiratory protection. - Exclusive zone may be required under area of sheet removal to prevent injury from falls of material from heights. - Only Department of Labour registered asbestos contractors may work with asbestos, and strictly in accordance with the requirements of the Asbestos Regulations.
9.	Asphalting	Fire Burns to skin Skin disease	- Suitable fire extinguisher to be place prior to commence of works - Ensure competent personnel using material and competent and trained machinery/equipment operators. - Ensure there is a safe workplace at all time. - Ensure all personnel wear sufficient personal protective equipment (PPE) including safety boots, reflective vests and gloves. - Health and safety data sheet required.
10.	Bricklaying	Caustic contamination with mortar Contact with sharp blade tools	- Use only trained personnel. - Safe means of access to be provided.

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			- Safe/suitable working platform required where working at height. - PPE for mortar to include gloves where practical and goggles/ masks where there is a risk of contamination
11.	Brush cutting	Injury from contact with blade/nylon Fire (where petrol used) Electrocution (where electrical tools are used)	- Person using brush cutter must be trained and competent. - Use PPE such as goggles, safety boots, ear protection, gloves, hard hat. - Brush cutter must be in good condition and maintained. - Adequate supervision on site at all times. - No smoking when refuelling, fire extinguisher to be on hand (where petrol is used)
12.	Chainsaw use	Falling tree or branches causing injury to persons Incorrect use of chainsaw causing injury	- Person using chainsaw must be trained and competent - Use PPE such as goggles, safety boots, ear protection, gloves, hard hat, chainsaw trousers and jackets. - Chainsaw must be in good condition including guards. - Clear area below area of chainsaw use and where tree felling.' - When using chainsaw at height practise safety procedures
13.	Plumbing	Falling material Fall from height Fire Burns Exposure to lead flames	- Ensure standard safety procedures are followed at all times - Only used trained and competent personnel - Ensure there is a safe working area at all times. - Ensure material are stored neatly - Ensure there is a safe access and egress at all times. - Ensure all personnel wear suitable and sufficient PPE. - Consider a hot works permit system prior to commencing of any hot works. - Make sure emergency procedures are in place and ensure all

			personnel are aware of where to go in case of fire.
14.	Plastering	Falling material Fall from height Contact with materials	- Ensure standard safety procedures are followed. - Ensure there is a safe working area. - Ensure safe access and egress. - Ensure competent personnel are used.
15.	Plant or vehicles and equipment operation	Workers injured by passing traffic Road users and pedestrians at risk from plant operation Noise	- Implement traffic protection measures. - Trained and competent operators must be used. - Check plant and vehicles on daily basis before use and record inspections. Maintain vehicles in safe condition. - Medical certificates of fitness required for construction plant. - Crossing of road by construction vehicles or machines must be limited to the practical minimum. - Plant and vehicles must be fitted with amber rotating beacons and reverse alarms. - Wear appropriate PPE
16.	Pilling	Falls Struck by machine Exposure to noise	- Personnel to be trained and competent, pilling rig to be in safe condition and inspected on a daily basis on a register by competent personnel. - Empty pilling holes not to be left unguarded. - Only approach pilling plant on signal from operator. - Personnel to wear PPE such as ear plugs.
17	Paving (laying)	Impact injuries from tile/ mallet Caustic burns Sore knees Cuts from cutter	- Impervious gloves to be worn/ barrier cream to be used - Kneelers or similar to be available. - Personal protective equipment to be worn.
18	Painting	Contact with paint	- Refer to safety data sheet for usage instructions, hazards and precautions required.

			- When working at height, refer to risk assessment addressing this hazard.
19	Overhead services (Working near)	Contact with live services causing injury to personnel Damage caused to services	- Maintain safe clearance levels. - Establish presence of any services via proper walk through survey of site and/ or means service drawings. - Wear personal protective clothing. - Ensure height of plant/ vehicles does not compromise or exceed clearance levels from service provider.
20	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	- Wear respiratory and hearing protection. - Dampen down and minimise dust where possible.
21	Night work	Security Lighting	- The contractor shall not undertake any night work without prior arrangement and written permit from the client. - The contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped
22	Compacting and filling	Contact with tipping materials Contact with moving plant Vehicles/personnel falling into excavations Contact with underground services	- Trained banks man to control vehicle movement - Only trained personnel to use plant - Personnel to stand clear as materials are being tipped - Use stop blocks and signs to warn vehicles of excavations, where applicable - Stand clear of plant whilst material is being compacted - Establish position of underground services and protect services from damage.
23	Concrete pumping	Sprains and strains Hit by pump Concrete burns Collapse/bursting of structure	- Personnel to be in clear vision of pump operator - Trained pump operator - Personnel working with the concrete to wear the appropriate equipment to protect against cement burns

			- Design of structure being loaded to be approved by competent designer and inspect before, during and after loading. - Pump to be well maintained
24	Compactor operations	Crush of feet	- Only trained and competent personnel to use the machine - Ensure operators wear steel toe caps shoes or boots at all times
25	Confined spaces	Suffocating Fumes	- Ensure that confined spaces is sufficiently ventilated - Wear personal protective equipment such as proper masks if air supply insufficient or not of sufficient quality. - Test oxygen levels in confined space to ensure that is safe for entry - Ensure that emergency procedures are in place
26	Cutting Kerbs	Saw slipping, blade disintegrating	- Only trained operators to use saw and change blades. - PPE must be worn, gloves, goggles, dust mask and hearing protection. - People to be kept away from the work area. - Work to cease if people have to pass - Sparks etc. To be directed away from people and any flammable material.
27	Cutting Off Disc	Noise Cuts from machine Fire (particularly at refuelling) Flying debris Blade shattering Contamination by fume created or exhaust fume	- Use competent personnel - Hot works control, fire extinguisher, fire watch man. (permit may be required). - PPE to include gloves, eye protection, hearing protection. - Solid working position - Clear working area - Correct grade of blade must be used - Good ventilation to be provided (Forced if necessary) - Changing of wheels to be by competent persons only

			- Cutting discs must not be used for grinding (grinding disc thicker). - Bystanders to wear hearing protection, as applicable.
28	Demolition	Falling materials premature collapse of structure	- Ensure there is current method statement in place - Ensure all emergency procedures are in place and all details are displayed. - Ensure that structural demolition has been approved by designer and site management
29	Kerb Laying	Nips at joints Crushing by kerbs Caustic burns	- Impervious gloves and barrier cream to be used to protect hands. - Personnel should be aware of safe manual handling techniques when handling kerbs.
30	Lead – working with removal of tiles	Toxic effects from exposure to lead and its compounds Risk of inhalation, ingestion and absorption Personnel falling from height Debris falling from height	- Demarcation of the workplace - Restriction of entry by unauthorised persons - Restriction of substances that can release airborne lead to certain areas - Limit number of workers exposed to lead - Regular cleaning of workplaces and equipment - All employees who are exposed to lead must be provided with suitable and adequate PPE - Lead is to be packed in impermeable containers that are tightly sealed and clearly marked for removal. - The need for medical surveillance and the nature thereof is to be based on both risk assessment and air monitoring results and safety legislations.
31	Lifting Operations	Falling material Crushing by material Hand injuries to the slinger Toppling crane	- Check test certificate - Check examination certificate - Check inspection have been carried out

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			- Check certificates for lifting equipment (chains, slings, shackles, etc.)
32	Fragile Materials	Person or items falling through fragile materials	- All fragile materials to be identified and protected prior to work commencing. - Protection to include either covering the fragile materials or excluding activity. - Any coverings to be secured in place - The location of the fragile materials to be indicated by signage
33	Hand tools	Injuries caused by use of hand tool Impact with the tool Falls due to access problems Contamination with substance being worked	- Ensure: - Tool is correct for the job - Tool is in good order and suitably sharp - Personnel must be competent/instructed in tool usage and tool safety - Lighting is sufficient - Access is safe, working platform is secure, leading edge is guarded - Operative is wearing all necessary PPE
34	Hazardous Substances	Injuries to workers through use of hazardous substances, e.g. injuries to eyes, skin, etc..	- Use substances in accordance with the safety data sheet particularly reference protective clothing required. (example: gloves, goggles, etc.) - Know what first aid measures are. - Have welfare facilities available for washing of hands, etc..
35	Hot Works	Burns to eyes or other parts of the body	- PPE to include eye protection, kin and ear protection. - Respirator maybe be required where cutting galvanized steel or anywhere else toxic fumes and gases arise. - Dust can also be a problem and forced ventilation may be required
36	Mobile Crane Erection & Dismantling and Use	Collapse of structure Overturning structure Falling Materials	- Ensure emergency procedures are in place and all operative are aware of the details

			- Only used trained and competent operators for the erection and dismantling and use of cranes - Ensure crane driver is trained and hold certification as proof. Must have a valid medical fitness certificate - Ensure crane is 360 degrees vision if not ensure a fully trained banks man is available at all times. - Banksman to wear reflector vest to identify him/herself to the crane driver - Ensure all personnel wear suitable and sufficient PPE - Consider creating an exclusion area
37	Members of the public – Protection Of	Injury to the member of the public and road users from site works	- Barriers and signage to be in place - Workers must warn away members of the public from the works - Footpaths and bridges which are open to the public must be closed off if in the area of works otherwise made safe so that no injury to a member of the public occurs - Traffic turning into site – traffic management and signage is required - Signage to be on the road at site entrance warning motorists that construction traffic turning into/out of site access. Keep roads free of mud where possible - Refer to plant risk assessment for details on plant safety precautions - NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PROVATE HOMEOWNERS MUST BE AGREED
38	Manhole Rings & Pipe Storage	Rolling of rings Collapse of pipes Crushing of persons Stockpile collapse	- Manhole rings must be stored flat to prevent them being rolled - Banks of stock pipes are not to be broken until they are ready to be used

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			- Personnel must stand to the side when breaking bands so as not to be hit by falling pipes - Pipes must be wedged to prevent rolling
39	Temporary Works – Shoring, Scaffolding, falsework, formwork	Collapse of works	- Wear PPE such as gloves and goggles - Formwork must be built by trained person and also be inspected by competent person and results entered into register on site/
40	Tower (Mobile Aluminium Tower) Scaffold	Overturning Falls	- Tower to be on firm level ground with wheels or feet properly supported - Erection by competent person - Inspection before first use - Weekly record of inspection required - Guard rails and toe boards as per normal scaffold - Beware when moving of overhead obstructions, such as power lines - Never move in strong winds
41	Underground Services	Striking of buried services	- Make all necessary enquiries to establish what services are in the area - Assume all services to be live (unless confirmation Is received to confirm that services are isolated or otherwise made safe. - Comply with requirements of the safe system of work for underground services - Where available locate services with a locator - Hand dig around services
42	Working at height	Personnel falling from height Falling debris Those beneath being injured	- All access equipment is properly constructed (inspection record must be maintained) - Only trained personnel construct, dismantle or control access equipment - All equipment must have full toe boards and guard rails, Comply

			with SANS10085 on erection, use and dismantling scaffolding - No access equipment to be loaded above its safe working load - No access equipment to be loaded above the level of the guardrail - Where working involves leaning out an open leading edge, then all personnel are to be fitted with a full body harness. The harness must be connected at all times - All fall arrest equipment to be correctly maintained - Ensure if ladders used for access, they are either footed or tied.
43	Precast slab/ Unit laying and fixing	Falls Falling material Manual handling	- Emergency procedures are in place and personnel explained details - Use competent personnel - Ensure suitable and sufficient access and egress is provided - Safe place of work must be provided - Ensure all personnel wear correct PPE - Exclusion zone may be required for protection against risk of falling objects
44	Road Construction	Risk of being struck by vehicles	- Ensure traffic management measures in place - No construction activities to commence until adequate provision made to accommodate traffic in accordance with the South African road signs manual - Wear reflective waist coats when working on or near the road and road shoulder as well as any either required PPE clothing - Crossing of road by personnel must be limited to the practical minimum - Use of fencing or other barriers as appropriate.
45	Road Marking	Contact with moving vehicles	- Ensure suitable and sufficient road signs are erected, as applicable

		Fire	- Possible road or lane closure may be required, traffic management may be required - Fire extinguisher to be situated in a suitable area, use dry powder or foam
46	Rope Access	Personnel falling from Height Falling debris Those beneath being injured	- Ensure: - Competent person is appointed in writing to supervise all rope access on the site - Compliance with Construction regulations particularly section 10 & 18 - All rope access work is carried out under supervision of a competent person - All rope access operators are competent and licensed to carry out their work - The design, selection and use of the equipment and anchors comply with safety standards incorporated for this purpose into these regulations under section 44 of the act. - Site specific fall protection plan must be developed by a competent person applicable to the specific work and environment prior to the commencement of the work including all records of maintenance and inspections of all equipment used for the work operations
47	Steel fixing	Back injuries caused by manual handling Eye injuries from tie wire Trips/Falls Falling from height	- PPE must include safety boots and goggles - Manual handling training may be required - Care to be taken when near overhead lines - Use only trained personnel - Provide safe means of access - Maintain and regularly inspect all lifting appliances and equipment

			- Cap starter bars to prevent injuries where feasible - Construct scaffold walkway to cross reinforcing mesh, as required
48	Steel erection	Falls from height Falling components Contact injuries from falling lifting equipment	- Adhere to all general precautions for working at height - Barrier off/ exclude area below work - All lifting appliances to be examined and inspected - Inspection register in place and up to date - All personnel to be trained and competent wear clipped on safety harnessed when working on height - Ensure that lifting equipment (slings, chains and shackles) test certificates are current and on site - Competent persons only to connect loads and direct plant
49	Work over or next to water	Drowning	- Evaluate the depth of water, height above water that work takes place, whether workers can swim or not and then determine safety precautions required: these may include such measures such as barriers, signage, life belts, safety harness etc. - When working on river/harbour/dam edge, erect life saving devices and barriers to protect workers and vehicles (Stop blocks may also be required). Only trained and competent personnel may be used
50	Scaffold Erection/Dismantling	Personnel falling from height Items of scaffold falling onto personnel Scaffold collapsing onto those below	- Ensure: - Scaffold is designed to take the imposed load - Scaffold is not overloaded - Scaffolders are fully trained - Scaffolding is regularly checked by competent person and record of inspection retained. Written inspections to be recorded on weekly basis.

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			- Scaffolders must adhere to the safe systems of work. - All fall arrest equipment to be checked and certified in good working order - That ALL understand the safety system of work
51	Shuttering walls, Beams, Columns	Falling from height Falling materials from height Cuts and abrasions from splinters and nails	- Ensure all personnel wear appropriate PPE - Ensure at all times there is a safe working platform - Use only trained competent personnel - If electrical tools are being used ensure they have been tested and safe to use - Ensure timber is de-nailed after used - Ensure safety standards are followed at all times - Ensure there is a safe means of access and egress at all times

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AGREEMENT WITH MANDATARY

WRITTEN AGREEMENT ENTERED INTO AND BETWEEN

_____

(Hereinafter referred to as the Employer)

and

_____

(Hereinafter referred to as The Employee)

Compensation Fund Number: _____

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Whereas the Company called under contract no. _____ for the executing of the following

_____

At _____ ("Premises")

and whereas the contractor _____

Undertook to carry out the work and whereas the client contractor have agreed to regulate as between them and as provided for in terms of section 37(2) of the Occupational Health and Safety Act, No 85 of 1993, now therefore the undersigned agree to:

1. The Contractor warrants that all his and his contractors' employees are covered in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act 1993 (the Act) which cover shall remain in force whilst any such employees are on the premises.

2 The Contractor warrants that he is in possession of the following insurance cover which shall remain in force whilst he and/or his Contractor and/or his employees are present on the premises or which shall remain in force for the duration of his contractual relationship with the client whichever period is the longest:
   - Public liability insurance covers.
   - Any other insurance cover that will adequately make provision for any possible losses and/or claims arising from his and/or his contractors and/or his Employees' acts and/or omissions on the premises.

3. The Contractor undertakes to ensure that he and/or his contractors and/or their respective employees will at all times comply with all the requirements of the Act and without derogating from this general undertaking, also comply with the following conditions:
   - All work performed on the premises must be performed under the close supervision of the contractor's employees who are trained to understand the hazards associated with any work that the contractor performs on the stated premises.
   - The Contractor shall assume the responsibility in terms of Section 16(1) of the Act. If the Contractor delegates any duty in terms of Section 16(2), a copy of such written delegation shall immediately be forwarded to the Client.
   - The Contractor shall ensure that he familiarize himself with the requirements of the Act, and that he, his employees and any Contractor comply with them.
   - The Contractor shall conduct a hazard analysis and ensure that his and any contractor employees are made aware of the hazards identified. This analysis needs to be reviewed prior to a new tasks are commenced.

   The Contractor must provide the Client with written proof that his employees and those of the sub contractor have been made aware of the hazards identified. The Contractor must provide the Client with up dated copies of the analysis.
   - Discipline regarding Occupational Health and Safety shall be strictly enforced.
   - Personal Protective Equipment as defined in the Act and regulations shall be issued free of charge by the Contractor and worn as prescribed.
   - Safe work practices shall be enforced and all employees shall be made conversant with the contents of these practices.
   - No unsafe equipment/machinery and/or articles will be allows and/or used on the premises.
   - All incidents referred to in Section 24 of the Act shall be reported by the Contractor to the Department of Labour as well as to the client. The Client shall further be provided with copies of all documentation relating to any incident.
   - The Client hereby obtains an interest in the issue of any formal inquiry conducted in terms of Section 32 of the Act into any incident involving a Contractor and/or his employees and/or his Contractor.
   - No use shall be made of any machinery/article/substance/personal protective equipment that belongs to the Client without prior written approval.
   - Work for which the issuing of a permit is required shall not be performed prior to the obtaining of a duly completed and approved permit.

- No alcohol or other intoxicating substance shall be allowed on the premises. Anyone found to be or suspected of being under the influence of alcohol or any other intoxicating substance shall be removed from the premises.
- Full participation shall be given if and when Client employees inquire into Occupational Health and Safety issues.
- The Contractor expressly agrees to comply with the procedures and arrangements as required by the Act in the execution of the work.

4. The Contractor confirms; that he has been informed that he must report to Client management ;(in writing) anything that he deems to be unhealthy and/or unsafe and that he has versed his employees and/or contractors in this regard.

5. The Contractor warrants that he shall not endanger the health and safety of any of the Client's employees in any way whilst performing any work on the premises.

_____ Date_____

1. Signed by Client Rep

_____ Date_____

2. Signed by Contractor or his Authorized Represent

C3.4 Contractors Reports

CONTRACTOR MONTHLY REPORT PART 1

Project No: …… ……. **Project Name: ……**

Contract No: ……

Contractor Name: ……..

Claim No: …….. **For Period Ending: ……...**

Date of Report: ……

The Contractors monthly report comprises an integral part of the Contractors payment claim and processing of the payment claim is not permitted without this report also being submitted i.e.

"NO REPORT – NO PAYMENT".

Attachments:

Part 2 : Overall Project Worker Schedule: Schedule of all local labourers employed since the start of the project

Part 3 : Weekly Task Wage Register

Part 4 : Local Labour Schedule

Part 5 : Beneficiary List (certified copy of ID's)

Additional Requirements:

1. When contractor recruit local labourers, they must produce a 13 digit identity document and a certified copy of the ID must be forwarded to the DRPW Regional EPWP representative
2. That at least one disabled person be recruited and employed on the project and reported as such
3. A daily attendance register should be kept on site
4. Each beneficiary must **sign** the payment sheet, as proof that they have been paid.
5. At the bottom of the contractors report, the site agent or CLO or contractor must sign the document as proof that the people indicated have worked the number of days
6. Employment of local labourers should constitute the following:
    a. 55% women
    b. 55% young people
    c. the minimum wage rate to be paid is in accordance with the National Minimum Wage Act, 1 March 2023 of the latest Published Act.

OVERALL PROJECT WORKER SCHEDULE (local labourers only) Contract No: …… **PART 2**

Project No. …… **Project Name: ……**

Month of Report: …… **Sheet: …….. of …….**

Names of all Local Workers employed at any time on the project are to be entered in the table below irrespective of how long they worked on the project.

No.	Name of Local Labourer	Identity Number	Month Worker Started	Age	Tick if Yes									Place a tick in the box which corresponds to the Gender and Age of the Worker				
														Women		Men		
					Female Head of Household with Dependants	Disabled	Labourer	Semi-Skilled	Skilled	Supervisor	Clerical	Managerial	Professional	Over 35 yrs 2A	35 yrs & under 2B	Over 35 yrs 2C	35 yrs & under 2D	
Totals for this sheet																		
Totals from previous sheet																		
Totals carried forward																		
					(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N) = (J+K+L)

Total No. of workers Employed on the Project

NOTE: LOCAL LABOUR TARGETS TO BE ACHIEVED WITH REGARD TO EPWP RELATED WORKS: Women = 55%; Youth = 55%; Disabled = 2%

Completed by: Name: …… Signature:…… Capacity …… Date:……..

WEEKLY TASK WAGE REGISTER (local labourers only) Contract No: …… **PART 3**

Project No. …….. Project Name: …….. Week Ending: …….. Sheet:….. of ….

Entries in this portion to be completed by Foreman									**Entries in this portion to be Completed by Contractor**				
No.	**Name of local worker**	**Day Tasks Worked**							**Payment**				
		Mon	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**	**Sun**	**Total DAY TASKS worked this week**	**Rate per DAY TASK**	**Total Payment due to Worker**	**Workers signature on receipt of Payment**	**Date Payment Received by Worker**
Totals This Sheet													
Totals Brought Forward From previous Sheet													
Totals Carried Forward													
									(A)		**(B)**		

Completed by: Name: …….. Signature: …….. Capacity: …….. Date: ……..

LOCAL LABOUR AND MATERIAL SCHEDULE PART 4

Contract No: …….. **Date of Report: ……..**

Project No: …….. **Project Name: ……..**

Claim No: …….. **For Period Ending: ……..**

Contractor Name: ……..……..

1. Summary of Day Tasks worked and Amount Spent on Local Labour this month

Week No.	Week Ending	Total Day Tasks / Person Days Worked	Total Amount Paid
		(Total of (A) from Form 4 for each week)	(Total of (B) from Form 4 for each week)
1			R
2			R
3			R
4			R
5			R
6			R
7			R
8			R
9			R
Total			R

Transfer to 2 in table below

2. Summary of Amount Spent on Local Labour to date

1. Previous Amount Spent on Local Labour (From previous claim)	R
2. Amount Spent on Local Labour this month (From Total above)	R
3. Total Amount Spent on Local Labour to date (3)=(1+2)	R

3. Local Labour Schedule

Summary of Local Labour Employed Columns refer to Columns in Part 2	No. of local workers who worked on the project to date (From Part 2)	% of Total
1. Total No. of individual local workers who have worked on the Project (Column N)		100%
10. How many of the Total No. are local youth (35 yrs and under) (Column B & D)		
11. How many of the Total No. are local women (Column A + B)		

4. Summary of Amount Spent on Material to Date (Cumulative)

Item	This Month	Total to date

1. Material from Local Municipality		
2. Material from Local District Municipality		
3. Material from Outside the Eastern Cape		
4. Material from other areas within the Eastern Cape		
Total Material		
Total material as percentage of contractor expenditure		
Total as percentage of contractor budget		

Training of Local Workers

Catogory of training	Name of course	No. trained	Days trained	Comments on progress
(a) Technical training for implementation	Bricklaying Carpentry			
	Plumbing			
	Fencing			
	Plastering			
	Painting			
	House Building			
	Handyman			
	Electrical			
(b) Institutional training for local management beyond construction				
(c) Technical training for OMM				
(d) Institutional training for implementation				
(e) HIV/ Aids etc.				
Other – Please specify				
Total				

NOTE: LOCAL LABOUR TARGETS TO BE ACHIEVED WITH REGARD TO EPWP RELATED WORKS: Women = 55%; Youth = 55%; Disabled = 2%

Completed by: …… …… …… ……

Name Signature Capacity Date

Part 5: Pricing Data

C2.1 Pricing Instructions

C2.1: PRICING INSTRUCTIONS JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
BID No:	**2023/10/022**

1. BILLS OF QUANTITIES

The **bills of quantities** forms part of and must be read and priced in conjunction with all the other documents forming part of the **contract documents**, the Standard Conditions of Bid, Conditions of Contract, Specifications, Drawings and all other relevant documentation.

2. VALUE ADDED TAX

The bid price must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the **bills of quantities** must however be net (exclusive of VAT) with VAT calculated and added to the Total Value thereof in the Final Summary.

3. PREVIOUS WORK

The bidder is to acquaint themselves with the site thoroughly before pricing. Adjustment of prices will not be entertained after the award of the contract.

C2.2 Preliminaries / Bill of Quantities / Final Summary

BILL NO: 8A		OVERHEAD SUPPORT & EXCAVATIONS			SCOPE SPECIFIC		
NO.	**D-D-T**	**DESCRIPTION**	**UNIT**	**Total Quantity**	**Labour Rate**	**Material**	**Grand Total**
EXCAVATIONS & TRENCHING		Excavate, backfill and compact as per Eskom standard and import backfill soil where required as per Eskom standard for holes and trenches for poles, stays, struts, flying stays and earth electrodes. All material will be measured elsewhere.					
1,1		**Excavation, backfilling & compacting of a hole 1m for 5 meter pole in soil type compacted.**					
1.1.1		Class 2 pickable soil per hole	Ea	0			
1.1.2		Hard rock - Compressor	Ea	0			
1.1.3		Hard rock - Rock Drilling Machine	Ea	0			
1,2		**Excavation, backfilling and compacting of a hole 1,3 meter (7 meter pole) in soil type.**					
1.2.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	2			
1.2.2		Hard rock - Compressor	Ea	2			
1.1.3		Hard rock - Rock Drilling Machine	Ea	2			
1,3		**Excavation, backfilling and compacting of a hole, 1,5 meter (9 meter pole) in soil type.**					
1.3.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	20			
1.3.2		Hard rock - Compressor	Ea	15			
1.3.3		Hard rock - Rock Drilling Machine	Ea	15			
1,4		**Excavation, backfilling and compacting of a hole 1,7 meters (10 meter pole) in soil type.**					
1.4.1.		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.4.2.		Hard rock - Compressor	Ea	0			
1.4.3.		Hard rock - Rock Drilling Machine	Ea	0			
1,5		**Excavation, backfilling and compacting of a hole 1,8 meters (11 meter pole) in soil type.**					
1.5.1.		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.5.2.		Hard rock - Compressor	Ea	0			
1.5.3.		Hard rock - Rock Drilling Machine	Ea	0			
1,6		**Excavation, backfilling and compacting of a hole 2,0 meters (12 meter pole) in soil type.**					
1.6.1.		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.6.2.		Hard rock - Compressor	Ea	0			
1.6.3.		Hard rock - Rock Drilling Machine	Ea	0			

BILL NO: 8A		OVERHEAD SUPPORT & EXCAVATIONS			SCOPE SPECIFIC		
NO.	**D-D-T**	**DESCRIPTION**	**UNIT**	**Total Quantity**	**Labour Rate**	**Material**	**Grand Total**
EXCAVATIONS & TRENCHING		Excavate, backfill and compact as per Eskom standard and import backfill soil where required as per Eskom standard for holes and trenches for poles, stays, struts, flying stays and earth electrodes. All material will be measured elsewhere.					
1,7		**Excavation, backfilling and compacting of a hole 2.2 meter (13 meter pole) in soil type.**					
1.7.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.7.2		Hard rock - Compressor	Ea	0			
1.7.3		Hard rock - Rock Drilling Machine	Ea	0			
1,8		**Excavation, backfilling and compacting of a hole 2.2m (14 meter pole) in soil type.**					
1.8.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.8.2		Hard rock - Compressor	Ea	0			
1.8.3		Hard rock - Rock Drilling Machine	Ea	0			
1,9		**Excavation, backfilling and compacting of a hole 2.2m (16 meter pole) in soil type.**					
1.9.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.9.2		Hard rock - Compressor	Ea	0			
1.9.3		Hard rock - Rock Drilling Machine	Ea	0			
1,10		**Excavation, backfilling and compacting of a hole 2.4m (18 meter pole) in soil type.**					
1.10.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.10.2		Hard rock - Compressor	Ea	0			
1.10.3		Hard rock - Rock Drilling Machine	Ea	0			
1,11	0350	**Excavation, backfilling and compacting of a hole 1,3 meters (LV stay hole) (rod diameter 12mm) in soil type.**					
1.11.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.11.2		Hard rock - Compressor	Ea	17			
1.11.3		Hard rock - Rock Drilling Machine	Ea	1			
1,12	0350	**Excavation, backfilling and compacting of a hole 1,8 meters (MV stay hole) (rod diameters 20mm) in soil type - Depth 1.45 meters**					
1.12.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	8			
1.12.2		Hard rock - Compressor	Ea	4			

BILL NO: 8A		OVERHEAD SUPPORT & EXCAVATIONS			SCOPE SPECIFIC		
NO.	**D-D-T**	**DESCRIPTION**	**UNIT**	**Total Quantity**	**Labour Rate**	**Material**	**Grand Total**
EXCAVATIONS & TRENCHING		Excavate, backfill and compact as per Eskom standard and import backfill soil where required as per Eskom standard for holes and trenches for poles, stays, struts, flying stays and earth electrodes. All material will be measured elsewhere.					
1.12.3		Hard rock - Rock Drilling Machine	Ea	3			
1,13	0342	**Excavation, backfilling & compacting of a MV 0.5m deep strut hole in soil type**					
1.13.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.13.2		Hard rock - Compressor	Ea	1			
1.13.3		Hard rock - Rock Drilling Machine	Ea	1			
1,14	0342	**Excavation, backfilling & compacting of a LV strut hole 0.5 deep meters in soil type**					
1.14.1		Class 2 pickable soil per hole (including the hand removable of rock and boulders)	Ea	0			
1.14.2		Hard rock - Compressor	Ea	0			
1.14.3		Hard rock - Rock Drilling Machine	Ea	0			
1,15		**Excavation, backfilling & compacting of wood pole using Mechanical boring/Rock Drill or Jack Hammer**					
1.15.1		Rock drilling (Irrespective of depth of hole, each hole to be verified by Appointed Clerk of Works) and labour required	Ea	2			
1.15.2		Excavate using a mechanical boring (Auger) device (Irrespective of depth of hole, each hole to be verified by Appointed Clerk of Works) and labour required	Ea	2			
1.15.3		Excavate using a jack hammer and compressor (Irrespective of depth of hole, each hole to be verified by Appointed Clerk of Works)	Ea	2			
WOOD POLE PLANTING		Excavations and compaction are measured elsewhere. Structure, Flying stay and strut poles are included in this section. Pole top diameter ranges from 140mm to 220mm					
1,17		**Planting By hand**					
1.17.1	0058	POLE,WOOD 5.0 X 80-100 TOP DIA	Ea	0			
1.17.2	0050	POLE,WOOD 7.0X100-120 TOP DIA	Ea	0			
1.17.3	0050	POLE,WOOD 7.0X120-139 TOP DIA	Ea	0			
1.17.4	0055	POLE:140-159MM TOP DIA X LG 9 M;WOOD	Ea	0			
1.17.5	0055	POLE:160-179MM TOP DIA X LG 9 M;WOOD	Ea	50			
1.17.6	0055	POLE:200-219MM TOP DIA X LG 9 M;WOOD	Ea	0			
1,18		**Planting by Crane**					
1.18.1	0050	POLE,WOOD 9.0m x 140-159	Ea				
1.18.2	0051	POLE,WOOD 9.0m x 160-179	Ea				

BILL NO: 8A	OVERHEAD SUPPORT & EXCAVATIONS				SCOPE SPECIFIC		
NO.	**D-D-T**	**DESCRIPTION**	**UNIT**	**Total Quantity**	**Labour Rate**	**Material**	**Grand Total**
EXCAVATIONS & TRENCHING		Excavate, backfill and compact as per Eskom standard and import backfill soil where required as per Eskom standard for holes and trenches for poles, stays, struts, flying stays and earth electrodes. All material will be measured elsewhere.					
1.18.4	0052	POLE,WOOD 9.0m x 180-199	Ea				
1.18.3	0052	POLE,WOOD 10.0m x 160-179	Ea				
1.18.4	0052	POLE,WOOD 10.0m x 180-199	Ea				
1.18.5	0052	POLE,WOOD 10.0m x 200-219	Ea				
STAYS AND STRUTS		Supply and install stays, flying stays, struts. Accessories include staywire, stayrods, stay plates, soil anchors, stay insulators, guy grips stay mounting brackets, mounting hardware, anti climbing devices, stayguards and danger labels. Poles and excavations are measured elsewhere.The installation and erection of strut poles are measured here					
1,19		**Installing Stay and strut assembles**					
1.19.1	0341 (Sh 1 of 5)	STAY ASSEMBLY (LV - 35kN) WOOD	Ea	18			
1.19.2	0341 (Sh 2 of 5)	STAY ASSEMBLY (MV - 97kN) WOOD POLES (LV STAYS)	Ea	0			
1.19.3	0341 (Sh 3 of 5)	STAY ASSEMBLY (MV - 97kN) WOOD	Ea	16			
1.19.4	0341 (Sh 4 of 5)	MV HEAVY / HV LINES CONDUCTOR STAY ASSEMBLY (MV - 115kN) WOOD	Ea	0			
1.19.5	0341 (Sh 5 of 5)	STAY ASSEMBLY WOOD STAY GUARD APPLICIATION (IF REQUIRED)	Ea	0			
1.19.6	0342 (Sh 1 of 3)	STRUT ASSEMBLY FLAT 45 DEG. BRACKET 7m, 9m AND 11m POLES	Ea	1			
1.19.7	0342 (Sh 2 of 3)	STRUT ASSEMBLY SWIVEL BRACKET 11m, 12m AND 13m ,14,15 WOOD POLES	Ea	2			
1.19.8	0342 (Sh 3 of 3)	STRUT ASSEMBLY WOOD H - POLE FOR -11m , 12m and 13m,14,15 poles	Ea	0			

BILL NO: 8A	OVERHEAD SUPPORT & EXCAVATIONS				SCOPE SPECIFIC		
NO.	**D-D-T**	**DESCRIPTION**	**UNIT**	**Total Quantity**	**Labour Rate**	**Material**	**Grand Total**
EXCAVATIONS & TRENCHING		Excavate, backfill and compact as per Eskom standard and import backfill soil where required as per Eskom standard for holes and trenches for poles, stays, struts, flying stays and earth electrodes. All material will be measured elsewhere.					
1.19.9	0343	LV- OVERHEAD FLYING STAY ARRANGEMENT	Ea	0			
1.19.10	0344	MV - OVERHEAD FLYING STAY ARRANGEMENT	Ea	0			
1.19.11	0344	HIP STAY FROM WOOD POLE FOUNDATION AND ASSEMBLY	Ea	0			
1.19.12	0357 (Sh 1 of 3)	LV/MV-ROCK ANCHOR INSTALLATION (EXPANDABLE SHELL & RESIN TYPE)	Ea	0			
1.19.13	0357 (Sh 2 of 3)	LV/MV-ROCK ANCHOR INSTALLATION (2 EYED ROD AND PIN TYPE)	Ea	0			
1.19.14	0357 (Sh 3 of 3)	MV- SOFT ROCK ANCHOR INSTALLATION	Ea				
	Totals					Carried to Summary Page	

Bidder: ……..

Date:

Bidder Signature: ……..

BILL NO: 8B		LV OVERHEAD SYSTEM		SCOPE SPECIFIC			
NO.	D-D-T	DESCRIPTION	UNIT	Total Qty	Labour Rate	Material	Grand Total
LV CONDUCTOR		Supply (Material to be priced elsewhere) and Install Eskom specified conductor. Material quantity to allow for 5% sag in addition to actual conductor length quantity. Installation includes handling, stringing and final sagging.					
4,1		**A. Stringing**					
4.1.13	3141	COND,ABC 4C XLPE 35SQ INS NEUT	m	2000			
LV STRUCTURES		Supply and erect LV support structures as per Eskom DDT 0900. Auxiliary equipment such as strain clamps, suspension clamps, cable ties, Connectors (IPC's &PG Clamps), LV shackle insulators, binding wires, D brackets, dead end pre-forms, threaded rods, pigtail bolts, eyenuts, terminations to be included.Pole, stay and strut material and excavations are measured elsewhere.					
4,2		**A. List of three-phase Bare Wire wood pole**					
4.3.		**B. List of Dual - phase Bare Wire Wood pole**					
4.4.		**C. List of Single-phase Bare Wire wood pole**					
LV STRUCTURES		Supply and erect LV support structures as per Eskom DDT 1100(only use insulated neutral ABC). Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eyenuts, terminations to be included.Pole, stay and strut material and excavations are measured elsewhere.					
4.5.		**A. List of single-phase ABC wood pole**					
4.6.		**B. List of Dual - phase ABC wood pole**					
4.7.		**C. List of Three-phase ABC wood pole**					
4.7.2	1120	LV 3 phase insulated/bare neutral LABC Terminal Assembly	Ea	7			
4.7.3	1121	LV 3 phase insulated/bare neutral ABC Strain Assembly (0° - 60°)	Ea	3			
4.7.4	1122	LV 3 phase insulated/bare neutral ABC Strain Assembly (60° - 90°)	Ea	4			
4.7.5	1140	LV 3 phase insulated/bare neutral ABC T from Intermediate	Ea	4			
4.7.6	1141	LV 3 phase insulated/bare neutral ABC Intermediate Suspension Assembly	Ea	27			
LOW VOLTAGE FUSE UNITS		Supply and install LV fuse units as per Eskom 0300 series assembly drawings. Accessories inclusive of fuse bracket and mounting hardware, fuse holders and appropiate labels. The LV NH00 fuse rating shall be as per the design.					
4.8.							
Conventional and Split meter LV POLE MOUNTED SERVICE BOXES		Supply and Install on a wooden and/or concrete pole a pole mounted distribution box as specified complete with pole mounting brackets (including sealing), cable ties, PG clamps, miniture circuit breaker(s), neutral, phase and earth bars, insulated copper tails for connecting to LV ABC, insulation piercing connectors and factory installed cable openings. Included shall be the stainless steel strapping, buckles and terminations of the tails onto the LV ABC. Eskom D-DT standards as amended will appply.					
LV TESTING		Allowance shall be made for the testing of each LV distributor on accordance with the project specification. Included shall be the provision of test certificates and all documentation as required.					
4.10.							
4.10.1		LV Test.	Ea	0			
MISCELLANEOUS		Allow for the following end items to be applied as per relevant Eskom instructions/bulletins/procedures and standardswhere not already allowed for in structure package					
4.11.							

BILL NO: 8B	LV OVERHEAD SYSTEM			SCOPE SPECIFIC			
NO.	D-D-T	DESCRIPTION	UNIT	Total Qty	Labour Rate	Material	Grand Total
4.11.1		POLE TOP BOX PHASING LABELS	Ea	1			
4.11.2	3049	ALUMINIUM POLE TAG 25x150MM WITH POLE NUMBER	Ea	50			
4.11.3		PEGGING OF LV POLES	Ea	50			
		Totals			Carried to Summary Page		

Bidder: ……..

Date: ……..

Bidder Signature: ……..

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BILL NO.1 - PRELIMINARIES & GENERAL

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1,1	Compliance with General Conditions of Contract Travelling, Out of Town Allowances				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,2	Establishment of site and provision of buildings and storage facilities including de-establishment of site cleaning and tidying up after completion of contract				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,3	Full time contract management and supervision of the works including liaison with Principal Contractor and submission of installation programme including weekly revisions thereto from time to time or as may be required				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,4	Liaison with Local Authority, compliance with O.S.H. Act, Local By-Laws and any other statutory regulations	Item	1		
1,5	Any additional item not specifically mentioned or included in the Bill of Quantities which the Tenderer may wish to detail.	Item	1		
1,6	Final Inspection of the works by an accredited representative and signing-off of installation excluding the provision of a Certificate of Compliance measured elsewhere	Item			
1,7	**OCCUPATIONAL HEALTH AND SAFETY ACT 1993 AND THE CONSTRUCTION REGULATIONS 2003** It is required of the contractor to study the Occupational Health and Safety Act attached as an additional specification. Provision for pricing of the Occupational Health and Safety Act and the Construction Regulations is made under items 1.16 to 1.30 and it is explicitly pointed out that all the requirements of the abovementioned specification are deemed to be priced hereunder and no additonal extras to the contract in this regard shall be entertained.				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,8	**CONTRACTOR'S RISK ASSESSMENT**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,9	**HEALTH AND SAFETY PLAN**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,10	**HEALTH AND SAFETY TRAINING, PROMOTION AND AWARENESS**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,11	**MONITORING AND AUDITS**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,12	**STATUTORY REPORTING**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,13	**MANAGEMENT OF HEALTH AND SAFETY PLAN**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,14	**PERSONAL PROTECTIVE EQUIPMENT AND PROTECTIVE CLOTHING**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		

	TOTAL CARRIED FORWARD TO NEXT PAGE	

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BILL NO.1 - PRELIMINARIES & GENERAL

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Brought Forward				
1,15	**EMERGENCY PLANNING AND RESPONSE**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,16	**DEVELOPMENT OF SAFE WORK PROCEDURES AND METHOD STATEMENTS**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,17	**HEALTH AND SAFETY FUNCTIONS**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,18	**MEDICAL SURVEILANCE**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,19	**SPECIAL CLOTHING FOR WORKFORCE**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,20	**IDENTITY CARDS**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		
1,21	**COVID 19 AWARENESS**				
	Fixed:_____ Value related:_____ Time related:_____.	Item	1		

	TOTAL CARRIED FORWARD TO SUMMARY PAGE	

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BILL NO.2 - LV DISTRIBUTION BOARDS & SWITCHGEAR

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2	**LV DISTRIBUTION BOARDS & SWITCHGEAR**				
	Marking and Engraved Labelling of Circuits and Distribution Boards				
2,1	Distribution boards, dedicated & normal socket outlets, isolators, light switches and cables shall be properly labelled and marked as indicated in the drawings and outlined in the specifications.				
2,2	Distribution Boards	No.	42		
2,3	Isolators	No.	10		
2,4	Light Switches	No.	25		
2,5	Cables (Marked and Labelled on the Exit and Entry Point of Kiosks, MDBs and SDBs with Grafoplast Trasp PVC Markers).	No.	25		
	Tidy, clean,repair and refurbish the following distribution boards including all busbars and switchgear to the satisfaction of the engineer as specified and shown on drawing, and to requirements of the specification.				
2,5	Supply and Install new main distribution board for normal supply, as shown on Drawing No. CAR20E/2018/CEI/300E and labelled TYPICAL MAIN DB				
	Supply	each	2		
	Install	each	2		
2,6	Supply and Install new main distribution board for normal supply, as shown on Drawing No. CAR20E/2018/CEI/301E and labelled TYPICAL SUB DB				
	Supply	each	6		
	Install	each	6		
	SWITCHGEAR				
	Allow for the supply and installation of the following switchgear as per specification, and to the satisfaction of the engineer.				
2,7	5-60 amp SP MCB - 5kA				
	Supply	each	1		
	Install	each	1		
2,8	5-60 amp DP MCB - 5kA				
	Supply	each	1		
	Install	each	1		
2,9	70-100 amp TP MCB - 5kA				
	Supply	each	1		
	Install	each	1		
2,10	125 amp TP MCB - 5kA				
	Supply	each	1		
	Install	each	1		
2,11	70-100 amp TP MCB - 10 kA				
	Supply	each	1		
	Install	each	1		
2,12	30-60 amp DP earth leakage relay - 5kA Isolator Type				
	Supply	each	1		
	Install	each	1		
2,13	20-60 amp DP isolator				
	Supply	each	1		
	Install	each	1		
2,14	20-60 amp TP isolator				
	Supply	each	1		
	Install	each	1		
2,15	100 amp TP isolator				
	Supply	each	1		
	Install	each	1		
2,16	125 amp TP isolator				

	Supply	each	1		
	Install	each	1		
	TOTAL CARRIED FORWARD TO NEXT PAGE				

BILL NO.2 - LV DISTRIBUTION BOARDS & SWITCHGEAR

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Brought Forward				
2,17	SAL Lightining Arrester 230V,Class 1 & 2				
	Supply	each	1		
	Install	each	1		
2,18	SPD Device				
	Supply	each	1		
	Install	each	1		
2,19	Allow for the sum of R300 000.00 for the servicing of all DBs	Item	1		
2,20	Allow for profit	Item	1		
2,21	Allow for attendance	Item	1		

	TOTAL CARRIED FORWARD TO SUMMARY PAGE				

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BILL NO.3 - MAINS CABLING & SUB MAIN WIRING

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3	**MAINS CABLING & SUB MAIN WIRING**				
3,1	16mm² x 4 core PVCPVCSWAPVC cable				
	Supply	m	20		
	Install	m	20		
	Terminations	each	8		
3,2	10mm² x 4 core PVCPVCSWAPVC cable				
	Supply	m	100		
	Install	m	100		
	Terminations	each	10		
3,3	10mm² bare copper earth wire				
	Supply	m	100		
	Install	m	100		
	Terminations	each	10		
3,4	6mm² bare copper earth wire				
	Supply	m	100		
	Install	m	100		
	Terminations	each			
	The supply and installation of galvanised perforated return flange heavy duty cable tray complete with fixing brackets, droppers, bends, tee pieces & all other ancillary accessories (see specification) before installation				
3,5	100mm wide cable tray				
	Supply	m	10		
	Install	m	10		
3,6	P9000 trunking				
	Supply	m	20		
	Install	m	20		
	Excavations for cables in trenches (450mm wide x 600mm deep)				
3,7	Excavate in normal earth	m	20		
3,8	Allow for Soft Rock in above trench	m³	5		
3,9	Allow for Hard Rock in above trench	m³	5		
3,10	Allow for earth in above trench	m³	4		
3,11	Cable Markers as per specification (Danger tape)				
	Supply	m	2		
	Install	m	2		
3,12	Supply and install 110mmØ sleeves c/w bends etc for main supply cables				
	Supply	m	1		Rate Only
	Install	m	1		Rate Only
3,13	Supply and install 75mmØ sleeves c/w bends etc for main supply cables				
	Supply	m	1		Rate Only
	Install	m	1		Rate Only
3,14	Supply and install 50mmØ sleeves c/w bends etc for main supply cables				
	Supply	m	1		Rate Only
	Install	m	1		Rate Only
3,15	Cable sleeve seal				
	Supply	ea.	1		Rate Only
	Install	ea.	1		Rate Only
3,16	Galvanised steel draw wire				
	Supply	m	1		Rate Only
	Install	m	1		Rate Only
3,17	Supply and install resin type cable joints and all accessories including resin, fasteners etc, for LV cable sizes between 4mm² 4C PVC/SWA cables up to and including 10mm² 4C PVC/SWA.				
	Supply	each	5		

	Install	each	5		
	TOTAL CARRIED FORWARD TO NEXT PAGE				

BILL NO.3 - MAINS CABLING & SUB MAIN WIRING

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Brought Forward				
3,18	Supply and install resin type cable joints and all accessories including resin, fasteners etc, for LV cable sizes between 16mm² 4C PVC/SWA cables up to and including 25mm² 4C PVC/SWA.				
	Supply	each	3		
	Install	each	3		
3,19	Supply and install resin type cable joints and all accessories including resin, fasteners etc, for LV cable sizes between 35mm² 4C PVC/SWA cables up to and including 50mm² 4C PVC/SWA.				
	Supply	each	5		
	Install	each	5		

	TOTAL CARRIED FORWARD TO SUMMARY PAGE				

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BILL NO.4 - GENERAL LIGHTING

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	**GENERAL LIGHTING**				
	All conduit and accessories to be plain ended galvanised steel. The supply and installation of conduit prices to include cutting, drawboxes, fixing material, all conduit accessories, round boxes, locknuts, bushes, cover plates et cetera.				
4,1	20mm diameter plain galvanised steel cast in concrete, on surface in roofspace, built in brickwork				
	Supply	m	170		
	Install	m	170		
4,2	Galvanised bosal, 100 x 50 x 50 switch boxes for 20mm dia conduit built into brickwork or cast into concrete (coverplates measured elsewhere)				
	Supply	each	27		
	Install	each	27		
4,3	16 amp single lever, one way flush mounted rocker type light switch with coverplate.				
	Supply	each	54		
	Install	each	54		
4,4	16 amp double lever, one way flush mounted rocker type light switch with coverplate.				
	Supply	each	84		
	Install	each	84		
4,5	16 amp photo electric cell surface mounted in an empty luminaire				
	Supply	each	58		
	Install	each	58		
	Conductor				
	The supply and installation of PVC insulated single core stranded copper conductors drawn into conduits				
4,6	2,5mm² PVC black & red				
	Supply	m	2000		
	Install	m	2000		
4,7	2,5mm² PVC green/yellow earth wire				
	Supply	m	2000		
	Install	m	2000		
4,8	5A unswitched socket outlets for light fittings				
	Supply	each			
	Install	each			

	TOTAL CARRIED FORWARD TO SUMMARY PAGE				

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BILL NO.5 - LUMINAIRES

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5	**LUMINAIRES**				
	Supply, take delivery, unpack, test fittings, including installation, materials, connections, fluorescent and incandescent lamps. Note:- All fluorescent tubes are to be colour '33' cool white complete with electronic ballasts. Type A,B to c/w 3m cabtyre and plug top				
5,1	Type A				
	Supply	each	38		
	Install	each	38		
5,2	Type B				
	Supply	each	309		
	Install	each	309		
5,3	Type C				
	Supply	each	5		
	Install	each	5		
	Allow for the complete servicing of the following fixtures as directed				
5,4	Servicing of Type A Light fixtures	each	19		
5,5	Servicing of Type B Light fixtures	each	91		
5,6	Supply and Install of a T8 Fluorescent tube				
	Supply	each	16		
	Install	each	16		
	Note:- The Bulkhead Fittings must be insect proof and fit snugly on to the walls and ceilings. Conductors must pass through grommets to prevent insects and water from entering the fitting. The lamp compartment shall be rated IP 35 and generally comply to SABS 1222. Shared ballasts are not acceptable.				

	TOTAL CARRIED FORWARD TO SUMMARY PAGE				

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BILL NO.6 - POWER

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6	**POWER**				
	All conduit and accessories to be plain ended galvanised steel. The supply and installation of conduit prices to include cutting, drawboxes, fixing material, all conduit accessories, round boxes, locknuts, bushes, cover plates et cetera.				
6,1	20mm dia				
	Supply	m	500		
	Install	m	500		
6,2	Galvanised steel, 100 x 100 x 50mm box for 20mm conduit built into brickwork or cast in concrete. (coverplates measured elsewhere)				
	Supply	No.	20		
	Install	No.	20		
	The supply and installation of PVC insulated single core stranded copper conductors drawn into conduits				
6,3	4mm² PVC black & red				
	Supply	m	1000		
	Install	m	1000		
6,4	2,5mm² PVC green/yellow earth wire				
	Supply	m	1000		
	Install	m	1000		
6,5	16A double socket outlet complete with equal handed toggles and cover plates.				
	Supply	each	99		
	Install	each	99		
6,6	16A double socket outlet,round pin switch socket outlet 3 pin flush mounted with cover plates, adhering to SANS 164-1 & 2.				
	Supply	each	15		
	Install	each	15		

	TOTAL CARRIED FORWARD TO SUMMARY PAGE				

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BILL NO.7 - SUNDRY ITEMS

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
7	**SUNDRY ITEMS**				
7,1	Making safe & decommissioning of the existing installation where specified	Item	10		
7,2	Allow for the safe removal of light fixtures, for the purposes of re-instating the fixtures as indicated on drawings and by Engineers approval.	ea	35		
7,3	Allow for the safe and complete removal and safe disposal of all fluorescent light fittings not intended for reinstating, per regulations.	ea	50		
7,4	Provide a complete Fluorescent Tube Disposal Certificate to accompany item above	Item	1		
7,5	Housekeeping, sundry items, consumable stocks such as circuit beads engraving, labels etc.	Sum	1		
7,6	Testing of complete installation in terms of the regulations	Each	1		
7,7	Provide Certificates of Compliance	Each	47		
7,8	- Electrician	hour	1		Rate only
7,9	- Assistant (skilled)	hour	1		Rate only
7.10	- Assistant (unskilled)	hour	1		Rate only
	Travelling:				
7,11	- Small vehicle (van) up to 1 ton capacity	km	1		Rate only
7,12	- Truck (specify capacity below)	km	1		Rate only
	TRACING OF UNDERGROUND CABLES Allow for tracing of all underground cables including all the equipment necessary to locate cables, GPS all points, produce CAD drawing, liaise with supply authority and provide personnel with authority to operate HV plant				
7,13	Locate all underground cables in the Complex as specified.	Sum	1		
	NON-SCHEDULED ITEMS				
7,14	Allow for the sum of R300 000.00 for the servicing of all DBs	Item			R 300 000,00
7,15	Allow for profit	Item			
7,16	Allow for attendance	Item			

	TOTAL CARRIED FORWARD TO SUMMARY PAGE				

CLARKEBURY EDUCATIONAL INSTITUTION

PRICE SUMMARY

ITEM	DESCRIPTION	TOTAL AMOUNT
Bill No. 1	PRELIMINARIES & GENERAL	
Bill No. 2	LV DISTRIBUTION BOARDS	
Bill No. 3	MAINS CABLING AND WIREWAYS	
Bill No. 4	GENERAL LIGHTING	
Bill No. 5	LUMINAIRES	
Bill No. 6	POWER	
Bill No. 7	SUNDRY ITEMS	
Bill No. 8A	OVERHEAD SUPPORT & EXCAVATIONS	
Bill No. 8B	LV OVERHEAD	
Subtotal		
Contingencies (10%)		
Subtotal		
VAT (15%)		
TOTAL AMOUNT		

ELECTRICAL INSTALLATIONS PRICE SUMMARY

TOTAL AMOUNT R -

NAME OF FIRM: ……

TENDERER'S SIGNATURE ……..

NAME IN PRINT ……..

ADDRESS ……..

……..

DATE ……..

TEL. NO. ……..

FAX NO. ……..

CLARKEBURY EDUCATIONAL INSTITUTION

TENDER DOCUMENTS

SPECIFICATION FOR ELECTRICAL WORKS

TENDERER		
TELEPHONE/ FACSIMILE		

JUNE 2023

PREPARED BY:

Carifro Consulting Engineers
4 Belgrave Road
Southernwood
East London
5213

Contact Person: Funani Luma
Tel: 043 743 8266

SPECIFICATION FOR ELECTRICAL WORKS:

CLARKEBURY EDUCATIONAL SCHOOL

CONSISTING OF:

SECTION C1…….. : ELECTRICAL INSTALLATION WORK (This Document)

DATE : JUNE 2023

INDEX **PAGE NO.**

NOTICE TO TENDERERS

1. The tenderer for the principal contract shall submit additional information regarding the installer of the Electrical Installation together with the returnables enclosed with the tender enquiry documents
2. The Contractor, on acceptance of his tender for the principal contract shall submit within the period stated, the information indicated on the forms following immediately after the Summary of the Bills of quantities for this installation.
3. The tenderer for the electrical installation inside the pump station shall have the correct CIDB grading, namely Level 4EB or higher. In addition, the Contractor shall have a three (3) phase Wireman Licence registered with Department of Labour.
4. This specification shall be read in conjunction with DPW standard specification and installation specification Part 3A & 3B obtainable from DPW website.
5. This specification shall be read in conjunction with DPW quality specification for electrical material & equipment Part 3C.

SPECIFICATION FOR ELECTRICAL WORK

PART 1 - GENERAL

CONTENTS

PART 1 - GENERAL

1 TESTS

After completion of the works and before practical completion is achieved, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the installations will be inspected and the Contractor shall make good, to the satisfaction of the Principal Agent/Electrical Engineer or the employer, any defects which may arise.

The Contractor shall provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing of the installations at completion.

2 MAINTENANCE OF INSTALLATIONS

With effect from the date of the Practical completion Certificate the Contractor shall at his own expense undertake the regular servicing of the installation during the maintenance period and shall make all adjustments necessary for the correct operation thereof.

If during the said period the installations is not in working order for any reason for which the Contractor is responsible, or if the installations develops defects, he shall immediately upon being notified thereof take steps to remedy the defects and make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Principle Agent/Electrical Engineer or the Employer, at his own expense replace the whole of the installations or such parts thereof as the Principal Agent/Electrical Engineer or the Employer may deem necessary with apparatus specified by the Principal Agent/Electrical Engineer or the Employer.

3 REGULATIONS

The installation shall be erected and tested in accordance with the Acts and Regulations as indicated in the scope of works

4 NOTICES AND FEES

The Contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority.

On production of the official account, only the net amount of the fee charged by the Supply Authority for connection of the installation to the supply mains, will be refunded to the Contractor by the Employer.

5 SCHEDULE OF FITTINGS

In all instances where schedule of light, socket outlet and power points are attached to or included on the drawings, these schedules are to be regarded as forming part of the specification.

6 QUALITY OF MATERIALS

Only materials of first class quality shall be used and all materials shall be subject to the approval of the Employer. Departmental specifications for various materials to be used on this Contract are attached to and form part of this specification.

Wherever applicable the material is to comply with the relevant South African Bureau of Standards, specifications, or to IEC Specifications, where no SANS Specifications exist.

Materials wherever possible, must be of South African manufacture.

7 CONDUIT AND ACCESSORIES

The type of conduit and accessories required for the service, i.e. whether the conduit and accessories shall be of the screwed type, plain-end type or of the non-metallic type and whether metallic conduit shall be black enamelled or galvanised, is specified in Part 2 of this specification.

Unless other methods of installation are specified for certain circuits, the installation shall be in conduit throughout. No open wiring in roof spaces or elsewhere will be permitted.

The conduit and conduit accessories shall comply fully with the applicable SANS specifications as set out below and the conduit shall bear the mark of approval of the South African Bureau of Standards.

a) Screwed metallic conduit and accessories: SANS 61386-1 and 21.

b) Plain-end metallic conduit and accessories: SANS 61386-1 and 21.

c) Non-metallic conduit and accessories: SANS 61386-1 and 21.

All conduit fittings except couplings, shall be of the inspection type. Where cast metal conduit accessories are used, these shall be of malleable iron. Zinc base fittings will not be allowed.

Bushes used for metallic conduit shall be brass and shall be provided in addition to locknuts at all points where the conduit terminates at switchboards, switch-boxes, draw-boxes, etc.

Draw-boxes are to be provided in accordance with the “Wiring Code” and wherever necessary to facilitate easy wiring.

For light and socket outlet circuits, the conduit used shall have an external diameter of 20mm. In all other instances the sizes of conduit shall be in accordance with the “Wiring Code” for the specified number and size of conductors, unless otherwise directed in part 2 of this specification or indicated on the drawings.

Only one manufactured type of conduit and conduit accessories will be permitted throughout the installation.

Running joints in screwed conduit are to be avoided as far as possible and all conduit systems shall be set or bent to the required angles. The use of normal bends must be kept to a minimum with exception of larger diameter conduits where the use of such bends is essential.

All metallic conduit shall be manufactured of mild steel with a minimum thickness of 1,2mm for plain-end conduit and 1,6mm in respect of screwed conduit.

Under no circumstances will conduit having a wall thickness of less than 1,6mm be allowed in screed laid on top of concrete slabs**.**

Bending and setting of conduit must be done with special bending apparatus manufactured for the purpose and which are obtainable from the manufacturers of the conduit systems. Damage to conduit resulting from the use of incorrect bending apparatus or methods applied must on indication by the Department’s inspectorate staff, be completely removed and rectified and any wiring already drawn into such damaged conduits must be completely renewed at the Contractor’s expense.

Conduit and conduit accessories used for flame-proof or explosion proof installations and for the suspension of luminaires as well as all load bearing conduit shall in all instances be of the metallic screwed type.

All conduit and accessories used in areas within 50 km of the coast shall be galvanised to SANS 32 and SANS 121.

Tenderers must ensure that general approval of the proposed conduit system to be used is obtained from the local electricity supply authority prior to the submission of their tender. Under no circumstances will consideration be given by the Department to any claim submitted by the Contractor, which may result from a lack of knowledge in regard to the supply authority’s requirements.

8 CONDUIT IN ROOF SPACES

Conduit in roof spaces shall be installed parallel or at right angles to the roof members and shall be secured at intervals not exceeding 1,5m by means of saddles screwed to the roof timbers.

Nail or crampets will not be allowed.

Where non-metallic conduit has been specified for a particular service, the conduit shall be supported and fixed with saddles with a maximum spacing of 450 mm. The Contractor shall supply and install all additional supporting timbers in the roof space as required.

Under flat roofs, in false ceilings or where there is less than 0,9m of clearance, or should the ceilings be insulated with glass wool or other insulating material, the conduit shall be installed in such a manner as to allow for all wiring to be executed from below the ceilings.

Conduit runs from distribution boards shall, where possible terminate in fabricated sheet steel draw-boxes installed directly above or in close proximity to the boards.

9 SURFACE MOUNTED CONDUIT

Wherever possible, the conduit installation is to be concealed in the building work; however, where unavoidable or otherwise specified under Part 2 of the specification, conduit installed on the surface must be plumbed or levelled and only straight lengths shall be used.

The use of inspection bends is to be avoided and instead the conduit shall be set uniformly and inspection coupling used where necessary.

No threads will be permitted to show when the conduit installation is complete, except where running couplings have been employed.

Running couplings are only to be used where unavoidable, and shall be fitted with a sliced couplings as a lock nut.

Conduit is to be run on approved spaced saddles rigidly secured to the walls.

Alternatively, fittings, tees, boxes, couplings etc., are to be cut into the surface to allow the conduit to fit flush against the surface. Conduit is to be bedded into any wall irregularities to avoid gaps between the surface and the conduit.

Crossing of conduits is to be avoided, however, should it be necessary purpose-made metal boxes are to be provided at the junction. The finish of the boxes and positioning shall be in keeping with the general layout.

Where several conduits are installed side by side, they shall be evenly spaced and grouped under one purpose-made saddle.

Distribution boards, draw-boxes, industrial switches and socket outlets etc., shall be neatly recessed into the surface to avoid double sets.

In situations where there are no ceilings the conduits are to be run along the wall plates and the beams.

Painting of surface conduit shall match the colour of the adjacent wall finishes.

Only approved plugging materials such as aluminium inserts, fibre plugs, plastic plugs, etc., and round-head screws shall be used for fixing saddles, switches, socket outlets, etc., to walls, wood plugs and the plugging in joints in brick walls are not acceptable.

10 CONDUIT IN CONCRETE SLABS

In order not to delay building operations the Contractor must ensure that all conduits and other electrical

equipment which are to be cast in the concrete columns and slabs are installed in good time.

The Contractor shall have a representative in attendance at all times when the casting of concrete takes place.

Draw-boxes, expansion joint boxes and round conduit boxes are to be provided where necessary. Sharp bends of any nature will not be allowed in concrete slabs.

Draw and/or inspection boxes shall be grouped under one common cover plate, and must preferable be installed in passages or male toilets.

All boxes, etc., are to be securely fixed to the shuttering to prevent displacement when concrete is cast. The conduit shall be supported and secured at regular intervals and installed as close as possible to the neutral axis of concrete slabs and/or beams.

Before any concrete slabs are cast, all conduit droppers to switchboards shall be neatly spaced and rigidly fixed.

11 FLEXIBLE CONNECTIONS FOR CONNECTING UP OF STOVES, MACHINES, ETC.

Flexible tubing connections shall be of galvanised steel construction, and in damp situations of the plastic sheathed galvanised steel type. Other types may only be used subject to the prior approval of the Department's site electrical representative.

Connectors for coupling onto the flexible tubing shall be of the gland or screw-in types, manufactured of either brass or cadmium or zinc plated mild steel, and the connectors after having been fixed onto the tubing, shall be durable and mechanically sound.

Aluminium and zinc alloy connectors will not be acceptable.

12 WIRING:

Except where otherwise specified in Part 2 of this specification, wiring shall be carried out in conduit throughout. Only one circuit per conduit will be permitted.

No wiring shall be drawn into conduit until the conduit installation has been completed and all conduit ends provided with bushes. All conduits to be clear of moisture and debris before wiring is commenced.

Unless otherwise specified in Part 2 of this specification or indicated on the service drawings, the wiring of the installation shall be carried out in accordance with the "Wiring Code". Further to the requirements concerning the installation of earth conductors to certain light points as set out in the "Wiring Code", it is a specific requirement of this document that where plain-end metallic conduit or non-metallic conduit has been used, earth conductors must be provided and drawn into the conduit with the main conductors to all points, including all luminaires and switches throughout the installation.

Wiring for lighting circuits is to be carried out with 1,5mm² conductors and a 1,5mm²-earth conductor. For socket outlet circuits the wiring shall comprise 4mm² conductors and a 2,5mm²-earth conductor. In certain instances, as will be directed in Part 2 of this specification, the sizes of the aforementioned conductors may be increased for specified circuits. Sizes of conductors to be drawn into conduit in all other instances, such as feeders to distribution boards, power points etc., shall be as specified elsewhere in this specification or indicated on the drawings. Sizes of conductors not specified must be determined in accordance with the "Wiring Code".

The loop-in system shall be followed throughout, and no joints of any description will be permitted.

The wiring shall be done in PVC insulated 600/1000 V grade cable to SANS 1507.

Where cable ends connect onto switches, luminaires etc., the end strands must be neatly and tightly twisted together and firmly secured. Cutting away of wire strands of any cable will not be allowed.

13 SWITCHES AND SOCKET OUTLETS

All switches and switch-socket outlet combination units shall conform to the Department Quality Specifications, which form part of this specification.

No other than 16 A 3 pin sockets are to be used, unless other special purpose types are distinctly specified or shown on the drawings.

All light switches shall be installed at 1,4m above finished floor level and all socket outlets as directed in the Schedule of Fittings which forms part of this specification or alternatively the height of socket outlets may be indicated on the drawings.

14 SWITCHGEAR

Switchgear, which includes circuit breakers, iron-clad switches, interlocked switch-socket outlet units, contactors, time switches, etc., is to be in accordance with the Departmental Quality Specifications which form part of this specification and shall be equal and similar in quality to such brands as may be specified.

For uniform appearance of switchboards, only one approved make of each of the different classes of switchgear mentioned in the Quality Specifications shall be used throughout the installations.

15 SWITCHBOARDS

All boards shall be in accordance with the types as specified, be constructed according to the detail or type drawings and must be approved by the Employer before installation.

In all instances where provision is to be made on boards for the supply authority's main switch and/or metering equipment the contractor must ensure that all requirements of the authorities concerned in this respect are met.

Any construction or standard type aboard proposed, as an alternative to that specified must have the prior approval of the Employer.

All busbars, wiring, terminals, etc., are to be adequately insulated and all wiring is to enter the switchgear from the back of the board. The switchgear shall be mounted within the boards to give a flush front panel. Cable and boxes and other ancillary equipment must be provided where required.

Clearly engraved labels are to be mounted on or below every switch. The working of the labels in English, is to be according to the lay-out drawings or as directed by the Electrical Engineer and must be confirmed on site. Flush mounted boards to be installed with the top of the board 2,0m above the finished floor level.

16 WORKMANSHIP AND STAFF

Except in the case of electrical installations supplied by a single-phase electricity supply at the point of supply, an accredited person shall exercise general control over all electrical installation work being carried out.

The workmanship shall be of the highest grade and to the satisfaction of the Employer.

All inferior work shall, on indication by the Employer's inspecting officers, immediately be removed and rectified by and at the expense of the Contractor.

17 VERIFICATION AND CERTIFICATION OF ELECTRICAL INSTALLATION (CERTIFICATE OF COMPLIANCE AND TEST REPORT)

On completion of the service, a certificate of compliance must be issued to the Principal Agent/Electrical Engineer or Employer in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) in the format as set out in SANS 10142-1 & 2.

18 EARTHING OF INSTALLATION

Main earthing

The type of main earthing must be as required by the supply authority if other than the Employer, and in any event as directed by the Principal Agent/Electrical Engineer, who may require additional earthing to meet test standards.

Where required an earth mat shall be provided, the minimum size, unless otherwise specified, being 1,0m x 1,0m and consisting of 4mm diameter hard-drawn bare copper wires at 250mm centres, brazed at all intersections.

Alternatively or additionally earth rods or trench earths may be required as specified or directed by the Electrical Engineer.

Installations shall be effectively earthed in accordance with the "Wiring Code" and to the requirements of the supply authority. All earth conductors shall be stranded copper with or without green PVC installation.

Connection from the main earth bar on the main board must be made to the cold water main, the incoming service earth conductor, if any and the earth mat or other local electrode by means of 12mm x 1,60 mm solid copper strapping or 16 mm² stranded (not solid) bare copper wire or such conductor as the Department's representative may direct. Main earth copper strapping where installed below 3m from ground level, must be run in 20 mm diameter conduit securely fixed to the walls.

All other hot and cold water pipes shall be connected with 12mm x 0,8mm perforated for solid copper strapping (not conductors) to the nearest switchboard. The strapping shall be fixed to the pipework with brass nuts and bolts and against walls with brass screws at 150-mm centres. In all cases where metal water pipes, down pipes, flues, etc., are positioned within 1,6m of switchboards an earth connection consisting of copper strapping shall be installed between the pipework and the board. In vertical building ducts accommodating both metal water pipes and electrical cables, all the pipes shall be earthed at each distribution board.

Roofs, gutters and down pipes

Where service connections consist of overhead conductors, all metal parts of roofs, gutters and down pipes shall be earthed. One bare 10mm² copper conductor shall be installed over the full length of the ceiling void, fixed to the top purlin and connected to the main earth conductor and each switchboard. The roof and gutters shall be connected at 15m intervals to this conductor by means of 12mm X 0,8mm copper strapping (not conductors) and galvanised bolts and nuts. Self-tapping screws are not acceptable. Where service connections consist of underground supplies, the above requirements are not applicable.

Sub-distribution boards

A separate earth connection shall be supplied between the earth busbar in each sub-distribution board and the earth busbar in the Main Switchboard. These connections shall consist of a bare or insulated stranded copper conductors installed along the same routes as the supply cables or in the same conduit as the supply conductors. Alternatively armoured cables with earth continuity conductors included in the armouring may be utilised where specified or approved.

Sub-circuits

The earth conductors of fall sub-circuits shall be connected to the earth busbar in the supply board in accordance with SANS 10142.

Ring Mains

Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SANS 10142. In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wire way, alternatively the size of the conductor shall be as directed by the Engineer. Earth conductors for individual circuits branching from the ring main shall by connected to the common earth conductor with T-ferrules or soldered. The common earth shall

not be broken.

Non-metallic Conduit

Where non-metallic conduit is specified or allowed, the installation shall comply with the Department's standard quality specification for "conduit and conduit accessories".

Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaires, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

Flexible Conduit

An earth conductor shall be installed in all non-metal flexible conduit. This earth conductor shall not be installed externally to the flexible conduit but within the conduit with the other conductors. The earth conductor shall be connected to the earth terminals at both ends of the circuit.

Connection

Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided.

Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

19 MOUNTING AND POSITIONING OF LUMINAIRES

The Contractor is to note that in the case of board and acoustic tile ceilings, i.e. as opposed to concrete slabs, close co-operation with the building contractor is necessary to ensure that as far as possible the luminaires are symmetrically positioned with regard to the ceiling pattern.

The layout of the luminaires as indicated on the drawings must be adhered to as far as possible and must be confirmed with the Department's representative.

Fluorescent luminaires installed against concrete ceilings shall be screwed to the outlet boxes and in addition 2 x 6mm expansion or other approved type fixing bolts are to be provided. The bolts are to be ¾ of the length of the luminaires apart.

Fluorescent luminaires to be mounted on board ceilings shall be secured by means of two 40mm x No. 10 round head screws and washers. The luminaires shall also be bonded to the circuit conduit by means of locknuts and brass bushes. The fixing screws are to be placed ¾ of the length of the fitting apart.

Earth conductors must be drawn in with the circuit wiring and connected to the earthing terminal of all fluorescent luminaires as well as other luminaires exposed to the weather in accordance with the "Wiring Code".

Incandescent luminaires are to be screwed directly to outlet boxes in concrete slabs. Against board ceilings the luminaires shall be secured to the brandering or joists by means of two 40mm x No. 8 round head screws.

20 TELEPHONE INSTALLATION – *[Not Applicable to this Contract]*

The Contractor shall allow for the complete installation of all skirting, trunking, conduits, outletboxes, TELKOM distribution boards, sleeve pipes, etc., required for the telephone system as shown on the drawings.

The sizes of all telephone sleeves/conduits shall be 25mm diameter and shall be provided with 1.6mm galvanized steel draw wires, 32mm dia conduit is to be provided to TELKOM distribution boards and must be installed in the walls, ceiling voids and floor slabs as specified. Galvanized steel draw-wires shall be installed in all conduits and sleeve pipes. Outlet boxes must be fitted with suitable blank covers.

End boxes must consist of a 50mm x 100 mm x 100mm outlet box fitted with suitable blank cover plates, flush mounted 0,4m above floor level.

The TELKOM Distribution Board must consist of a 450mm x 450mm x 100mm metal box and hinged door with a 20mm thick wooden backboard. The board must be flush mounted, 1,37m above the floor.
Note: Suitable draw-wires shall be installed in all conduits for the intercom system installations.

21 OVERHEAD POWER TRUNKING

Power trunking system is run on the trusses along the corridors (passages). The P9000 is for all power conductors and the P8000 for communications systems e.g. Intercom, Telephone and Data system.

The Contractor shall be responsible for the supply and installation of all power trunking completewith corner pieces, end pieces, junction pieces, supply conduits, cover plates and power outlets as specified and indicated on the drawings.

The power trunking must comply with SABS 1197. The Contractor must ensure that the power trunking is installed to satisfaction of the Department's representative before commencing with the wiring of the power trunking.

The installation of power trunking shall be carried out in accordance with Clause 15 of Part II of this specification.

22 DEPARTMENTAL MATERIAL

When certain materials are supplied by the Department to the contractor for installation, the contractor must arrange for taking delivery and providing safe storage for these materials.

The contractor will be held responsible for all damage to or loss of such material while it is in his custody.

23 DELAY

If the electrical contractor's work should cause any delay to the building operations, he will be held responsible for any claims arising out of such delay.

PART 2: INSTALLATION DETAILS

CONTENTS

PART 2: INSTALLATION DETAILS

1 CABLE SLEEVE PIPES

Where cables cross under roadways, other services and where cables enter buildings, the cables shall be installed in earthenware or high-density polyethylene pipes.

The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.

2 NOTICES

The Contractor shall issue all notices and make the necessary arrangements with Supply Authorities, the Postmaster-General, and S.A. Transport Services, Provincial or National Road Authorities and other authorities as may be required with respect to the installation.

3 ELECTRICAL EQUIPMENT

All equipment and fittings supplied must be in accordance with the attached quality specification (Part 3 of this document), suitable for the relevant supply voltage, and frequency and must be approved by the Employers Electrical Engineer.

4 DRAWINGS

The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

5 BALANCING OF LOAD

The Contractor is required to balance the load as equally as possible over the multiphase supply.

6 SERVICE CONDITIONS

All plant shall be designed for the climatic conditions appertaining to the service.

7 SWITCHES AND SOCKET OUTLETS

The installation of switches and socket outlets must conform to clause 13 of Part 1 of this specification.

8 LIGHT FITTINGS AND LAMPS

The installation and mounting of luminaires must conform to clause 19 of Part 1 of this specification.

All fittings to be supplied by the Contractor shall have the approval of the Employer.

The light fittings must be of the type specified in the Schedule of Light Fittings.

9 EARTHING AND BONDING

The Contractor will be responsible for all earthing and bonding of the building and installation. The earthing and bonding is to be carried out strictly as described in clause 18 of Part 1 of this specification and to the satisfaction of the Employer/s Electrical Engineer.

10 MAINTENANCE OF ELECTRICAL SUPPLY

All interruptions of the electrical supply that may be necessary for the execution of the work, will be subject to prior arrangement between the Contractor and the Client and the Employer's Electrical Engineer.

11 EXTENT OF WORK

The work covered by this contract comprises all electrical installations including small power and lighting relating to damaged/stolen and or vandalized electrical equipment. This includes but is not limited to replacement of MAIN DB-A, and servicing and cabling to sub-distribution boards. The installations shall be completed in accordance with this specification and the corresponding drawings.

11.1 LOCATION OF SITE

The site is in Clarkebury location, Engcobo.

11.2 SCOPE OF WORKS

11.2.1. Servicing of MDBs & SDBs at Girls and Boys hostel.

- Replacement of switchgear, and entire distribution board if necessary.
- Cable replacement for MDBs and SDBs with cable lengths to be measured on site.
- Power and lighting electrical installations for the passageways at Boys and Girls Hostel.
- A new CoC to be issued for all MDBs and SDBs, after testing of all circuits where applicable.

11.2.2. Earthing and bonding (*Where applicable*)

- Check earthing and bonding of outlet points, equipment, cable and wireways, fixed appliances, water and gas pipes, etc.
- Check installation and termination of protective conductors and earth electrodes.
- Test for earth continuity.
- Provide 6 mm² copper earth wire jumper between roof cladding and all gutter downpipes. Fasten with lugs and galvanized zinc bolts.

11.2.3. Existing Electrical Installations

The contractor shall, in the course of carrying out his duties, ensure that the following is observed

a) Ensure that MDBs and SDBs at Hostels etc are serviced in such a way as to allow proper connection of new power supply cables as required, including addition of switchgear in line with supplied drawings and with the Engineers approval.

11.2.4. Building Work

b) Excavate trench for cables and lay sleeves including backfilling & compacting

11.2.5. Repair of Distribution Boards *(where applicable)*

The servicing of Distribution boards shall entail:

- Service distribution boards: inspect and clean the distribution boards treat the enclosure for moisture ingress and corrosion.
- Check for rigidity and fastening of equipment trays, panels, doors and handling devices.
- Check locking mechanism and fit padlock. All padlocks shall be of local manufacture with brass bodies and 75 mm chrome shackles. Three keys (with pvc labels) shall be provided for each lock.
- Replace damaged or missing faceplates, doors, mounting frames, handles, thumb catches, etc.
- Check operation of distribution board equipment and meters, replace if faulty or damaged with an approved type.
- Remove all obsolete equipment and meters.
- Check and fasten wiring and cable terminations.
- Re-arrange wiring and equipment to give a neat installation.
- Trace outgoing circuits.
- Fit labelling and blank face plate covers.
- Replace the distribution boards if required and replacement is approved by Engineer.
- Check earth bar and earth continuity, record.
- Label all wiring and cabling with Grafoplast Trasp PVC markers.
- Re-paint all boards with paint to depict essential supply.

11.2.6. Electrical Work

a) Provide temporary power supply points for construction works, to be approved by Engineer in advance.
b) Supply & installation of cable sleeves and manholes where applicable, to be approved by Engineer in Advance.
c) Supply & installation of cable markers, to be approved by Engineer in advance.
d) Label distribution board as prescribed in the wiring code Notices, labels or rating plates shall be durable and not removable except by determined and deliberate action. The inscriptions shall be legible and indelible.
e) Generate as-built drawings including updating single line diagrams as per changes during construction phase.
f) Label all wiring and cabling with Grafoplast Trasp PVC markers.
g) Provide Certificate of Compliance for all distribution boards and entire installation.

11.3 Tracing of Cables

Tracing of Cables

Contractor shall perform tracing of all underground cables including all the equipment necessary to locate cables, GPS all points, produce CAD drawing, liaise with supply authority and provide personnel with authority to operate HV plant. The contractor shall employ a suitable specialist if needs be, and shall provide the Engineer with as built drawings and schedules which shall be submitted at the beginning of the project.

12 SUPPLY AND CONNECTION

The supply will be at 400/230 Volt 50Hz.

The Contractor will be responsible for the supply and installation of the supply cable from the main KIOSK 1 or 2 to the main low-tension distribution board (MDB). The size and length of the cable is listed in the Schedule of Cables and measured in the Bills of Quantities.

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The Contractor will be responsible for the supply and installation of the supply cable from the main KIOSK 1 or 2 to the main low-tension distribution board (MDB). The size and length of the cable is listed in the Schedule of Cables and measured in the Bills of Quantities.

13 CONDUIT AND WIRING

Conduit and conduit accessories shall be black enameled/galvanized screwed conduit or black enameled/galvanized plain end conduit in accordance with SANS 61386.

All conduits, regardless of the system employed, shall be installed strictly as described in the applicable paragraphs of clauses 4 to 8 of Part 1 of the specification. Wiring of the installation shall be carried out as directed in clause 9 part 1 of this specification.

Where plain end conduit is offered all switches and light fittings must be supplied with a permanent earth terminal for the connection of the earth wire.

Lugs held by switch fixing screws or self-tapping screws will not be acceptable.

14 POWER POINTS

The Contractor must electrically connect all water heaters as specified and listed in the Schedule of Power Points.

NOTE: The hot water installation must be approved by the Employers Electrical Engineer. Detail with regard to the size and type of water heaters that must be provided must be obtained from the Architect.

15 CABLES

The Contractor shall supply and completely install all distribution cables as indicated on the drawings, and listed in the Schedule of Cables.

The storage, transportation, handling and laying of the cables shall be according to first class practice, and the contractor shall have adequate and suitable equipment and labour to ensure that no damage is done to cables during such operations.

The cable-trenches shall be excavated to a depth of 600mm deep below ground level and shall be 450mm wide for one to three cables, and the width shall be increased where more than three cables are laid together so that the cables may be placed at least two cable diameters apart throughout the run. The bottom of the trench shall be level and clean and the bottom and sites free from rocks or stones liable to cause damage to the cable.

The Contractor must take all necessary precautions to prevent the trenching work being in any way a hazard to the personnel and public and to safeguard all structures, roads, sewage works or other property on the site from any risk of subsidence and damage.

In the trenches the cables shall be laid on a 75mm thick bed of earth and be covered with a 150-mm layer of earth before the trench is filled in.

All joints in underground cables and terminations shall be made either by means of compound filled boxes according to the best established practice by competent cable jointers using first class materials or by means of approved epoxy-resin pressure type jointing kits. Epoxy-resign joints must be made entirely in accordance with the manufacturer's instructions and with materials stipulated in such instructions. Low tension PVCA cables are to be made off with sealing glands and materials designed for this purpose which must be of an approved make. Where cables are cut and not immediately made off, the ends are to be sealed without delay.

The laying of cables shall not be commenced until the trenches have been inspected and approved. The cable shall be removed from the drum in such a way that no twisting, tension or mechanical damage is caused and must be adequately supported at intervals during the whole operation. Particular care must be exercised where it is necessary to draw cables through pipes and ducts to avoid abrasion, elongation or distortion of any kind. The ends of such pipes and ducts shall be sealed to approval after drawing in of the cables.

Backfilling (after bedding) of the trenches is to be carried out with a proper grading of the material to ensure settling without voids, and the material is to be tamped down after the addition of every 150mm. The surface is to be made good as required.

On each completed section of the laid and jointed cable, the insulation resistance shall be tested to approval with an approved "Megger" type instrument of not less that 500 V for low tension cables.

Earth continuity conductors are to be run with all underground cables constituting part of a low tension distribution system. Such continuity conductors are to be stranded bare copper of a cross-sectional area equal to at least half that of one live conductor of the cable, but shall not be less than 4mm² or more than 70mm². A single earth wire may be used as earth continuity conductor for two or more cables run together, branch earth wires being brazed on where required.

Contractors to note that for cable trench excavations:
EARTH:
Shall mean ground that can be removed by pick and hand shovel and includes loose gravel, clay made-up ground, loose or soft shale, loose ouklip and boulders less than 75mm in diameter.

SOFT ROCK:
Shall mean rock that can be loosened by hand –pick and includes hard shale, compact ouklip and boulders from 75mm in diameter up to 0,08 cubic meters in volume.

HARD ROCK:
Shall mean granite, quartzite sandstone, slate and rock of similar or greater hardness, solid shale and boulders over 0,03 cubic meters in volume.

15.1 Existing Cables

The contractor shall allow for the disconnection of existing cables and reconnection of the P.V.C.A. Cables as per "Price Schedule of Quantities" and as hereafter specified.

- Disconnect all cables and keep them in a safe storage, all cables and materials disconnected will remain property of the client.
- The disposal of items mentioned above will be disposed as per Department procedures.

Contractors to note that for cable trench excavations:

EARTH:
Shall mean ground that can be removed by pick and hand shovel and includes loose gravel, clay made-up ground, loose or soft shale, loose ouklip and boulders less than 75mm in diameter.

SOFT ROCK:
Shall mean rock that can be loosened by hand –pick and includes hard shale, compact ouklip and boulders from 75mm in diameter up to 0,08 cubic meters in volume.

HARD ROCK:
Shall mean granite, quartzite sandstone, slate and rock of similar or greater hardness, solid shale and boulders over 0,03 cubic meters in volume.

15.2 Cable Markers

Cable markers shall consist of concrete blocks in the shape of truncated pyramids, approx. 300 mm high, 150 x150 mm at the top and 250 x 250 mm at the bottom.

Brass plates shall be cast into the tops of the blocks in such a manner that they cannot be pried loose. The wording “ELECTRICAL CABLE” shall be stamped on the brass plates as well as direction arrows and the cable voltage rating.

Cable markers shall be installed on the surface along all the underground routes shall project 50 mm above normal ground level unless the projected markers could be a hazard to pedestrian or other traffic in which case the shall be installed flush with the surface.

Cable markers shall be installed at the beginning and end of cable run (e.g. where cable enters a substation or a building), at all changes of direction, above joints, above cable pipe entries exist and at intervals not exceeding 25 m along the cable

The Contractor shall supply and completely install all distribution cables as indicated on the drawings, and listed in the Schedule of Cables.

NB: No cable joints shall be allowed in this contract.

15.3 LAYING, JOINTING AND MAKING OFF OF ELECTRICAL CABLES

[The requirements specified hereafter, are aimed essentially at high tension cable but are also valid for low tension cable, where applicable.]

1. The use of the term “Inspector” includes the engineer or inspector of the Department or an empowered person of the concerned supervising consulting engineer’s firm.

2. No cable is to be laid before the cable trench is approved and the soil qualification of the excavation is agreed upon by the Contractor and inspector.

3. After the cable has been laid and before the cable trench is back-filled the inspector must ensure that the cable is properly bedded and that there is no undesirable material included in the bedding layer.

4. All cable jointing and the making off of the cables must only be carried out by qualified experienced cable jointers. Helpers of the jointers may not saw, strip, cut, solder, etc. The cable and other work undertaken by them must be carried out under the strict and constant supervision of the jointer.

5. Before the Contractor allows the jointer to commence with the jointing work or making off of the cable (making off is recognized as half a joint) he must take care and ensure:

5.1 That he has adequate and suitable material available to complete the joint properly and efficiently. Special attention must be given to ensure the cable ferrules and cable lugs are of tinned copper and of sufficient size. The length of the jointing lugs must be at least six times the diameter of the conductor,

5.2 That the joint pit is dry and that all loose stones and material are removed,

5.3 That the walls and banks of the joint pit are reasonable firm and free from loose material which can fall into the pit,

5.4 That the necessary coffer-dams or retaining walls are made to stop the flow of water into the joint pit,

5.5 That the joint pit is provided with suitable groundsheets so that the jointing work is carried out in clean conditions,

5.6 That the necessary tents or sails are installed over the joint pit to effectively avert unexpected rainfall and that sufficient light or lighting is provided,

5.7 That the necessary means are available to efficiently seal the jointing or cable end when an unexpected storm or cloudburst occurs, regardless of how far the work has progressed,

5.8 That the cables and other materials are dry, undamaged and in all respects are suitable for the joint work or making off,

5.9 That the heating of cable oil, cable compound, plumbers metal and solder is arranged that they are at the correct temperature when required so that the cable is not unnecessary exposed to the atmosphere and consequently the ingress of moisture (care must be taken of overheating)

Flow temperatures of cable oil and compound must be determined with suitable thermometers**.** Cable oil and compound must not be heated to exceed the temperatures given on the containers and precaution must be taken to ensure that the tin is not overheated in one position. The whole mass must be evenly and proportionally heated.

(Temperatures of solder and plumbers metal may be tested with brown paper (testing time: 3 seconds). The paper must colour slightly - not black or burnt).

6. Before the paper-insulated cables are joined, they must be tested for the presence of moisture by the cable jointers test. This consists of the insertion of a piece of unhandled insulated impregnated paper tape in warm cable oil heated to a temperature of 130 ± 5°C.

Froth on the surface of the oil is an indication that moisture is present in the impregnated insulation and the amount of the froth gives an indication of the moisture present.

7**.** If the cable contains moisture or is found to be otherwise unsuitable for jointing or making of the inspector is to be notified immediately and he will issue the necessary instruction to cope with the situation.

8. The joint or making off of paper insulated cables must not be commenced during rainy weather.

9. Once a joint is in progress the jointer must proceed with the joint until it is complete and before he leaves the site.

10. The jointer must ensure that the material and his tools are dry at all times, reasonably clean and absolutely free from soil.

11. Relating to the jointing of the cable the following requirements apply:

11.1 All jointing must be carried out in accordance with recognized and tried techniques and comply strictly with the instructions given by the supplier of the jointing kit.

11.2 The cables must be twisted by hand so that the cores can be joined according to the core numbers. If necessary the cable is to be exposed for a short distance to accomplish this. Under no circumstances may the cores in a joint be crossed so as to enable cores to be joined according to the core numbers. If it is not possible to twist the cables so that the preceding requirements can be met, then cores are to be joined in the normal way without any consideration of the core numbers.

11.3 Normally the cables will have profile conductors. The conductors shall be pinched with gas pliers to form a circular section, bound with binding wire so that they do not spread, and then tinned before jointing.

11.4 Jointing ferrules, the length of which are at least 6 times the diameter of the conductors, must be slid over the conductor ends to be joined and pinched tightly. Then they are soldered by means of the ladle process whilst being pinched further closed.

Use resin only as a flux. The slot opening in the ferrule must be completely filled, including all depressions.

Remove all superfluous metal with a cloth dipped in tallow. Work during the soldering process must be from top to bottom. Rub the ferrule smooth and clean with aluminium oxide tape after it has cooled down to ensure that there are not any sharp points or edges.

NB: The spaces between the conductor strands must be completely filled by soldering process and must be carried out quick enough to prevent the paper insulation from burning or drying out unnecessarily.

11.5 After the ferrules have been rubbed smooth and clean, they and the exposed cores must be treated with hot cable oil (110°C) to remove all dust and moisture. These parts are to be thoroughly basted with the oil.

11.6 The jointer must take care that his hands are dry and clean before the joint is insulated. Also the insulating tape which is to be used must first be immersed in warm cable oil (110°C) for a sufficient period to ensure that no moisture is present.

11.7 After the individual cores have been installed they must be well basted with hot cable oil and again after the applicable separator and/or belt insulation tape is applied before the lead joint sleeve is placed in position.

11.8 The lead joint sleeve must be thoroughly cleaned and prepared before it is placed on the cable and must be kept clean during the whole jointing process. Seal the filling apertures of the sleeve with tape until the sleeve is ready for compound filling.

11.9 The plumbing joints employed to solder the joint sleeve to the cable sheath, must be cooled off with tallow and the joint sleeve is to be filled with compound while it is still warm. Top up continuously until the joint is completely filled to compensate for the compound shrinkage.

11.10 The outer joint box must be clean and free from corrosion. After it has been placed in position it must be slightly heated before being filled with compound. Top up until completely full.

12. As far as cable end boxes are concerned the requirements as set out above are valid where applicable.

16. DISTRIBUTION BOARDS

In addition to clause 14 and clause 15 of Part 1 of this specification the following shall also be applicable to switchboards required for this service.

The Contractor shall supply and install the distribution boards as indicated on the drawings and listed in the distribution Board Schedule. All distribution boards shall comply with the quality specification in Part 3 of this specification, and be approved by the Employer's Electrical Engineer.

The following types of distribution boards are required for the service:

CAR20E/2018/CEI/300E	-	MDB-34A SINGLE LINE DIAGRAM
CAR20E/2018/CEI/301E	-	MDB-35B SINGLE LINE DIAGRAM
CAR20E/2018/CEI/302E	-	MDB-38C SINGLE LINE DIAGRAM
CAR20E/2018/CEI/303E	-	MDB-41D SINGLE LINE DIAGRAM
CAR20E/2018/CEI/304E	-	MDB-44E SINGLE LINE DIAGRAM
CAR20E/2018/CEI/305E	-	Typical SDBs SINGLE LINE DIAGRAM
CAR20E/2018/CEI/306E	-	MDB-25A SINGLE LINE DIAGRAM
CAR20E/2018/CEI/307E	-	MDB-57B SINGLE LINE DIAGRAM

CAR20E/2018/CEI/308E	-	MDB-28C SINGLE LINE DIAGRAM
CAR20E/2018/CEI/309E	-	MDB-30D SINGLE LINE DIAGRAM
CAR20E/2018/CEI/310E	-	MDB-31E SINGLE LINE DIAGRAM
CAR20E/2018/CEI/311E	-	Typical SDBs SINGLE LINE DIAGRAM

17. SUBSTATION

The Contractor shall be responsible for the complete liaison with the local Authority for switching off of the supply for maintenance purposes.

18. TYPE OF CONTRACT

The successful tenderer will be a Domestic Contractor to the Main Contractor.

19. VALUE ADDED TAX (VAT)

The total tender price must include VAT. All rates, provisional sums, etc. in the Contract must be net with VAT calculated ad added to the total value thereof.

The Priced Schedule for Variations must be net. VAT will be calculated and added to Variation Orders as they are processed and the Price Schedule Variation shall be completed for materials used on the project.

20. CONTRACT PRICE ADJUSTMENT PROVISIONS AND IMPORTED EQUIPMENT FLUCTUATIONS

Contract price adjustments will be managed as indicated on the DPW-5. Value Added Tax (VAT), will be increased or decreased depending on the rate applicable at the time of tender.

The Contractor to complete form DPW-23 for any fluctuations in the rate of exchange on imported equipment

21. INFORMATION

The tenderer's attention is drawn to the fact that if the schedules of this specification are not completed this tender cannot be adjudicated and may be disqualified. This applies also to the Price Schedule Variation where the unused items not priced. Items used on the project must be priced no cost plus items will be accepted.

22. DRAWINGS

This specification and drawings generally show the character and extent of the proposed work, and shall not be held as showing every minute detail of the work to be executed.

23. MAKING GOOD

The successful tenderer will be responsible for making good in all trades of any damage to buildings or other services which he or his employees may have incurred during the construction of the works.

24. SCHEDULE OF LIGHT FITINGS

The Departmental Quality Specification for the relevant luminaires must be included in Part 3 of the specification.

Note: All luminaires to be energy efficient and shall employ the latest energy efficiency technology

available and comply to SANS. All luminaires components shall comply with the DPW quality specification Part 3 C and installation specification part 3A and 3B, specifications are available from DPW website. All light fittings and related components shall be approved by the DPW's representative before installation. All LED lights will have service life of 50 000 – 70 000hrs and manufacture certificate for each type of light confirming service life shall be submitted to the Engineer before installation.

Type A 37W LED lamp surface mount luminaire. High colour rendering index CRI > 80 Colour temperature 4000K. Small colour tolerance - MacAdam 3 Tridonic LED module and driver, Ambient temperature: -25…+45°C , Rolled mild steel body with a white epoxy powder coated finish, Snap-on injection moulded plastic end-caps, Frosted prismatic diffuser, Individual mounting and continuous row mounting.

Type B 13W LED round bulkhead luminaire with compartment ingress protection of IP65. LM2 high pressure die-cast aluminium housing, with anti-corrosive powder coating, Opal non-discolouring high impact acrylic injection molded diffuser, stainless steel M5 Allen head screws. Color temperature of 4000K, 2070lm with CRI > 80. For exterior lighting bulkhead with black aluminium ring frame will be used.

Type C 50W LED 5042 lm 1200 x 600mm opal backlit luminaire, with an opal diffuser, seamless aluminium extruded frame, powder coated finish, surface mounted, 4000K, CRI.80. 1,5kV surge protection. IP65 protection level.

25. SCHEDULE OF POWER POINTS

BOARD	POWER POINT	TYPE	SIZE OF CABLES, CONDUIT AND WIRING	LOAD WATTS

26. SCHEDULE OF CABLES, CONDUIT AND WIRING

Supply, install and connect the following cable, conduit and wiring:

FROM	TO	SIZE AND TYPE	Length
KIOSK 1	MDB-25A, MDB-27B, MDB-C, MDB-30D & MDB-30E etc.	16mm² 4-core PVCA cables	TMS
MDB	Typical SDBs	10mm² 3-core PVCA cables	TMS
KIOSK 2	MDB-34A, MDB-35B, MDB-38C, MD-41D & MDB-44E	16mm² 4-core PVCA cables	TMS
MDB	Typical SDBs	10mm² 3-core PVCA cables	TMS
KIOSK 3	MDB Kitchen	16mm² 4-core PVCA cables	TMS
KIOSK 4	MDB - Boys Hostel		TMS
MDB – Boys Hostel	SDB-A, SDB-B, SDB-C	16mm² 4-core PVCA cables	TMS

27. SCHEDULE OF DISTRIBUTION BOARDS

The front panels of normal supply, standby power and no-break supply sections shall be painted in distinctive colours as follows:

Normal supply : Light Orange, colour B26 of SANS 1091.
Standby power : Signal Red, colour A11 of SANS 1091.
No-break supply: Dark Violet, colour F06 or Olive Green, Colour H05 of SANS 1091.

Indicated is the probable fault level rating (kA) of the busbars. Refer to the Summary of Switchgear and Circuits for the minimum fault level rating of specified equipment.

BOARD	TYPE	PANEL	FAULT LEVEL	LOAD kVA
MAIN DB	Surface mounted, with door	Normal power	5	15
SDB	Surface mounted, with door	Normal power	5	10

28. SUMMARY OF SWITCHGEAR AND CIRCUITS

The indicated fault current rating (kA) is the minimum value that the switchgear must comply with for connecting to the busbars of the respective panels-distribution boards.

MAIN DB : SUB DISTRIBUTION BOARD

NORMAL POWER

Main switch	:	300A triple pole 6kA circuit breaker.
Typical MDBs	:	63A triple pole 6kA circuit breaker.
Typical SDBs	:	63A triple pole 6kA circuit breaker.
Lighting circuits 1-3	:	3 x 10A one pole 5kA circuit breakers.
Socket outlets	:	1 x 60A two pole 30mA single-phase earth leakage units, and 3 x 20A Single pole 5kA circuit breakers.
Fan Point	:	1 x 40A three pole 5kA circuit breaker
Compressor	:	1 x 40A three pole 5kA circuit breaker

[***Socket outlets circuits (P) must be controlled by 60A two pole 30mA single phase earth leakage relay and 20A single pole 5kA circuit breakers. With a maximum of 5 circuits (10 plugs) per earth leakage relay.]***

29. PAINTING OF DISTRIBUTION BOARDS

The front panels of standby and no-break supply sections shall be painted in distinctive colours as follows:

(a) Normal supply "LIGHT ORANGE", colour B26 of SANS 1091
(b) Standby power "SIGNAL RED", colour All of SANS 1091
(c) No-break supply "DARK VIOLET", colour F06 or "OLIVE GREEN". colour H05 of SANS 1091

29.1. CONSTRUCTION OF NEW DISTRIBUTION BOARDS

The Contractor shall supply & install one new floor standing distribution boards (Main LV panel) and 10 new flush mounted distribution boards as per drawings.

The distribution boards shall comply with the standards as set out in the Department of Public Works standards. The following items are highlighted:

- **Framework**
  A metal framework for free standing switchboards shall be manufactured from angle iron, channel iron or 2mm minimum folded metal. A solid U-channel base frame, sufficiently braced to support all equipment and span floor trenches and access holes shall be provided. Switchboards shall be of cubicle design with 2mm side panels forming divisions between cubicles. The maximum allowable cubicle width is 1,5m. Joints shall be non-continuously butt-welded. Welds shall be ground smooth and the joint wiped with plumber's metal in order to provide a smooth finish. Switchboards wider than 2m shall be fitted with screwed eye-bolts attached to the framework to facilitate loading and transportation of the board.

- **Rear and Side Panels**
  The rear panels shall be removable and shall be manufactured from 2mm minimum sheet steel. The panels shall have returned edges which are recessed in the frame or which fit over lips on the switchboard frame. The panels shall be secured to the frame by means of studs and chromium-plated hexagonal domed brass nuts or hank nuts or captive fasteners equal or similar to "DZUS" or "CAMLOC". Where switchboards are intended for installation in vertical building ducts or against walls, the rear and side panels may consist of a single folded sheet which is either bolted or welded to the frame or which forms part of the folded metal frame.

- **Front Panels**
  - The front panels of floor standing switchboards shall preferably be hinged except where flush mounted equipment prevents this. The panels shall be arranged in multi-tiered fashion to allow for the logical grouping of equipment.
  - The hinged front panels shall have a dished appearance with 20mm upturns which fit over a lip on the switchboard frame. Alternatively the hinged panels shall have folded edges and shall be fitted flush or slightly recessed in the switchboard frame. The latter method shall be used where doors are required. Corners shall be welded and smoothed.
  - The panels shall be of 2mm minimum sheet steel with machine punched slots to allow for the flush mounting of instrumentation, switchgear toggles and operating handles. A minimum clearance of 50mm shall be maintained between the rear of equipment mounted on the panels (taking into account terminals or other projections) and the frame and chassis of the switchboard. Separate panels shall preferably be provided for the mounting of instrumentation and for covering flush mounted switchgear. Enclosed switchgear with front panels e.g. combination fuse-switch units, may be flush mounted in the board in lieu of separate hinged panels.
  - Hinged panels shall be suitably braced and stiffened to carry the weight of flush mounted equipment and to prevent warping.
  - Hinged panels with flush mounted equipment and panels higher than 600mm shall be supported by hinges of adequate strength to ensure smooth and reliable operation. 16mm pedestal or similar heavy duty hinges with single fixing bolts may be used on panels smaller than 600mm. On the larger panels long pedestal type hinges with two fixing bolts per hinge are preferred. Piano hinges are not acceptable for this application.
  - A tubular chromium-plated handle shall be fitted on each panel. The handle may be omitted if "DZUS" or "CAMLOC" fasteners are used.
  - Blanking plates shall be fitted over slots intended for future equipment. These plates shall be fixed in a manner which does not require the drilling of holes through the front panel. Dummy circuit-breakers may be fitted where applicable.
  - Front panels containing live equipment such as instrumentation or control switches, shall be bonded to the switchboard frame with a braided copper earth trap with an equivalent cross-sectional area of at least $4mm^2$.

- **MOUNTING OF EQUIPMENT**
  The mounting of equipment shall comply with SANS 1765 where applicable. Equipment to be mounted on the chassis shall be mounted by bolts, washers and nuts or by bolts screwed into tapped holes in the chassis plate. In the latter case the minimum thickness of the chassis plate shall be 2,5mm. The latter method shall not be used where boards will be subject to vibration or mechanical shocks. Self-tapping screws will not be accepted.

- **Space Requirements**
  In designing the switchboards the following requirements shall be strictly adhered to:-

(a) A minimum of 50mm between any piece of equipment and the frame or internal partitioning. This minimum space is required on all sides of the equipment. In the case of a single row of single-pole circuit-breakers the spacing on one side row may be reduced to 25mm if the incoming side of the circuit-breakers is busbar connected.
(b) A minimum of 75mm between horizontal rows of equipment. The maximum outside dimensions of equipment shall be considered.
(c) Circuit-breakers up to a fault rating of 10 kA may be installed adjacent to each other. For higher ratings a minimum of 40mm shall be allowed between circuit-breakers or isolators.
(d) Sufficient space shall be provided for wiring allowing for the appropriate bending radius.
(e) Space for future equipment shall be allowed as described.

- **Standby Supplies**

  Where standby power from a diesel-generator set or other sources is available and has to be connected to some of the equipment on a switchboard, the switchboard shall be divided into separate sections with sheet metal divisions to isolate standby power and mains power sections.
  Standby and normal supply shall each have its own incoming isolator or circuit-breaker.
  The two sections of the switchboard shall be labelled "ESSENTIAL" and "NON-ESSENTIAL" respectively.
  The front panels of standby and no-break supply sections shall be painted in distinctive colours as follows:

(a)	Normal supply	"LIGHT ORANGE",	colour B26 of SANS 1091
(b)	Standby power	"SIGNAL RED",	colour A ll of SANS 1091
(c)	No-break supply	"DARK VIOLET",	colour F06 or "OLIVE GREEN". colour H05 of SANS 1091

PART 3: QUALITY SPECIFICATION FOR MATERIALS AND EQUIPMENT OF ELECTRICAL INSTALLATIONS

"Part 3: Quality specification for materials and equipment" manual of the Department of Public Works is applicable for this Contract and the manual can be obtained from the Department of Public Works.

CONTENTS

ADDITIONAL REQUIREMENTS OR SPECIFICATIONS NOT COVERED IN QUALITY SPECIFICATIONS ABOVE

LED LIGHTS

All Light fittings installed for this project is to be of the LED type, unless otherwise stated.

The following international standard specifications and South-African Bureau of Standards shall apply to the LED luminaire specification:

SANS 475	Luminaires for interior lighting, street lighting and floodlighting – Performance and requirements
SANS 10114-1	Interior lighting part 1: Artificial lighting of interiors
SANS 10114-2	Interior lighting part 2: Emergency lighting
SANS 60598-1	Luminaires part 1: General requirements and tests
SANS 60598-2.1	Luminaires part 2: Particular requirements section 1 – Fixed general purpose luminaires.
SANS 60598-2.2	Luminaires part 2: Particular requirements section 2 – Recessed luminaires.
SANS 60598-2.3	Luminaires part 2: Particular requirements section 3 – Luminaires for road and street lighting.
SANS 60598-2.5	Luminaires part 2: Particular requirements section 5 – Flood lighting.
SANS 61347-1 to 13	Lamp control gear
SANS 62031	LED modules for general lighting – Safety specifications
SANS 62384	DC or AC supplied electronic control gear for LED modules – Performance requirements.
SANS 62560	Self-ballasted LED lamps for general lighting services with supply voltages > 50V – Safety specification.
SANS 62612	Self-ballasted LED lamps for general lighting services with supply voltages > 50V – Performance requirements
EN 55015	Limits and methods of measurement of radio disturbance of electrical lighting or equipment.

EN 61000-3.2	Electromagnetic compatibility (EMC) limits for harmonic current emissions.
EN 61000-3.3	Electromagnetic compatibility (EMC) limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems.
EN 61547	Equipment for general lighting purposes: EMC immunity requirements.
IEC-EN 62471	Photo biological safety of lamps and lamp systems for LEDs
IES LM-79-08	Approved method: Electrical and photometric measurement of solid-state lighting products.
IES LM-80	Approved method: Measuring lumen maintenance of LED light sources.

General requirements:

The luminaire shall be suitable for operation with mid-power LEDs. **Note that no LED tubes are allowed to be used.**

The luminaire shall be suitable for operation on a 230V single phase 50Hz mains supply.

Power factor capacitors shall be supplied to correct the power factor to at least 0.95 of higher.

The luminaire shall be marked with identification labels stating the brand name and model and shall bear the SANS approval mark.

The driver shall comply with IEC 61347-1 and IEC 61347-2B as applicable and shall be suitable for operation on 230V +-10%, 50Hz single phase system and it must be insured that harmonics filter is provided as per SANS 61000-3-2. The drivers and LED circuitry shall be protected against lighting and power surges. Suitable surge arrestors with a 10kA rating shall be provided for indoor installations and 20kA for outdoor installations.

Colour rendering (Ra) shall be not less than 80 and lumen depreciation of not more than 30% L70 at 50 000 hours @ Tq 25°C. Colour temperature of the LED lamp shall be 4000K, unless otherwise stated.

Thermal requirements:

The luminaire must be able to withstand an ambient temperature of 35°C. Storage temperature of this luminaire should be able to handle -40°C < T < 60°C.

To this end internal electrical and mechanical components shall not be allowed to exceed their maximum temperature ratings of 75°C. Test reports from an independent authorised testing facility proving this requirement shall be made available on request.

Noise requirements:

The noise level emitted from the luminaire shall be kept as low as possible. Drivers/electronic components shall therefore fully comply with the latest edition of SANS 55015.

= END OF SPECIFICATION =

PART 4: BILLS OF QUANTITIES

Electrical, mechanical and/or any other engineering work must be measured by the quantity surveyor and must be prepared in accordance with the latest edition of the Standard System of Measuring Building Work.

No additional provision for Preliminaries may be included in the engineering sections of the bills of quantities.

Bills of Quantities are included in part C2.2 of the tender document.

PART 5: ELECTRICAL WORK MATERIAL SCHEDULE

The Contractor shall complete the following schedules and submit them to the Electrical Engineer within 21 days of the date of the acceptance of the tender.

The schedules will be scrutinised by the Electrical Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB: Only one manufacturer's name to be inserted for each item.

Item	Material	Make or trade name	Country of origin
1.	Distribution boards		
2.	Circuit breakers 1P, 2P, 3P		
3.	On load isolators without trips		
4.	Contactors 1P, 2P, 3P		
5.	Earth leakage relays 1 & 3 phase		
6.	H.R.C. fuse switches		
7.	Kilowatt hour meter		
8.	Current transformers		
9.	Voltmeter		
10.	Maximum demand ammeter		
11.	Daylight sensitive switch		
12.	Time switch		
13.	Conduit		
14.	Conduit boxes		
15.	Power skirting		
16.	Surface switches		
17.	Watertight switches		
18.	16A flush socket outlets		
19.	16A surface socket outlets		
20.	16A watertight socket outlets		
21.	Luminaires		
	Type A		
	Type B		
	Type C		
22.	PVCA cable		
23.	Cable trays		
24.	P9000 Steel Trunking		
25.	Weather proof switches		

PARTICULARS OF ELECTRICAL CONTRACTOR

Please ensure that DPW -22(EC) Particulars of electrical contractor is inserted in main tender document.

PART 6: DRAWINGS

List all drawings

CAR20E/2018/CEI/300E	-	MDB-34A SINGLE LINE DIAGRAM
CAR20E/2018/CEI/301E	-	MDB-35B SINGLE LINE DIAGRAM
CAR20E/2018/CEI/302E	-	MDB-38C SINGLE LINE DIAGRAM
CAR20E/2018/CEI/303E	-	MDB-41D SINGLE LINE DIAGRAM
CAR20E/2018/CEI/304E	-	MDB-44E SINGLE LINE DIAGRAM
CAR20E/2018/CEI/305E	-	Typical SDBs SINGLE LINE DIAGRAM
CAR20E/2018/CEI/306E	-	MDB-25A SINGLE LINE DIAGRAM
CAR20E/2018/CEI/307E	-	MDB-57B SINGLE LINE DIAGRAM
CAR20E/2018/CEI/308E	-	MDB-28C SINGLE LINE DIAGRAM
CAR20E/2018/CEI/309E	-	MDB-30D SINGLE LINE DIAGRAM
CAR20E/2018/CEI/310E	-	MDB-31E SINGLE LINE DIAGRAM
CAR20E/2018/CEI/311E	-	Typical SDBs SINGLE LINE DIAGRAM

EDUCATIONAL INSTITUTION DEVELOPMENT

Project Title:	**ECDOEC- CLARKEBURY EDUCATIONAL INSTITUTION**	**Rev.**	**0**
Project ID.	**2018**		

PROJECT OVERVIEW

To proceed with the LV reticulation of Clarkebury Educational Institution.

INDEX

Compiled By		Approved By		Received By	
Company:	CARIFRO Consulting Engineers	**Name:**	Gregory Mavhunga	**Name:**	
Name:	Funani Luma				
Tel:	073 7959093	**Tel:**	043-743 8266	**Tel:**	
Date:	05/10/2023	**Date:**	05/10/2023	**Date:**	
Signatures					
Consultant Project Engineer		**Senior Consultant Project Engineer**		**Project Engineer Specialist**	

Design Package Handing Over Certificate

Herewith all the applicable design documentation and drawings. The design package is a comprehensive document complete with; Scope of Works, Technical Specifications, Bill of Material, Quality Assurance, and other relevant documentation. The Design Package provides the Capital Program Office with sufficient information to successfully implement this project. (NB: this includes quality TBC-ing as per Volume 3 of the package)

Signing of the Design Package Handover Certificate will confirm the completion of the Design Phase of the project and the receival of the complete design outputs as requested. Further we trust that this design package will be formally handed over to each discipline. (Please note that no additional copies will be provided)

Handed Over from Carifro Consulting Engineers		**Received by:**	
Name:	Funani Luma	**Name:**	
Tel:	043-743 8266	**Tel:**	
Date:	05/10/2023	**Date:**	
Signature:		**Signature:**	
Consultant Project Engineer		**Contractor**	

PROJECT OVERVIEW

1. EXECUTIVE SUMMARY

CLARKEBURY EDUCATIONAL INSTITUTION is in Clarkebury Location within Engcobo CNC electrification area.

Item	DESCRIPTION	COMMENTS
1.	**DEMOGRAPHIC INFORMATION**	
Town LAYOUT	NUMBER OF STANDS	TBC
	AVERAGE STAND SIZES	TBC
	STAND DENSITY	Medium -2 stand/hectare
	SETTLEMENT PATTERNS	Two dwelling per stand
	TOWN LAYOUT	Unstructured
	CLASSIFICATION OF LAYOUT	Low Density
Existing Infrastructure	Type of Road	Gravel
	Existence of Telephone Services	None
	Existence of Water Services	Present
	Water Reticulation	Present
	Sewage infrastructure	Present
Structures	Type of house	90% Brick houses
		0% Mud Houses
		10% Prefab Houses
	Others: Clinic	0
	Schools	1
	Churches	1
	Businesses	0
Site Conditions	Soil type	Clay soil
	Climate	Temp: -5 to 32^{o}C
	Population	TBC

1.1. BACKGROUND PARAGRAPH

As part of ECDOE this project proposes electrification of LV network at Clarkebury Educational Institution.

1.1.1 ADDITIONAL INFORMATION:

1. Maximum LV Feeders from Transformer 500meters
2. Maximum of four LV Feeders emerge per Transformer
3. MV conductor is Fox and LV Conductor is ABC 70/35mm
4. The Loading on the Transformer is less than 80%
5. Transformers sizes to be utilized is 500kVA (Three phase system)

2.4. Low Voltage

The low voltage feeders shall be single and dual ABC conductor and shall be 70mm and 35mm is size. The LV network is to be constructed in street-front layout on 9m meter wooden poles. The feeders shall be fused at the transformer pole.

All LV structures shall be constructed in accordance with Eskom Low Voltage Distribution Standard and specifications.

3. MATERIAL & EQUIPMENT SPECIFICATIONS

3.1 GENERAL

a) The LV configuration shall comprise of LV ABC 35mm^2 and 70mm^{2}conductor on 9m wooden poles.

d) Flying Stays

Flying stays shall be installed in the positions indicated on the drawings by the structure codes. Anchor poles shall be as specified for the line structures and of sufficient length to ensure the required ground clearance. Overhead stay wire shall be 7/4.00mm as specified for stays.

e) Struts

Struts shall be installed in the positions indicated on the drawings by the structure codes. Strut poles shall be as specified for the line structures. Line structure poles shall be fitted with suitable ground anchors at all strut positions. Struts shall be fitted with barbed wire anti climbing devices.

f) Insulators, Line Clamps and Other Line Components, Pole Dressing Hardware etc.

All in accordance with Eskom's Distribution Reticulation Technology, Electrification Standards and Guidelines with particular reference to the detailed material take off sheets provided for the various line structures.

g) Sags and Tensions

The Developer shall provide suitable dynamometer sighting rods or other approved apparatus necessary for proper TBCing of the work. Dynamometers shall be calibrated in kg or kN.

h) Surge Arrestors

Surge arrestors shall be of the metal oxide outdoor hermetically sealed, vertical base mounted type, rated at 22kV, 10kA impulse current.

i) Sectionalisers

Solid links shall be provided on every MV take off (preferably on the first structure of that particular spur and dropout fuses shall be provided for each transformer.

3.2 LV OVERHEAD LINES

LV Areal Bundle Conductor (ABC) overhead lines shall comply with the requirements of Eskom's Distribution Reticulation Technology, Electrification Standards and Guidelines as

and where applicable. The LV system share pole structures with the MV system wherever these follow the same routes.

a) LV ABC 35mm/70mm

System Detail - 240 volt, 1 phase, insulated neutral, 50 Hz

The LV O/W ABC 35/70mm conductor shall be installed in strict accordance with the manufacturer's recommendations and so as to ensure that the statutory clearances as specified in the Eskom Distribution Standard **DDT348** are maintained at all times. The Contractor shall submit details of terminations to be used to the Engineer for his approval before installation.

b) Poles

Pole type	Wood
Pole lengths	9m for LV Distribution
Planting depth	1.5m
Pole marker	Black painted letters on yellow background.

c) Stays

LV stays for wooden poles in the Eskom Distribution Standard. Stays are indicated on the drawings by means of the structure codes.

d) Flying Stays

LV flying stays for wood poles in the Eskom Distribution Standard and indicated on the drawings by means of the structure codes.

e) Struts

Strut are as detailed for the MV system described in Clause 3.5

f) Line Clamps, Connections, Pole Dressing and Mounting Hardware

All in accordance with Eskom's Distribution Construction Standards.

i) **Connectors**

The connector housing shall be made entirely of weather resistant plastic materials. No metallic parts outside the housing will be accepted (except for the tightening bolt).
The tightening bolt shall incorporate an over torque shearing head which will allow a clamping torque in conformity with the manufacturer's re-commendations, without the use of any special tools.

No energised parts shall be exposed or accessible by the operators during installation.

ii) **Mounting brackets**

Brackets are to be manufactured from corrosion resistant materials. Galvanised steel brackets are not acceptable.

g) Sags and Tensions

Sags and tensions are as detailed for the MV system described in Clause 3.2.3(g)

h) Surge Arrestors

No surge arrestors are required on the LV system. A 6kV, 10kA impulse surge arrestor will be provided on the LV neutral of the transformer.

3.3. CIVIL INFRASTRUCTURE

The Contractor shall provide the following excavations as per **DDT0332**.

a) Pole holes as required for both LV overhead line systems.

Pole excavations	5m	-	1200 long 1000 wide 1000 deep
	7m	-	1200 long 1000 wide 1300 deep
	9m	-	1200 long 1000 wide 1500 deep

b) Strut and stay holes as required for LV overhead line systems. Strut and stay excavations: 2000 long 1000 wide 1700 deep

c) Trenching for structure and operator earthing systems.
Trench excavation : 300 wide, 600 deep.

3.6. CLEARANCES

Eskom Standards as well as Occupational Health and Safety Act shall be adhered to. The overhead line routes require a number of LV crossings over roads. Correct clearance heights as specified in the Eskom Distribution Standard shall be adhered to.

3.7. EARTHING

In accordance with Eskom Distribution Standard Part 2, with particular reference to:
Earthing system philosophy TN -C - S.

Make reference to Eskom Eastern Cape Operating Unit *DDT0627* and *DDT642* for detailed execution.

M.2.1 – TN-C-S system earthing

The usual form of a TN-C-S system earthing is as shown in figure M.2.1, where the supply is TN-C and the arrangement in the consumer's installation is TN-C-S.

All exposed conductive parts of a consumer's installation are connected to the PEN (protective earth and neutral) conductor via the supply earth terminal.

NOTE 1 This is one of the preferred methods of low-voltage system earthing.

NOTE 2 The integrity of the PEN conductor is of paramount importance. With an open circuit in the PEN conductor, dangerous voltages can appear at the supply earth terminal, which might not be prevented by multiple-point earthing of the PEN conductor.

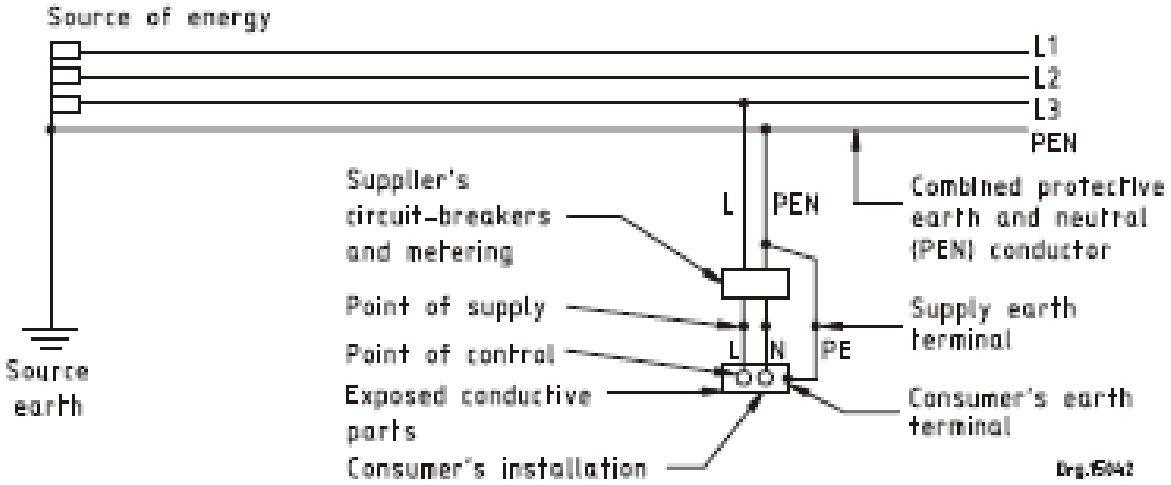


Figure M.2.1 —TN-C-S system earthing

Neutral and protective functions combined in a single conductor between the source of energy and the point of supply and separated in the consumer's installation

Results of soil resistivity survey at 2 points.
Min Cu area : 16mm² stranded
12mm² solid

- Low Voltage
  240V system : 70 Ohms
  480V system : 70 Ohms

A1. LARGE TOPOGRAPHICAL DRAWING

a) Show the entire prospect in accordance with the latest approved Surveyor General Plan.
b) Any schools, clinics, parks, open parks and any special area.

A2. ELECTRIFICATION RETICULATION LAYOUT DRAWING

a) All drawings shall comply with the latest standard as issued by Survey Technology.
b) Show LV and service connection network (conductor type and route);
c) Show all proposed LV pole lengths, assembly codes and conductor type (Using the latest 6-character alpha coding system);
d) Show the position of LV earths;
e) Show and indicate the stays and struts orientation;
f) Show LV span lengths (rounded to nearest metre) or a scaled diagram;
g) Show potential service connections (as lines from a pole to a dwelling) with phase connection (R,W,B) of the pole top box or service connection;
h) Showing transformer positions, links, protection equipment, etc;

ITEM	DESCRIPTION	BENCHMARK	COMMENT
C			
C1	**Stays/km**	<16	
C2	**Bends/km**	<4.8	
C3	**Span Lengths**		
1	i. Min	>10	
2	ii. Max	<75	
3	iii. Average	>41	
C4	**LV/Connection**	<48	
C5	**Conductor**	12498	
1	% Single Phase	>49	
2	% Dual Phase	>51	
3	% Three Phase	<0	
C6	**% 35mm^2 ABC**	100	
C7	**Connections/retic pole**		
1	% Direct	60	
2	% Indirect	40	
C8	**Poles installed**		
1	Poles per km	29.36	
2	% 5m	14.17	
3	% 7m	14.17	
4	% 9m	71.66	
5	% 10	0	
6	% 11m	0	
7	% Other	0	
D			
D1	**Concentric**		
1	% 10mm^2	0%	
2	% 6mm^2	100%	
3	% 4mm^2	0%	
D2	**Length airdac/connection**	$20 < x < 50 = 25$	
D3	**Number of house poles per connection**	<1	
D4	**Number of services poles per connection**		
1	% 5m	20%	
2	% 7m	20%	
3	% 9m	0%	
D5	**% overhead connections**	100%	
D6	**% underground connections**	0%	
E	**Material cost/total cost (excluding transport, IDC and O/H) expressed as %**		
F	**Cost per connection**	As per budget	

Part 6: Site Information

C4 Site Information

C4: SITE INFORMATION - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
BID No:	**2023/10/022**

C4 Site Information – Existing operational education facilities

1. GROUND CONDITIONS

Geotech information not available. This is an existing site.

2. UNDERGROUND SERVICES

There are unidentifiable underground services traversing the area of works, care would need to be taken during excavations.

3. ADJACENT BUILDINGS

No adjacent buildings could be affected by the construction. No particular precautions have been identified by the Engineer for the protection of this structure.

4. ENVIRONMENTAL ISSUES

None

C5 Drawings

C5.1: DRAWINGS

Project title:	**EMERGENCY REPAIRS TO ELECTRICAL INFRASTRUCTURE AT CLARKEBURY AGRICULTURAL SCHOOL**
BID No:	**2023/10/022**

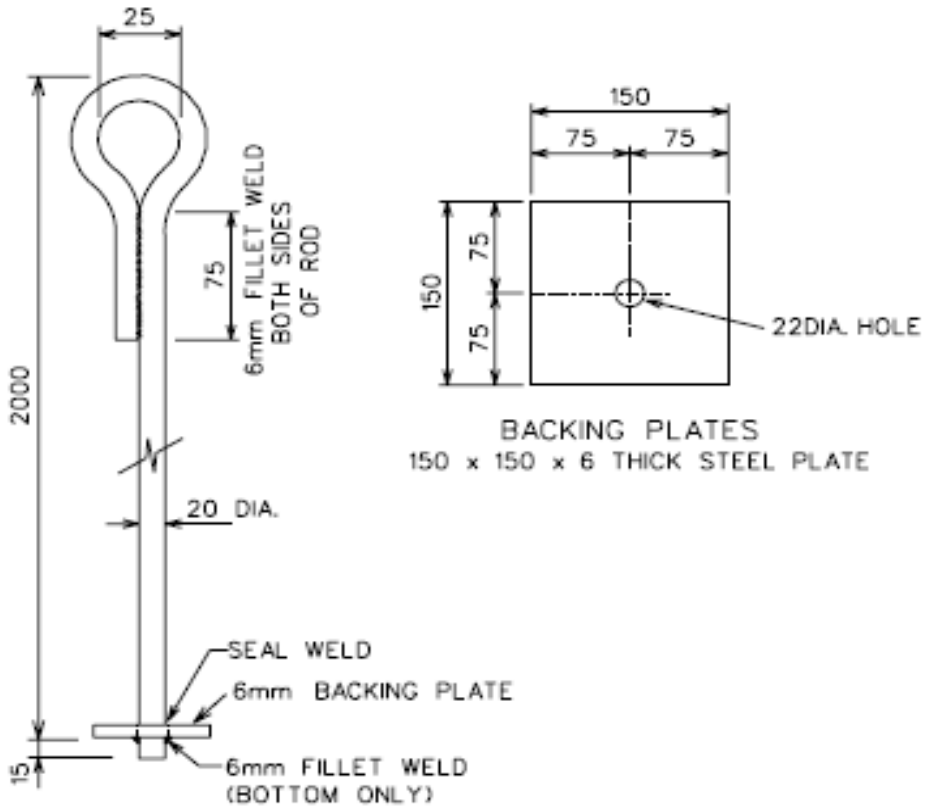
Drawing tile	Drawing number	Print date	Rev No.
Site Development Plan	1920.49-AR-DES-0001	Aug 23	B

ANNEXURE C - DETAIL DRAWINGS

ITEM	DESCRIPTION	PAGE
1.	DETAIL ASSEMBLY & INFO DRAWINGS	2
2.	DETAIL FOUNDATION DRAWINGS	11
3.	DETAIL STRUCTURE DRAWINGS	14

D-DT-

DETAIL ASSEMBLY & INFO DRAWINGS



SAP MATERIAL No.:	0163402
SHORT DESCRIPTION:	STAYROD 2000xM20 96kN NON-ADJUST D3012

TECH. DESCRIPTION:

NON-ADJUSTABLE STAYROD * MATERIAL GRADE 250MPa STEEL *
HOT DIPPED GALVANISED * MINIMUM FAILING LOAD 96kN *
WORKING LENGTH 2000mm * ROD DIAMETER 20mm *
INSIDE EYE DIA. 25mm *
FLAT BACKING PLATE WASHER 150x150x6mm WITH 22mm HOLE WELDED TO ANCHOR ROD *
ESKOM DRAWING No. D-DT-3012 *

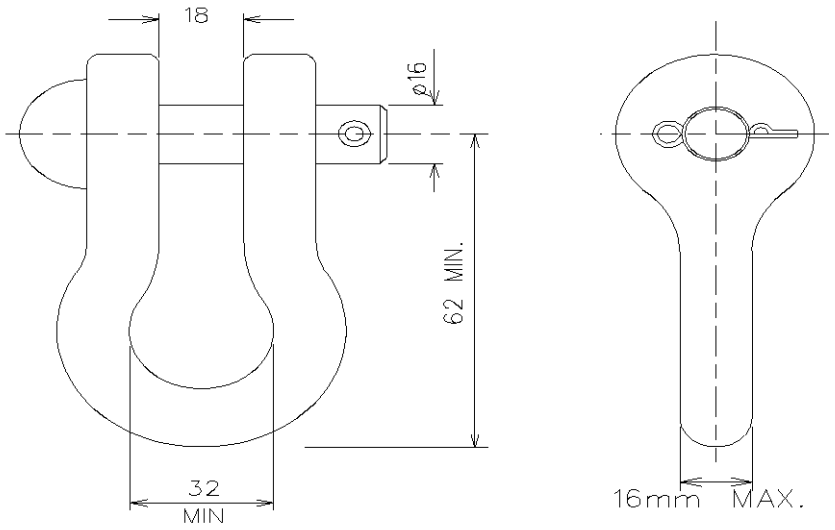
ITEM	:-	STAYROD 2000xM20 NON-ADJUST MV
MATERIAL SPECIFICATION	:-	SANS 1431
CORROSION SPECIFICATION	:-	SANS 121
STANDARD SPECIFICATION	:-	NRS 022
ESKOM SPECIFICATION	:-	DSP 34-1657
TEST & CERTIFICATION REQUIREMENTS	:-	TYPE TEST ACCORDING TO DSP 34-1657

INSPECTION	Yes	No	ESKOM RELEASE NOTE	Yes	No

IDENTIFICATION:- INDELIBLE MANUFACTURES TRADEMARK & PART No. ON ALL ITEMS

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DWGS
22	MATERIAL GRADE CHANGED	P.A.T.	S.MASHABA	B. HILL	20.04.2010	
21	STAYROD DIAMETER AND LENGTH CORRECTED	P.A.T.	S. MASHABA	B. BRANFIELD	10.03.2010	
20	BACKING PLATE HOLE DIA CHANGED FROM 24mm DIA. SEAL WELD ADDED, 6mm FILLET WELD CORRECTED, 2 MATERIAL TYPES SPECIFIED & PERC.STAYROD SAP 0185177 REMOVED	P.A.T.	S. MASHABA	B. BRANFIELD	05.02.2010	

AUTH:	P. CROWDY	DATE:	17.08.1995	SCALE NTS	Eskom Distribution	SAP No: 0163402	
CHKD:	J. SWAN	DATE:	17.08.1995	CAD REF: SERIES 3000		SET	SHEET / REV
DRAWN:	P.A. VERMAAK	DATE:	11.03.1997	FILE No: 3012	D-DT-3012	2	1 / 22



NOTE :
SKETCH NOT FOR MANUFACTURING PURPOSES.

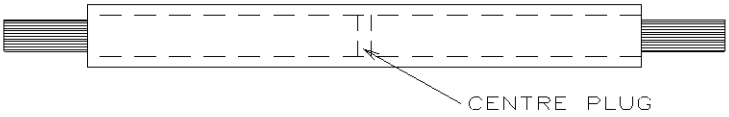
SAP MATERIAL No. 0163400
SHORT DESCRIPTION SHACKLE, D H/BACK PIN 70KN D3010
TECH DESCRIPTION

LINE TYPE D-SHACKLE WITH PIN *
FORGED STEEL GRADE 300W * HOT DIPPED GALVANISED *
APERTURE 18mm *
ULIMATE TENSILE STRENGTH 70KN *
SUPPLIED ASSEMBLED WITH ONE STAINLESS STEEL HUMPBACK SPLIT PIN *
SPLIT PIN TO BE FITTED TO SHACKLE *
ESKOM DRAWING No. D-DT-3010 *

ITEM	:- SHACKLE, D STRAIGHT PIN 70kN				
MATERIAL SPECIFICATION	:- SANS 1431				
CORROSION SPECIFICATION	:- SANS 121				
STANDARD SPECIFICATION	:- SABS 178				
ESKOM SPECIFICATION	:- TRMASAAI1, SCSSCAAZ0				
TEST AND CERTIFICATION REQUIREMENTS	TYPE TEST AT MIN FAILING LOAD & CERTIFICATE VALID SAMPLE TEST CERTIFICATE, PER SANS 178 TO BE PROVIDED FOR THE PRODUCTION RUN ASSOCIATED WITH EACH DELIVERY				
INSPECTION	yes	no	ESKOM RELEASE NOTE	yes	no
IDENTIFICATION :- INDELIBLE MANUFACTURERS TRADEMARK & PART No. ON ALL ITEMS					

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DRAWINGS
12	STANDARD SANS HAS BEEN CORRECTED	D.D.N.	P.A.VERMAAK		08.04.05	
11	STANDARD SABS CHANGED TO SANS	D.D.N.	P.A.VERMAAK		18.11.04	
10	HUMPBACK SPLIT PIN SUPPLIED FITTED TO D-SHACKLE ADDED	P.A.V.	B. HILL	B. HILL	08.11.04	
9	LOGO CHANGED AS PER CORPORATE I.D.	D.D.N.	P.VERMAAK	J.SCHOLTZ	09.06.04	

AUTH:	S.A. CILLIERS	DATE:	MARCH 93	SCALE	Eskom Distribution	SAP. No. AS ABOVE	
CHKD:		DATE:		CAD REF. SERIES 3000			
DRAWN:	Z. WATSON	DATE:	14.09.92	FILE No. 3010	D-DT-3010	SET 1	SHEET 1 / REVISION 12



SECTION BEFORE COMPRESSION

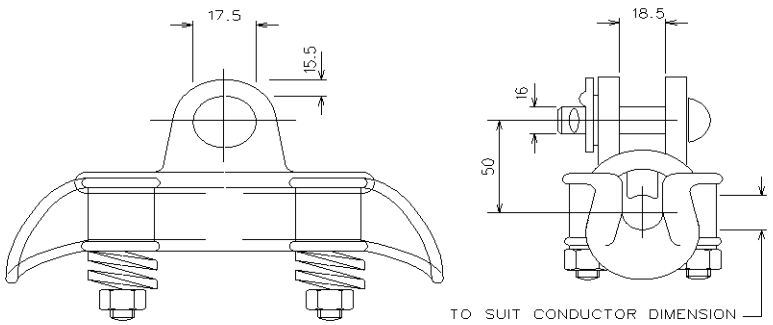
SECTION AFTER COMPRESSION
4-POINT SHALLOW INDENTATION CRIMPING SYSTEM

NOTE :
1. NOT FOR MANUFACTURING PURPOSE.

ITEM	:- JOINT,NON-TENSION BI-METAL AND ALUMINIUM				
MATERIAL SPECIFICATION	:-				
CORROSION SPECIFICATION	:-				
STANDARD SPECIFICATION	:-				
ESKOM SPECIFICATION	:- SCSSCAAG5/SCSSCAAU5				
TEST AND CERTIFICATION REQUIREMENTS	:- TYPE TEST AND PRODUCTION SAMPLE TEST				
INSPECTION	yes	no	ESKOM RELEASE NOTE	yes	no
IDENTIFICATION	:- INDELIBLE MANUFACTURERS TRADEMARK & PART No. ON ALL ITEMS FITTING REF., CONDUCTOR SIZE, DIE SIZE AND CRIMPING RANGE				

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DRAWINGS
9	6-9AL 32.3, 65.4 CU., 6-9AL 65.4CU, CHIC AL-0.025 CU, CHIC AL-0.05 CU, CHIC AL-0.01 CU, 6-9AL - 9-15AL D , CHIC-CHIC & CHIC - OAK/HAR ADDED & 0165796,,0165797, 0166012, 0166013, 0165959 & 0165836 C/CRIMPS REMOVED	P.A.V.	B. HILL	B. HILL	21.09.04	
8	LOGO CHANGED AS PER CORPORATE I.D.	D.D.N.	P.VERMAAK	J.SCHOLTZ	15.06.04	
7	SET-UP UPPER LIMIT ON TUBE SIZES CHANGED	P.A.V.	G.STANFORD	B. HILL	11.07.00	
6	SAP No.'s CORRECTED FOR 4.5-9.0 & 7.4-15.0 AND HORNET SAP No. CORRECTED	P.A.V.	G STANFORD	P. CROWDY	02.03.00	

AUTH:	P. CROWDY	DATE:	17-07-95	SCALE	Eskom Distribution	SAP. No. AS ABOVE	
CHKD:	J. SWAN	DATE:	17-07-95	CAD REF. SERIES 3000			
DRAWN:	P.A. VERMAAK	DATE:	23.05.1995	FILE No. 3098	D-DT-3098	SET 8	SHEET 1 / REVISION 9



NOTE :
SKETCH NOT FOR MANUFACTURING PURPOSES

ITEM :- CLAMP,SUSP CRADLE							
MATERIAL SPECIFICATION :- SANS 121 OR ISO 1461, DIE CAST ALUMINIUM							
CORROSION SPECIFICATION :- SANS 121 OR ISO 1461							
STANDARD SPECIFICATION :- SANS 178, SANS 135							
ESKOM SPECIFICATION :- SCSSCAAZO							
TEST & CERTIFICATION REQUIREMENTS :- TYPE TEST TO BE SUPPLIED							
INSPECTION	yes	no	ESKOM RELEASE NOTE			yes	no
IDENTIFICATION :- INDELIBLE MANUFACTURERS TRADEMARK & PART No. ON ALL ITEMS							

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DRAWINGS
13	STANDARD SANS HAS BEEN CORRECTED	D.D.N.	P.A.VERMAAK		08.04.2005	
12	STANDARD SABS CHANGED TO SANS	D.D.N.	P.A.VERMAAK		18.11.2004	
11	U-BOLTS, BOLT TORQUE, HEX. NUTS AND KEY ADDED	P.A.V.	B. HILL	B. HILL	11.11.2004	
10	MATERIAL FOR THE CRADLE SUSPENSION CLAMP IDENTIFIED	P.A.V.	B. HILL	B. HILL	01.08.2003	

AUTH:	S.CILLIERS	DATE:	MARCH 1993	SCALE N.T.S.	Eskom Distribution	SAP. No.	AS ABOVE
CHKD:		DATE:		CAD REF. SERIES 3000		SET	SHEET	REVISION
DRAWN:	Z.WATSON	DATE.	14.09.1992	FILE No. 3008	D-DT-3008	2	1	13

SAP MATERIAL No. 0168534
SHORT DESCRIPTION CLAMP,SUSP CRADLE CON 8,0-18,0 D3008
TECH DESCRIPTION

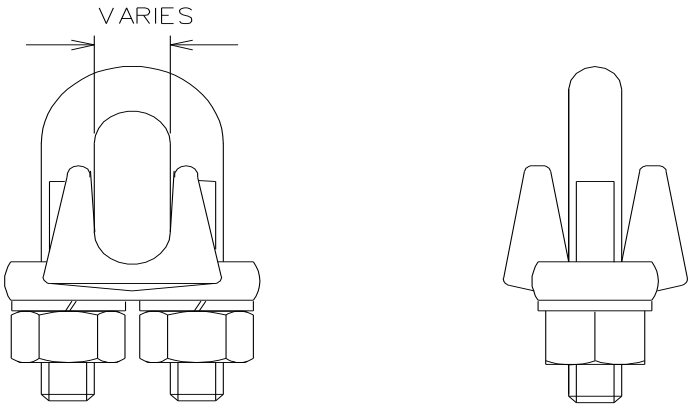
CRADLE TYPE SUSPENSION CLAMP *
BODY CAN BE MANUFACTURED FROM GALVANISED GRADE 300W STEEL OR DIE CAST ALUMINIUM *
CONDUCTOR RANGE INCLUDING ARMOR RODS 8.0mm (3.66 STEEL WIRE) TO 18mm (FOX) * CLEVIS OPENING 18.5mm * MIN. FAILING LOAD 40kN *
SUPPLIED COMPLETE WITH :
1 x 16mm DIAMETER GALV. CLEVIS PIN,
1 x STAINLESS STEEL HUMP BACK SPLIT PIN,
4 x SPRING WASHER (ID = 13, OD = 21.5 AND 2.7mm THICK)
4 x M16 FLAT WASHER (D-DT-3014),
2 x M16 U-BOLTS (SUITABLE LENGTH FOR ALL CONDUCTOR RANGES)
BOLTS TO BE TORQUED TO 25Nm,
4 x M16 HEX. NUTS AND SUPPLIED WITH KEY *
ESKOM DRAWING No. D-DT-3008 *

SAP MATERIAL No. 0010840
SHORT DESCRIPTION CLAMP,SUSP CRADLE CON 15.0-24.4 D3008
TECH DESCRIPTION

CRADLE TYPE SUSPENSION CLAMP *
BODY CAN BE MANUFACTURED FROM GALVANISED GRADE 300W STEEL OR DIE CAST ALUMINIUM *
CONDUCTOR RANGE INCLUDING ARMOR RODS 15.0mm (FOX) TO 25.4mm (HARE) * CLEVIS OPENING 18.5mm * MINIMUM FAILING LOAD 40kN *
SUPPLIED COMPLETE WITH :
1 x 16mm DIAMETER GALV. CLEVIS PIN,
1 x STAINLESS STEEL HUMP BACK SPLIT PIN,
4 x SPRING WASHER (ID = 13, OD = 21.5 AND 2.7mm THICK)
4 x M16 FLAT WASHER (D-DT-3014),
2 x M16 U-BOLTS (SUITABLE LENGTH FOR ALL CONDUCTOR RANGES)
BOLTS TO BE TORQUES TO 25Nm,
4 x M16 HEX. NUTS AND SUPPLIED WITH KEY *
ESKOM DRAWING No. D-DT-3008 *

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DRAWINGS
13	STANDARD SANS HAS BEEN CORRECTED	D.D.N.	P.A.VERMAAK		08.04.2005	
12	STANDARD SABS CHANGED TO SANS	D.D.N.	P.A.VERMAAK		18.11.2004	
11	U-BOLTS, BOLT TORQUE, HEX. NUTS AND KEY ADDED	P.A.V.	B. HILL	B. HILL	11.11.2004	
10	MATERIAL FOR THE CRADLE SUSPENSION CLAMP IDENTIFIED	P.A.V.	B. HILL	B. HILL	01.08.2003	

AUTH:	S.CILLIERS	DATE:	MARCH 1993	SCALE N.T.S.	Eskom Distribution	SAP. No.	AS ABOVE
CHKD:		DATE:		CAD REF. SERIES 3000		SET	SHEET	REVISION
DRAWN	Z.WATSON	DATE:	14.09.1992	FILE No. 3008	D-DT-3008	2	2	13



SAP MATERIAL No. 0000225
SHORT DESCRIPTION CROSBY CLAMP 12 WIRE ROPE D7032
TECH DESCRIPTION

CROSBY CLAMP * MALLEABLE CAST IRON * HOT DIPPED GALVANISED *
USED WITH 12mm DIAMETER WIRE ROPE *
SINGLE GRIP * SINGLE SADDLE TYPE *
ESKOM DRAWING No. D-DT-7032 *

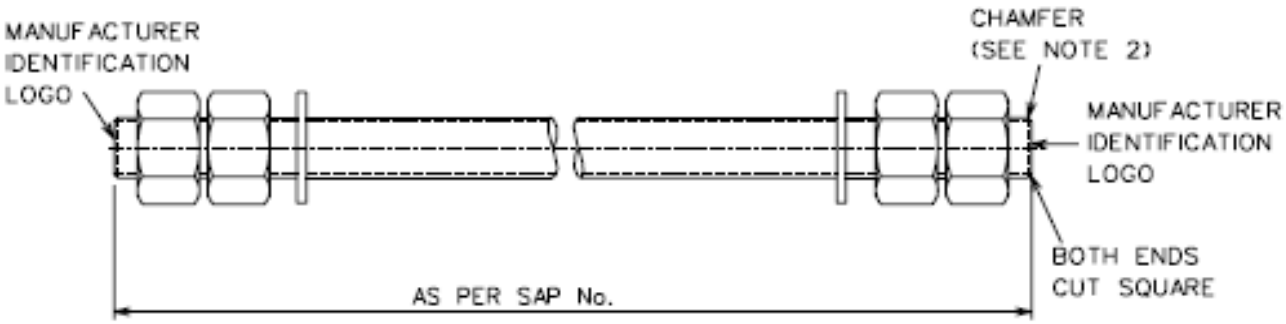
SAP MATERIAL No. 0039608
SHORT DESCRIPTION CROSBY CLAMP 16 WIRE ROPE D7032
TECH DESCRIPTION

CROSBY CLAMP * MALLEABLE CAST IRON * HOT DIPPED GALVANISED *
USED WITH 16mm DIAMETER WIRE ROPE *
U-BOLT SINGLE GRIP * SINGLE SADDLE 'S' TYPE *
ESKOM DRAWING No. D-DT-7032 *

ITEM :- CROSBY CLAMP WIRE ROPE					
MATERIAL SPECIFICATION :- BS 6681 (MIN.)					
CORROSION SPECIFICATION :- SANS 1461 OR ISO 1461					
STANDARD SPECIFICATION :- SANS 813					
ESKOM SPECIFICATION :-					
TEST & CERTIFICATION REQUIREMENTS :-					
INSPECTION	yes	no	ESKOM RELEASE NOTE	yes	no
IDENTIFICATION :- INDELIBLE MANUFACTURERS TRADEMARK & PART No. ON ALL ITEMS					

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DRAWINGS
3	LOGO CHANGED AS PER NEW CORPORATE ID AND SABS CHANGED TO SANS	PBM	P.A.V.	P.A.V.	16.11.04	
2	CORROSION SPEC. CHANGED	P.A.V.	G.STANFORD	A. BEKKER	07.09.01	
1	CROSBY CLAMP 16 ADDED	P.A.V.	B. HILL	P. CROWDY	26.05.99	
0	CROSBY CLAMP WAS SHOWN ON D-DT-3025					

AUTH:	P. CROWDY	DATE:	05.03.1998	SCALE	Eskom Distribution	SAP. No. AS ABOVE
CHKD:	D. PILLAY	DATE:	05.03.1998	CAD REF. CHALL\BUYERS		
DRAWN:	P.A. VERMAAK	DATE:	05.03.1998	FILE No. 7032	D-DT-7032	SET 1 / SHEET 1 / REVISION 3



NOTE :
1. SKETCH NOT FOR MANUFACTURING PURPOSES.
2. THREAD TO BE CHAMFERED BOTH ENDS SEE SAP TECHNICAL DESCRIPTION FOR CHAMFER AMOUNT AND TO BE CUT AT RIGHT ANGLES.

SAP MATERIAL No.:	0163868
SHORT DESCRIPTION:	ROD,THREADED E/PL. M6x500 WASH+NUTS D3015

TECH. DESCRIPTION:

FULL THREADED ROD M6x1.0-6g BEFORE ELECTRO PLATING x 500mm LG.*
NO CHAMFER REQUIRED IF <6mm *
GRADE SAE 1008 STEEL * ELECTRO PLATED ACCORDING TO SANS 1700-5-11 *
COMPLETE WITH TWO M6 FLAT SQUARE WASHERS(D-DT-3014),
AND M6 FOUR HEXAGON NUTS (D-DT-3173) *
PACKAGING : SHRINK WRAPPED 10 PER PACK COMPLETE WITH *
NUTS AND WASHERS ETC. TO BE RUN ONTO THREAD 300mm *
ESKOM DRAWING No. D-DT-3015 *

ITEM	:-	ROD THREADED
MATERIAL SPECIFICATION	:-	GRADE SAE 1008 STEEL, GRADE 070M20 STEEL
CORROSION SPECIFICATION	:-	SANS 121
STANDARD SPECIFICATION	:-	SANS 1700
ESKOM SPECIFICATION	:-	
TEST & CERTIFICATION REQUIREMENTS	:-	TYPE TEST ACCORDING TO SANS 1700-6-3 (PULL TEST ONLY)

INSPECTION	Yes	No	ESKOM RELEASE NOTE	Yes	No

IDENTIFICATION:- INDELIBLE MANUFACTURES TRADEMARK & PART No. ON ALL ITEMS

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DWGS
22	TEST & CERTIFICATION SANS SPEC AND HEX NUT DRG NO. ADDED	P.A.T.	S. MASHABA	B. HILL	06.08.2009	
21	MANUFACTURING ID, BOLT CHAMFER & NUTS ETC. RUN ONTO THREAD AND SPRING WASHER DRG.NO. SHOWN	N.M. P.A.T.	B. HILL	B. HILL	19.05.2009	
20	MATERIAL CHANGED AND THREAD ON M8 + M12 CORRECTED	P.A.V.	B. HILL	B. HILL	22.06.2007	
19	M20x1000 THREADED ROD ADDED	P.A.V.	B. HILL	B. HILL	06.06.2006	

AUTH:	S.A.CILLIERS	DATE:	MARCH 93	SCALE NTS	Eskom Distribution	SAP No: 0163868	
CHKD:		DATE:		CAD REF:			
				SERIES 3000	D-DT-3015	SET 5	SHEET 1 / REV 22
DRAWN:	R.V.R.	DATE:	14-09-92	FILE No: 3015			

NOTE :
SKETCH NOT FOR MANUFACTURING PURPOSES.

SAP MATERIAL No.:	0402584
SHORT DESCRIPTION:	DEAD END,HELICALLY FORMED SQUR/ACAC D3065

TECH. DESCRIPTION:

HELICALLY FORMED DEAD END * ALUMINIUM ALLOY *
CONDUCTOR COLOUR CODE ORANGE *
USED ON BARE SQUIRREL AND ACACIA CONDUCTOR OR EQUIVALENT *
PACKED IN CARTON AND INDIVIDUALLY LABELLED *
ESKOM DRAWING No. D-DT-3065*

SAP MATERIAL No.:	0168472
SHORT DESCRIPTION:	DEAD END,HELICALLY FORMED MAGPIE D3065

TECH. DESCRIPTION:

HELICALLY FORMED DEAD END * GALVANISED STEEL *
CONDUCTOR COLOUR CODE GREEN *
USED ON BARE MAGPIE CONDUCTOR OR EQUIVALENT *
PACKED IN CARTON AND INDIVIDUALLY LABELLED *
ESKOM DRAWING No. D-DT-3065*

ITEM	:-	DEAD END,HELICALLY FORMED				
MATERIAL SPECIFICATION	:-	ALUMINIUM ALLOY				
CORROSION SPECIFICATION	:-	SANS 182-5				
STANDARD SPECIFICATION	:-	BS 3288				
ESKOM SPECIFICATION	:-	SCSSCAAN4				
TEST & CERTIFICATION REQUIREMENTS	:-					
INSPECTION	Yes	No	ESKOM RELEASE NOTE	Yes	No	
IDENTIFICATION:- INDELIBLE MANUFACTURES TRADEMARK & PART No. ON ALL ITEMS						

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DWGS
10	SAP NO. 0011042, 0010866, 0010875, 0010852 CORRECTED	P.A.T.	D. RAMJASS	D. RAMJASS	18.01.2017	
9	0168866 COLOUR CODE CORRECTED TO RED	P.A.T.	B. HILL	B. HILL	22.07.2015	
8	STANDARD SABS CHANGED TO SANS	D.D.N.	P.A.VERMAAK	P.A.VERMAAK	05.01.2005	

AUTH:	S.A. CILLIERS	DATE:	MARCH 93	SCALE NTS	Eskom	SAP No: 0402584 0168472		
CHKD:		DATE:		CAD REF: SERIES 3000		SET	SHEET	REV
DRAWN:	A.STEWART	DATE:	10-11-1992	FILE No: 3065	D-DT-3065	2	1	10

SPEC SHEET

SAP MATERIAL No.:	0174614
SHORT DESCRIPTION:	COND,AAAC ACACIA 6.24D GRS D3136

TECH. DESCRIPTION:

ALL ALUMINIUM ALLOY CONDUCTOR *
7 STRANDS OF 2.08mm DIA * CONDUCTOR 6.24mm DIA. *
GREASED * CODE NAME ACACIA *
RATED TENSILE STRENGTH 6.69kN *
ESKOM DRAWING No. D-DT-3136 *

SAP MATERIAL No.:	0174613
SHORT DESCRIPTION:	COND,AAAC 35 8.31D GRS D3136

TECH. DESCRIPTION:

ALL ALUMINIUM ALLOY CONDUCTOR *
7 STRANDS OF 2.77mm DIA * CONDUCTOR 8.31mm DIA. *
GREASED * CODE NAME 35 *
RATED TENSILE STRENGTH 11.86kN *
ESKOM DRAWING No. D-DT-3136 *

SAP MATERIAL No.:	0174612
SHORT DESCRIPTION:	COND,AAAC PINE 10.83D GRS D3136

TECH. DESCRIPTION:

ALL ALUMINIUM ALLOY CONDUCTOR *
7 STRANDS OF 3.61mm DIA * CONDUCTOR 10.83mm DIA. *
GREASED * CODE NAME PINE *
RATED TENSILE STRENGTH 20.2kN *
ESKOM DRAWING No. D-DT-3136 *

SAP MATERIAL No.:	0403107
SHORT DESCRIPTION:	COND,AAAC OAK 13.95D GRS D3136

TECH. DESCRIPTION:

ALL ALUMINIUM ALLOY CONDUCTOR *
7 STRANDS OF 4.65mm DIA * CONDUCTOR 13.95mm DIA. *
GREASED * CODE NAME OAK *
RATED TENSILE STRENGTH 33.33kN *
ESKOM DRAWING No. D-DT-3136 *

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	REF. DWGS
13	SAP 0014606, 0014443, 0014440, 0014442, 0014441 0014445, 0014697, 0014439, 0014657, 0014677, 0014675, 0014781, 0014752, 0171327, 0014678, 0014580, 0014446,0014447, 0014452 CORRECTED	P.A.T.	D. RAMJASS	D. RAMJASS	20.01.2017	
12	RAIL CONDUCTOR GREASED AND UNGREADED ADDED AND ESKOM SPEC CHANGED	P.A.T.	B. HILL	M. RAPAPA	07.12.2009	
11	FOX CONDUCTOR GREASED REINSTATED	P.A.T.	M. RAPAPA	M. RAPAPA	07.07.2009	

AUTH:	P.CROWDY	DATE:	17.07.1995	SCALE NTS	Eskom	SAP No: 0174614 0174613	0174612 0403107
CHKD:	J.SWAN	DATE:	17.07.1995	CAD REF: SERIES 3000		SET	SHEET / REV
DRAWN:	P.A.VERMAAK	DATE:	11.05.1995	FILE No: 3136	D-DT-3136	8	6 / 13

D-DT-

DETAIL FOUNDATION DRAWINGS

WOOD POLES

POLE LENGTH	POLE TOP	APPLICATION	PLANTING DEPTH
5m (D-DT-0058)	80-100	SERVICE CONN.	1.0m
5.7m (D-DT-0047)	100-119	LV ABC	BASE PLATE SEE (D-DT-3197)
7m (D-DT-0050)	100-120 120-139	LV ABC	1.3m
9m (D-DT-0055)	140-159 160-179 180-199	LV BAREWIRE ABC & MV	1.5m
10m (D-DT-0052)	160-179 180-199 200-219	MV	1.7m
11m (D-DT-0051)	160-179 180-199 200-219	MV MV TRFRS.	1.8m
12m (D-DT-0053)	160-179 180-199 200-219	MV	2m
13m (D-DT-0056)	160-179 180-199	MV SPECIAL APPLICATION	2.2m
14m (D-DT-0054)	160-179 180-199 200-219	MV SPECIAL APPLICATION	2.2m
15m (D-DT-0057)	200-219	MV	2.2m
16m (D-DT-0049)	180-199 200-219	MV SPECIAL APPLICATION	2.2m
18m (D-DT-0048)	180-199 200-219	MV SPECIAL APPLICATION	2.4m

CONCRETE POLES

POLE LENGTH	APPLICATION	PLANTING DEPTH
4m (D-DT-0001)	SERV. CONN.	0.8m
7m (D-DT-0002)	ABC	1.3m
9m (D-DT-0003)	MV. LV.	1.5m
10m (D-DT-0007)	MV. LV. ROAD CROS.	1.8m
10m TRFR (D-DT-0007)	MV. LV., TRFRS.	1.8m
11m (D-DT-0004)	MV	1.8m
12m (D-DT-0005)	MV	2m
13m	MV	2.2m
14m	MV	2.3m

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
7	FIELD LINERS REMOVED AND 13m AND 14m CONCRETE POLES ADDED	P.A.V.	B. HILL	B. HILL	09.10.2003	
6	WOOD POLE TABLE UPDATED	P.A.V.	B.BRANFIELD	B.BRANFIELD	11.01.1999	
5	3.6m WOOD POLE REMOVED BY ELECTRIFICATION STUDY COMMITTEE	P.A.V.	A.ABROSIE	A. ABROSIE	20.10.1998	
4	4.0m WOOD POLES CHANGED TO 3.6m WOOD POLE	P.A.V.	B. HILL	P. CROWDY	18.06.1998	
3	4.0m, 5.7m, 7.5m, 16m AND 18m WOOD POLES ADDED	P.A.V.	B. HILL	P. CROWDY	30.09.1997	

Eskom Distribution

AUTH: P.CROWDY
DATE: 08.11.1994
CHKD: B.HILL
DATE: 08.11.1994
DRAWN: P.A.V.
DATE: 20.10.1994

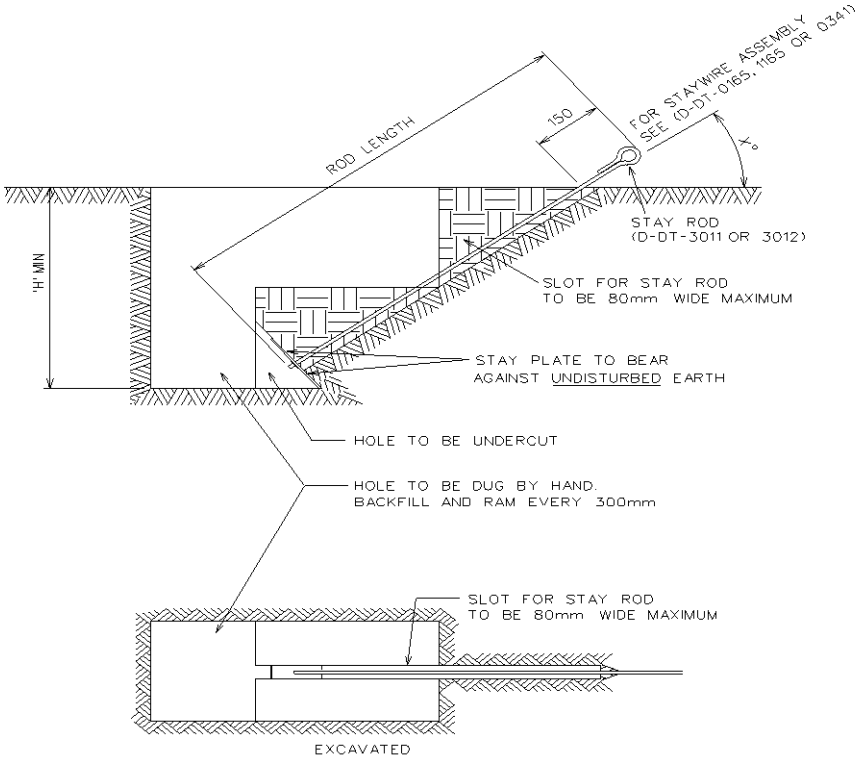
MV & LV RETICULATION
POLE PLANTING DEPTH DETAILS

D-DT-0332

SET	SHEET	REVISION
1	1	7

Page No. 0DB10

A3L



NOTE :

1. COMPACTION :- SOIL TO BE BACKFILLED IN 300mm LAYERS. EACH LAYER COMPACTED WITH HAND COMPACTOR OR MECHANICAL COMPACTOR, UNTIL GROUND IS HARD, THEN PLACE NEXT LAYER.
2. FOR SINGLE AND MULTIPLE CONDUCTORS ATTACHED TO THE POLE WITH DEVIATION ANGLES, THE MAX. HORIZONTAL LOAD kN IS TO BE WORKED OUT AND NOT TO EXCEED THE ALLOWABLE HORIZONTAL LOAD.
3. STAY SIZE TO MATCH CONDUCTOR AND NOT VOLTAGE.

PLANTING DEPTH TABLE

ROD DIA. mm	ROD LENGTH mm	MAX. UTS OF STAY ROD - kN	'H' MIN. mm	'H' MAX. mm	MAX. ALLOWABLE HORIZONTAL LOAD kN (IN LINE WITH THE STAY) ON THE POLE AT POSITION OF STAY FIXTURE X-60	X-45	MAX. WORKING LOAD OF STAY ROD - kN
12	1500	33	1050	1300	6.6	9.3	13.2
20	2000	94	1450	1750	19	27	38
24	2400	135	1950	2150	27	38	54

* SOME OPEN WIRE LV AND DOUBLE ABC REQUIRES THE USE OF MV (20mm) STAYS.

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	LOGO CHANGED AS PER NEW CORPORATE ID	AKM	P.A.V.	P.A.V.	26/10/04	
4	VARIOUS AMMENDMENTS MADE AND MULE STAY REMOVED	P.A.V.	B.BRANFIELD	B.BRANFIELD	11/01/1999	
3	PLANTING DEPTH TABLE AND NOTE CHANGED ON SHT.1	P.A.V	B HILL	P.CROWDY	30/09/1997	
2	TABLE DIMENSIONS CHANGED & SHT.2 ADDED	P.A.V.	J. SWAN	P.CROWDY	28/08/1995	

Eskom Distribution

AUTH: S.A. CILLIERS
DATE: 10/01/1994
CHKD: NJVR
DATE: 01/03/1993
DRAWN: ETR + OTS ZW
DATE: 01/09/1992

MV & LV RETICULATION
STAY ROD INSTALLATION
NON-AUGURED HOLES

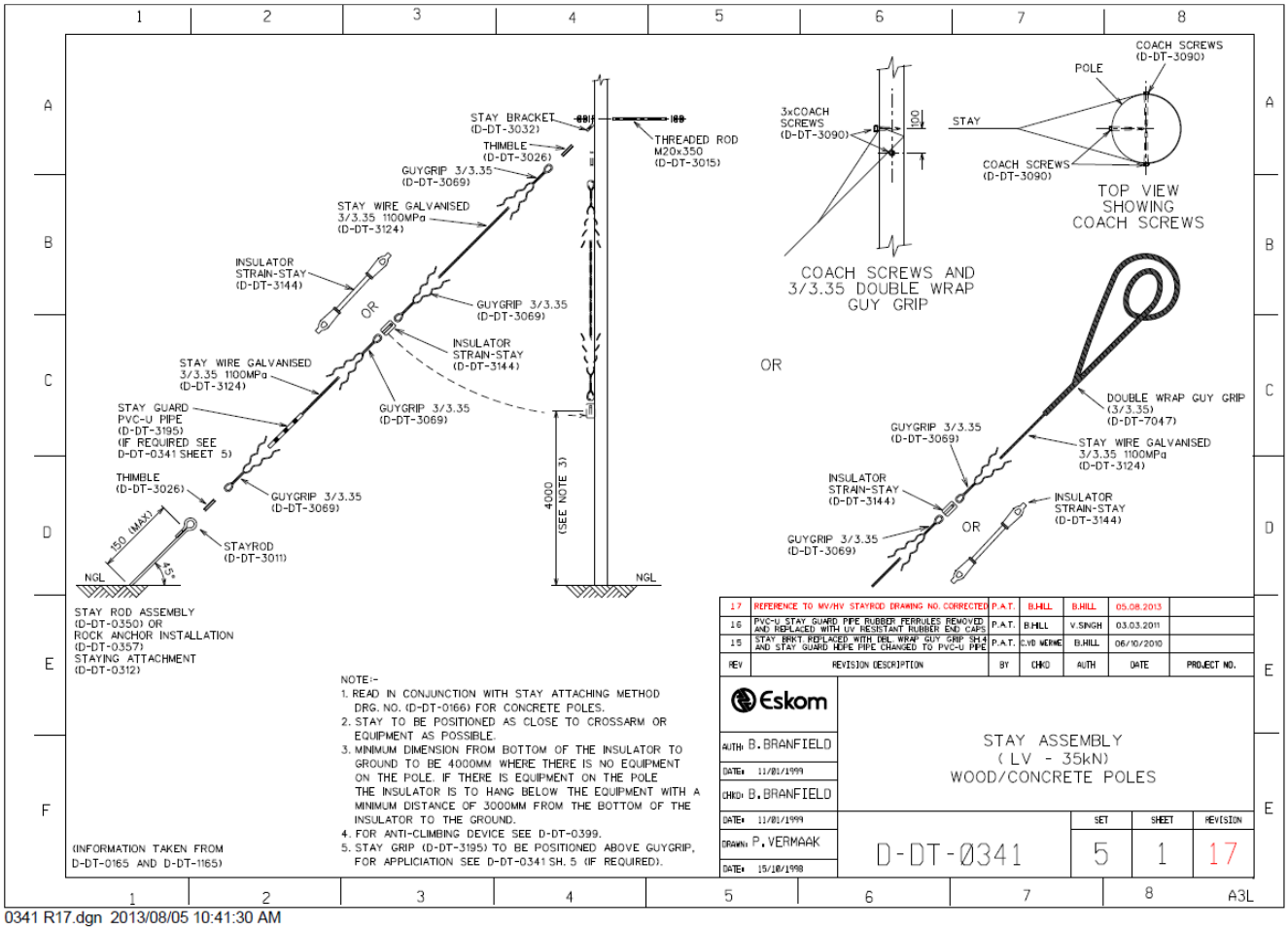
D-DT-0350

SET	SHEET	REVISION
2	1	5

A3L

D-DT-

DETAIL STRUCTURE DRAWINGS



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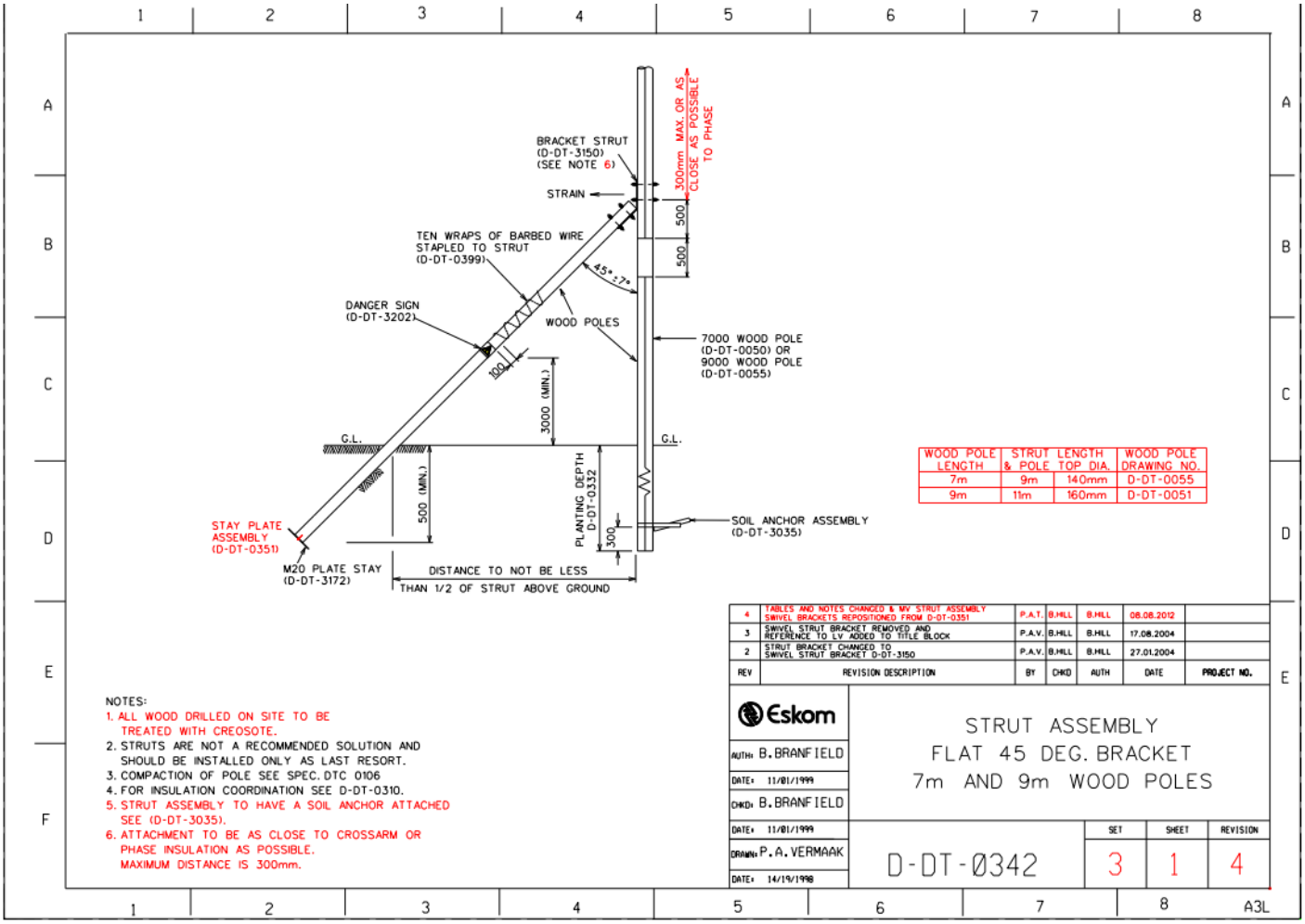


WOOD POLE LENGTH	STRUT LENGTH & POLE TOP DIA.		WOOD POLE DRAWING NO.
7m	9m	140mm	D-DT-0055
9m	11m	160mm	D-DT-0051

NOTES:
1. ALL WOOD DRILLED ON SITE TO BE TREATED WITH CREOSOTE.
2. STRUTS ARE NOT A RECOMMENDED SOLUTION AND SHOULD BE INSTALLED ONLY AS LAST RESORT.
3. COMPACTION OF POLE SEE SPEC. DTC 0106
4. FOR INSULATION COORDINATION SEE D-DT-0310.
5. STRUT ASSEMBLY TO HAVE A SOIL ANCHOR ATTACHED SEE (D-DT-3035).
6. ATTACHMENT TO BE AS CLOSE TO CROSSARM OR PHASE INSULATION AS POSSIBLE. MAXIMUM DISTANCE IS 300mm.

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
4	TABLES AND NOTES CHANGED & MV STRUT ASSEMBLY SWIVEL BRACKETS REPOSITIONED FROM D-DT-0351	P.A.T.	B.HILL	B.HILL	08.08.2012	
3	SWIVEL STRUT BRACKET REMOVED AND REFERENCE TO LV ADDED TO TITLE BLOCK	P.A.V.	B.HILL	B.HILL	17.08.2004	
2	STRUT BRACKET CHANGED TO SWIVEL STRUT BRACKET D-DT-3150	P.A.V.	B.HILL	B.HILL	27.01.2004	

Eskom

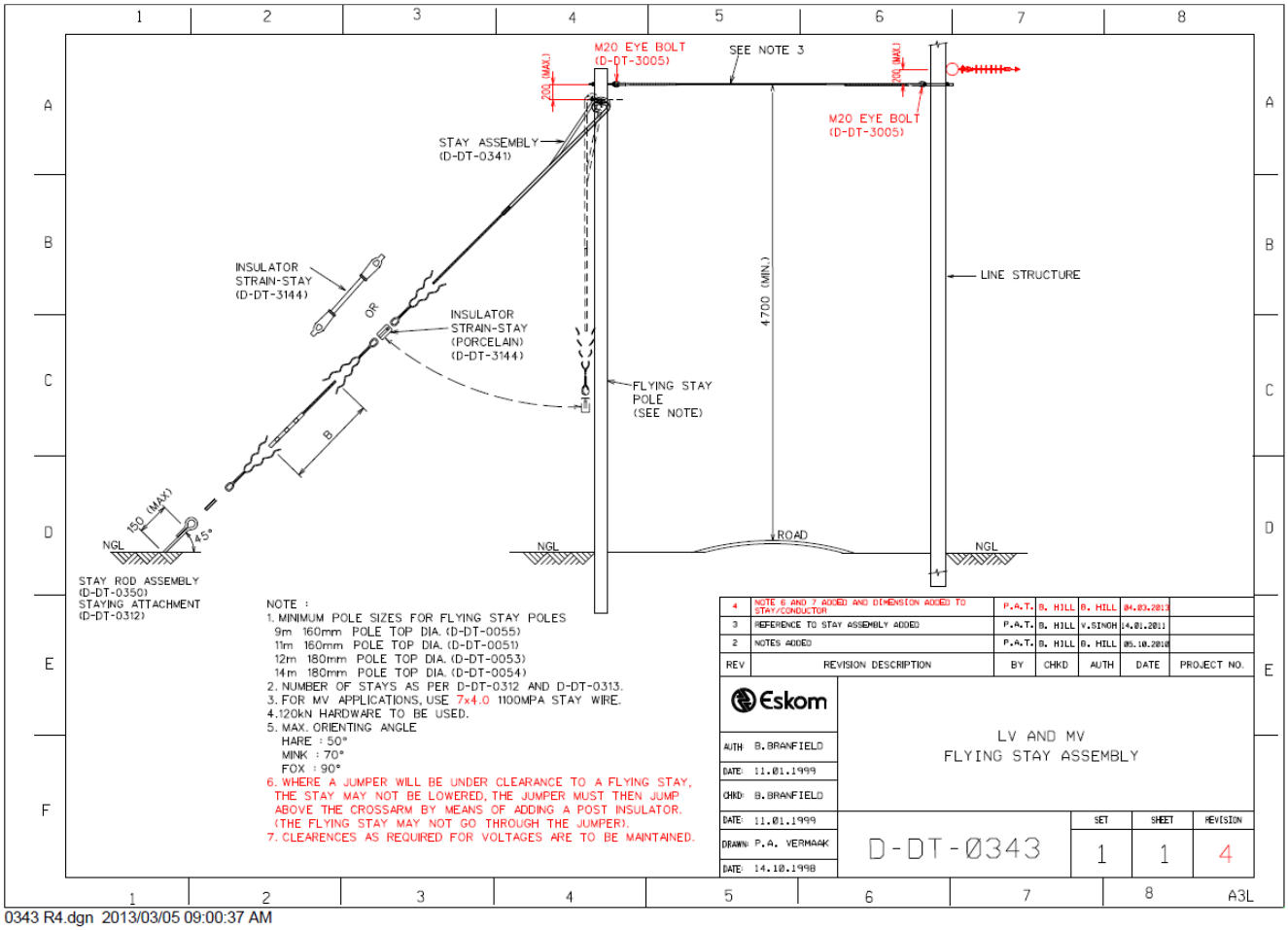
AUTH: B.BRANFIELD
DATE: 11/01/1999
CHKD: B.BRANFIELD
DATE: 11/01/1999
DRAWN: P.A.VERMAAK
DATE: 14/19/1998

STRUT ASSEMBLY
FLAT 45 DEG. BRACKET
7m AND 9m WOOD POLES

D-DT-0342

SET	SHEET	REVISION
3	1	4

A3L



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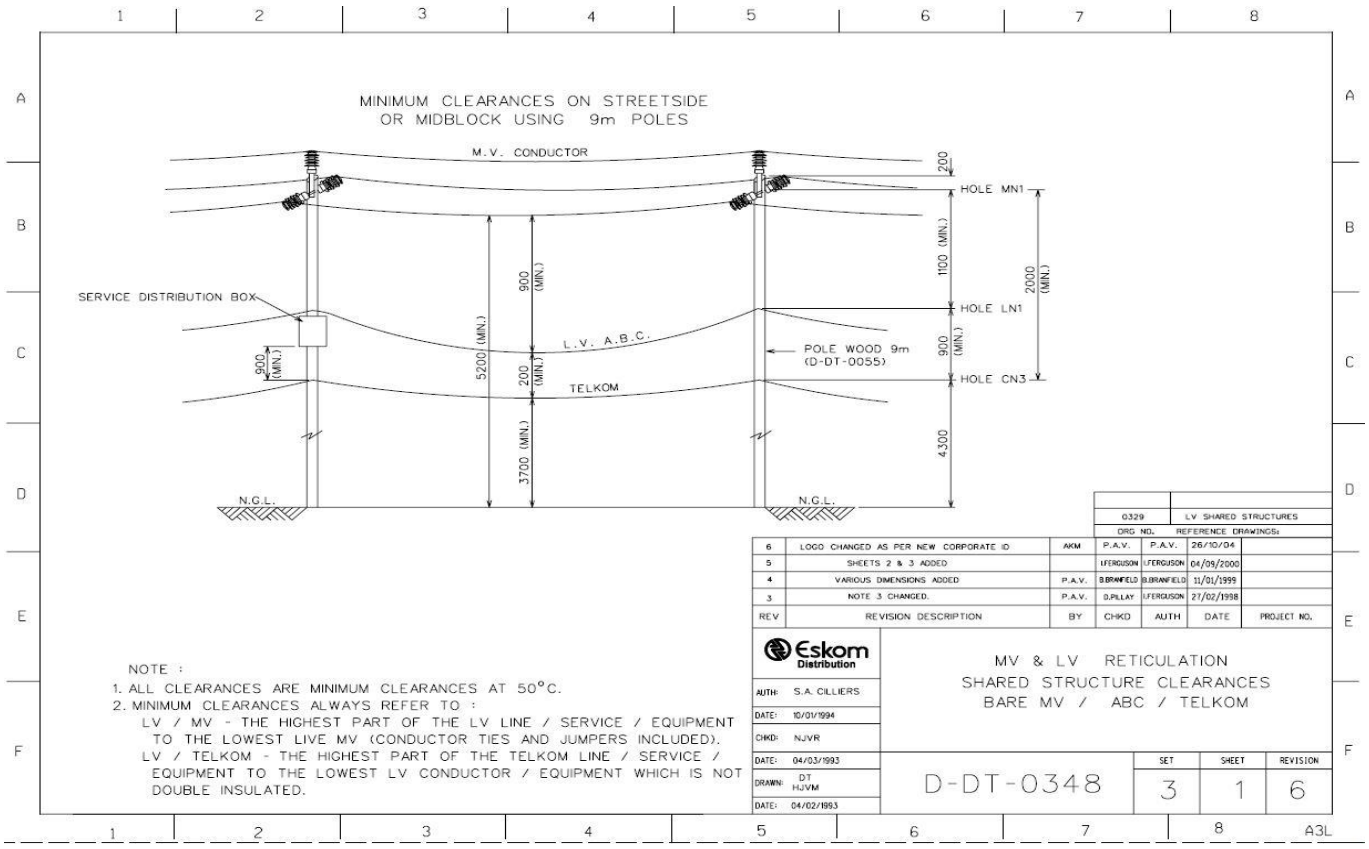
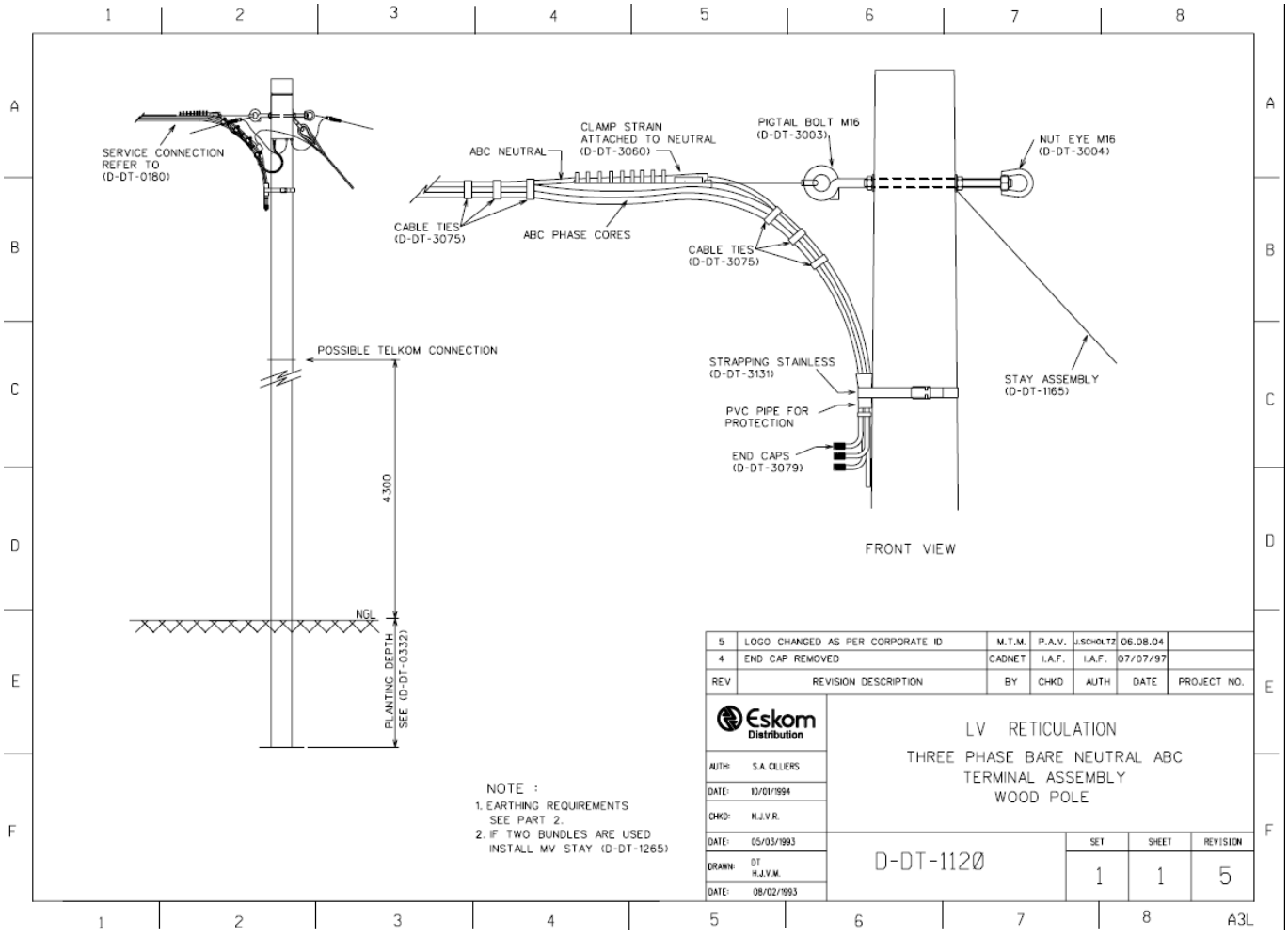
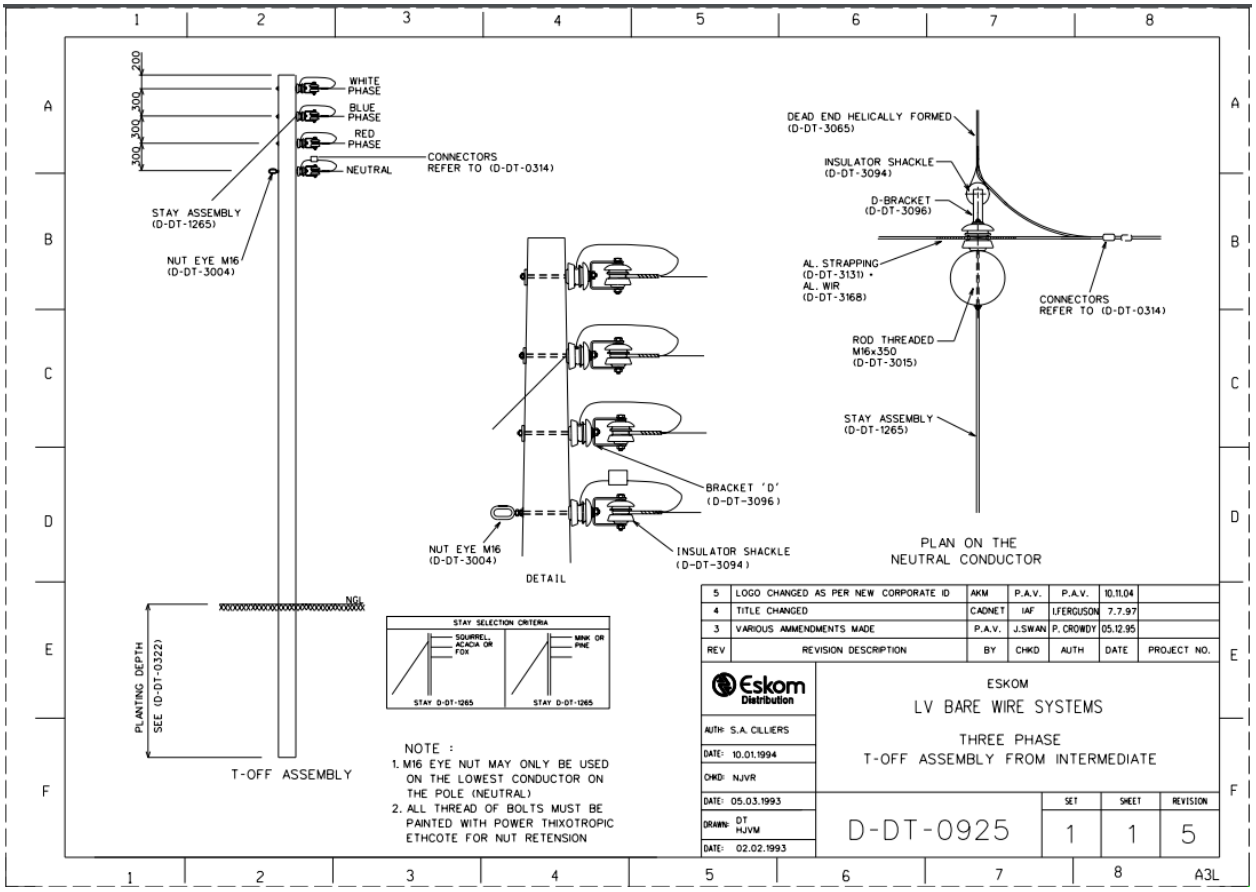

MINIMUM CLEARANCES ON STREETSIDE
OR MIDBLOCK USING 9m POLES
M.V. CONDUCTOR
SERVICE DISTRIBUTION BOX
L.V. A.B.C.
TELKOM
POLE WOOD 9m
(D-DT-0055)
HOLE MN1
HOLE LN1
HOLE CN3
200
100 (MIN.)
2000 (MIN.)
900 (MIN.)
5200 (MIN.)
200 (MIN.)
3700 (MIN.)
4300
N.G.L.
N.G.L.
NOTE :
1. ALL CLEARANCES ARE MINIMUM CLEARANCES AT 50°C.
2. MINIMUM CLEARANCES ALWAYS REFER TO :
LV / MV - THE HIGHEST PART OF THE LV LINE / SERVICE / EQUIPMENT TO THE LOWEST LIVE MV (CONDUCTOR TIES AND JUMPERS INCLUDED).
LV / TELKOM - THE HIGHEST PART OF THE TELKOM LINE / SERVICE / EQUIPMENT TO THE LOWEST LV CONDUCTOR / EQUIPMENT WHICH IS NOT DOUBLE INSULATED.
0329
LV SHARED STRUCTURES
ORG NO.
REFERENCE DRAWINGS:
6 LOGO CHANGED AS PER NEW CORPORATE ID AKM P.A.V. P.A.V. 26/10/04
5 SHEETS 2 & 3 ADDED L.FERGUSON L.FERGUSON 04/09/2000
4 VARIOUS DIMENSIONS ADDED P.A.V. B.BRANFIELD B.BRANFIELD 11/01/1999
3 NOTE 3 CHANGED. P.A.V. D.PILLAY L.FERGUSON 21/02/1998
REV REVISION DESCRIPTION BY CHKD AUTH DATE PROJECT NO.
Eskom Distribution
AUTH: S.A. CILLIERS
DATE: 10/01/1994
CHKD: NJVR
DATE: 04/03/1993
DRAWN: DT HJVM
DATE: 04/02/1993
MV & LV RETICULATION
SHARED STRUCTURE CLEARANCES
BARE MV / ABC / TELKOM
D-DT-0348
SET 3
SHEET 1
REVISION 6
A3L


SERVICE CONNECTION
REFER TO
(D-DT-0180)
ABC NEUTRAL
CLAMP STRAIN
ATTACHED TO NEUTRAL
(D-DT-3060)
PIGTAIL BOLT M16
(D-DT-3003)
NUT EYE M16
(D-DT-3004)
CABLE TIES
(D-DT-3075)
ABC PHASE CORES
CABLE TIES
(D-DT-3075)
STRAPPING STAINLESS
(D-DT-3131)
PVC PIPE FOR
PROTECTION
END CAPS
(D-DT-3079)
STAY ASSEMBLY
(D-DT-1165)
FRONT VIEW
POSSIBLE TELKOM CONNECTION
4300
NGL
PLANTING DEPTH
SEE (D-DT-0332)
NOTE :
1. EARTHING REQUIREMENTS
SEE PART 2.
2. IF TWO BUNDLES ARE USED
INSTALL MV STAY (D-DT-1265)
5 LOGO CHANGED AS PER CORPORATE ID M.T.M. P.A.V. J.SCHOLTZ 06.08.04
4 END CAP REMOVED CADNET I.A.F. I.A.F. 07/07/97
REV REVISION DESCRIPTION BY CHKD AUTH DATE PROJECT NO.
Eskom Distribution
AUTH: S.A. CILLIERS
DATE: 10/01/1994
CHKD: N.J.V.R.
DATE: 05/03/1993
DRAWN: DT H.J.V.M.
DATE: 08/02/1993
LV RETICULATION
THREE PHASE BARE NEUTRAL ABC
TERMINAL ASSEMBLY
WOOD POLE
D-DT-1120
SET 1
SHEET 1
REVISION 5
A3L


200
300
300
300
WHITE PHASE
BLUE PHASE
RED PHASE
NEUTRAL
CONNECTORS REFER TO (D-DT-0314)
STAY ASSEMBLY (D-DT-1265)
NUT EYE M16 (D-DT-3004)
NGL
PLANTING DEPTH SEE (D-DT-0322)
T-OFF ASSEMBLY
STAY SELECTION CRITERIA
SQUIRREL, ACACIA OR FOX
MINK OR PINE
STAY D-DT-1265
STAY D-DT-1265
NOTE :
1. M16 EYE NUT MAY ONLY BE USED ON THE LOWEST CONDUCTOR ON THE POLE (NEUTRAL)
2. ALL THREAD OF BOLTS MUST BE PAINTED WITH POWER THIXOTROPIC ETHCOTE FOR NUT RETENSION
BRACKET 'D' (D-DT-3096)
NUT EYE M16 (D-DT-3004)
INSULATOR SHACKLE (D-DT-3094)
DETAIL
DEAD END HELICALLY FORMED (D-DT-3065)
INSULATOR SHACKLE (D-DT-3094)
D-BRACKET (D-DT-3096)
AL. STRAPPING (D-DT-3131) + AL. WIR (D-DT-3168)
CONNECTORS REFER TO (D-DT-0314)
ROD THREADED M16x350 (D-DT-3015)
STAY ASSEMBLY (D-DT-1265)
PLAN ON THE NEUTRAL CONDUCTOR
5 LOGO CHANGED AS PER NEW CORPORATE ID AKM P.A.V. P.A.V. 10.11.04
4 TITLE CHANGED CADNET IAF I.FERGUSON 7.7.97
3 VARIOUS AMMENDMENTS MADE P.A.V. J.SWAN P. CROWDY 05.12.95
REV REVISION DESCRIPTION BY CHKD AUTH DATE PROJECT NO.
Eskom Distribution
AUTH: S.A. CILLIERS
DATE: 10.01.1994
CHKD: NJVR
DATE: 05.03.1993
DRAWN: DT HJVM
DATE: 02.02.1993
ESKOM
LV BARE WIRE SYSTEMS
THREE PHASE
T-OFF ASSEMBLY FROM INTERMEDIATE
D-DT-0925
SET 1
SHEET 1
REVISION 5
A3L