

PARTICULARS OF THE BIDDER					
NAME OF THE BIDDING OR TENDERING COMPANY					
COMPANT					
POSTAL ADDRESS					
	POSTAL CODE				
STREET ADDRESS (PHYICAL ADDRESS)					
E-MAIL ADDRESS	POSTAL CODE				
TELEPHONE NUMBER (TELKOM LINE)					
CIDB CRS NUMBER (IF APPLICABLE)					
CELLPHONE NUMBER					
ALTERNATE CELLPHONE NO.					
CENTRAL SUPPLIER DATABASE NUMBER OF THE BIDDING COMPANY					



# RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS

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### **TENDERING CONDITIONS**

- 1. The document must be completed in full as per the guide provided under administrative evaluation document completion.
- 2. All mandatory documents must be attached as per the guide under administrative evaluation attachment of mandatory documents.
- 3. The document must not be dismantled; page numbers must be sequential.
- 4. Bidders must be registered on CSD.
- 5. For all documents that will need certification (and affidavits where applicable) bidders must not submit copies/copies of certified copies.
- 6. Only black ink must be used when completing the tender document.
- 7. Electronic signatures are not allowed.
- 8. Bidders are not allowed to use correction pens. In a case where a wrong answer is ticked, a straight line must be made across the wrong answer, then initial next to the mistake and a correct answer must be ticked or provided in writing.

NB! FAILURE TO ADHERE TO THE ABVOVE INSTRUCTIONS WILL RENDER THE TENDER INVALID AND RESULT IN DISQUALIFICATION



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### **ADMINISTRATIVE EVALUATION (DOCUMENT COMPLETION)**

# <u>PLEASE READ AND FOLLOW INSTRUCTIONS BELOW ON HOW TO COMPLETE DIFFERENT FORMS IN</u> THE DOCUMENT AND FILL THEM AS INSTRUCTED

- ✓ The tender documents must be completed in full i.e. Compulsory Questionnaire (where applicable), MBD 1, MBD 4, MBD 5, MBD 6.1, MBD 7.2, MBD 8, MBD 9, Section 38, Signatory Resolution Form, Pricing Schedule, and the Form of Offer, including all witness signatures on all the above stated forms.
- ✓ NB! FAILURE TO ADHERE TO THE BELOW MENTIONED POINTS WILL INVALIDATE THE TENDER AND RESULT IN DISQUALIFICATION
  - COMPULSORY QUESTIONAIRE must be fully completed and signed (where applicable)

    In a case of Joint Venture separate COMPULSORY QUESTIONAIRE forms must be completed and submitted.
  - MBD 1 must be fully completed and signed
  - MBD 4 must be fully completed and signed: only tick the appropriate answer. Please be informed that whether you scratch out, tick or circle, your answer will be where the pen ink is reflecting.
     In a case of Joint Venture or multi- directors, full details of all directors / trustees / shareholders / members must be provided on the table on MBD 4.
  - MBD 5 (where applicable) must be fully completed and signed: only tick the appropriate answer. Please
    be informed that whether you scratch out, tick or circle, your answer will be where the pen ink is
    reflecting. In a case of Joint Venture separate MBD 5 forms must be completed and submitted.
  - MBD 6.1 must be fully completed and signed.
  - MBD 7.2 must be fully completed and signed.
  - MBD 8 must be fully completed and signed: only tick the appropriate answer box, whether you scratch
    out, tick or circle, your answer will be where the pen ink is reflecting
  - MBD 9 must be fully completed and signed
  - SECTION 38 must be fully completed and signed: only tick the appropriate answer box, whether you scratch out, tick or circle, your answer will be where the pen ink is reflecting. Note that should you answer "NO" to any of the declaration questions on section 38 form, then supporting documents MUST be attached
  - SIGNATORY AUTHORISATION must be fully completed and signed
  - PRICING SCHEDULE must be fully completed and signed



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ADMINISTRATIVE EVALUATION (ATTACHMENT OF MANDATORY DOCUMENTS)

- ✓ Deposit slip with tender reference number as indicated on the advert
- ✓ Proof of CSD registration (CSD report)
- ✓ Required CIDB Grading Certificate (where applicable)
- ✓ Signatory resolution Please attach a copy of Signatory resolution where instructed
- ✓ If the submission is from a Joint Venture, then a JV agreement must be attached
- ✓ A valid and certified (not older than (3) three months on the date of tender closure) BBBEE Certificate for the company (if it is a JV the BBBEE must be consolidated)

FOR ALL DOCUMENTS THAT WILL NEED CERTIFICATION (AND AFFIDAVITS WHERE APPLICABLE) BIDDERS MUST NOT SUBMIT COPIES/ COPIES OF CERTIFIED COPIES.

# **MUNICIPAL RATES AND TAXES STATEMENTS OF THE DIRECTORS**

- Municipal rates and taxes statement of the last billable month on the date of tender closure for each directors' address must be attached; or
- ✓ Valid lease agreement of the director/s (showing lease period) or,
- ✓ An original letter (not a copy) from tribal authority not older than three (3) months if the director/s are residing in a tribal land, or
- ✓ If the rates and taxes account are not in the names of the director/s the attached municipal rates and taxes statement must be submitted together with an original affidavit from the property owner whose names are reflecting on the municipal rates and taxes statement to confirm that the director resides in their property.

#### **MUNICIPAL RATES AND TAXES STATEMENTS OF THE COMPANY**

- Municipal rates and taxes statement of the last billable month on the date of tender closure for the company's' address must be attached; or
- ✓ Valid lease agreement of the company (showing all critical contractual obligations, or)
- ✓ An original letter (not a copy) from a tribal authority not older than three (3) months if the company is operating from a tribal, or
- ✓ If the rates and taxes account are not in the names of the company, the attached municipal rates taxes statement must be submitted together with an original affidavit from the property owner whose names are reflecting on the municipal rates and taxes statement to confirm that the company operates from their property.

### <u>NB!!</u>

- ✓ FOR PROCUREMENT EXPECTED TO BE LESS THAN 10 MILLION, AWARDS WILL NOT BE MADE TO BIDDERS OWING MUNICIPAL RATES AND TAXES FOR OVER 90 DAYS AT THE TIME OF TENDER CLOSURE
- ✓ FOR PROCUREMENT EXPECTED TO BE MORE THAN 10 MILLION, AWARDS WILL NOT BE MADE TO BIDDERS OWING MUNICIPAL RATES AND TAXES FOR OVER 30 DAYS AT THE TIME OF TENDER CLOSURE



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# **VERIFICATION OF DOCUMENTS AND INFORMATION.**

- ✓ Tax compliance status will be verified using CSD number. (For a bidder to be considered for final award, their status must reflect "tax compliance" before final award is made)
- ✓ CIDB Grading will be verified
- ✓ BBBEE certificates will be verified with relevant registration bodies.
- ✓ A Sworn Affidavit will be accepted only if an original is submitted.

# **ALLOCATION OF BBBEE POINTS**

- ✓ No points will be allocated for a BBBEE certificate that is a copy of a certified copy or not that is not certified.
- ✓ No points will be allocated if the attached sworn affidavit (BBBEE) is a copy.

### **INSTRUCTION ON THE SUBMISSION OF TENDER DOCUMENTS**

- ✓ A tender document must be in a sealed envelope that has on the outside the bid number and bid description. Both the bid number and the bid description must be on the envelope for the document to be acceptable.
- ✓ If the bid number and description are not clearly marked on the envelope, the bid will not be received
- ✓ The tender document must be in the tender box before the specified closing time and date.
- ✓ Bidders who arrive when the tender box is open are late and their submissions will not be accepted.



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- 1. Documents will be available on E-tender and RLM websites respectively 5 working days after the advert date at a non-refundable fee of R1000.00
- 2. A compulsory briefing session will be held on the 03 November, from 10H00 TO 10H30 at Rustenburg Local Municipality Electrical Department 98 Zendeling Street
- Sealed bid documents marked: "RLM/DTIS/0026/2021/22 APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS" must be placed in the bid box in the foyer of the Municipal offices, Missionary Mpheni House, Beyers Naude Drive, Rustenburg not later than 14 JANUARY 2022 @ 09H00,
- 4. The bid will be evaluated as follows: Administrative evaluation (document completion and attachment of mandatory documents), and 80/20 preferential point system (price = 80 & BBBEE points = 20)
- 5. Please note that no bid documents given to couriers will not be signed for by Rustenburg Local Municipality.
- 6. The Council will not be responsible for bids not received or received late by mail. Bids will remain valid for 90 days (Ninety).
- 7. All bids will be adjudicated based on the prescribed criterion as stipulated in the document.
- 8. An updated record of payment of rates, taxes and services to the relevant Municipality must be attached. Failure to do so will invalidate the bid submitted
- 9. No bids will be considered from any person(s) in the service of the state (as defined in Regulation 1 of Local Government: Municipal Supply Chain Management Regulations).
- 10. Objections or complaints must be submitted in writing to the Municipal Manager at the address stated, and must contain the following:
  - (a) reasons and/or grounds for the objection or complaint.
  - (b) the way in which the objector or complainant's rights have been affected; and
  - (c) the remedy sought by the objector or complainant.
  - 11. Any objection or complaint must reach the Municipal Manager with a 14-day period after award has been made. Late objections or complaints will not be entertained
- 12. All bids must be submitted on the official forms provided and a successful bidder will be required to fill and sign a written Contract Form (MBD 7).

RUSTENBURG LOCAL MUNICIPALITY, P.O. BOX 16, MISSIONARY MPHENI HOUSE



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# PART A INVITATION TO BID

MBD 1

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE RUSTENBURG LOCAL MUNICIPALITY								
		CLOSING   CLOSING   CLOSING TIME: 09H00						
BID NUMBER:						CLOSING T		09H00
	APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION							
	IN BOITEKONG FOR							
DESCRIPTION	AVAILABLE FOR A PI				LIII AO A	ND WIILN	ONDO	DECONIES
	FUL BIDDER WILL BE R			A WF	RITTEN CON	ITRACT FOR	M (MBI	07).
BID RESPONSE SITUATED AT:	DOCUMENTS MAY BE	DEPOSITED IN THE B	ID BOX				•	
RUSTENBURG	LOCAL MUNICIPALITY							
MISSIONARY M	PHENI HOUSE							
CNR BEYERS N	IAUDE AND NELSON M	ANDELA DRIVE, RUS	STENBURG	}				
SUPPLIER INFO	RMATION							
NAME OF BIDD	ER							
POSTAL ADDR	ESS							
STREET ADDRI	ESS		1			ı		
TELEPHONE N	UMBER	CODE			NUMBER			
CELLPHONE N	UMBER							
FACSIMILE NUI	MBER	CODE			NUMBER			
E-MAIL ADDRE	SS							
VAT REGISTRA	TION NUMBER							
TAX COMPLIAN	ICE STATUS	TCS PIN:			CSD No:			
				B-B				
B-BBEE STATUS LEVEL STATUS								
VERIFICATION CERTIFICATE Yes LEVEL Yes   SWORN								
I TION AFFLICA	PLL DOV	□ No AFFIDAVIT □ No						
	[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE							
SUBMITTED IN	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 BAS SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?		☐Yes ☐No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED		TOTAL BID PR	ICE	R
SIGNATURE OF BIDDER		DATE		
CAPACITY UNDER WHICH THIS BID IS SIGNED				
BIDDING PROCEDURE ENQUIRIES MA	AY BE DIRECTED TO:	TECHNICAL INFO	RMAT	ION MAY BE DIRECTED
DEPARTMENT	SCM	CONTACT PERSON	Mr. P	. Bergh
CONTACT PERSON	MR J MASINGA	TELEPHONE NUMBER	014 5	590 3371
TELEPHONE NUMBER	0145903123	E-MAIL ADDRESS	pberg	nh@rustenburg.gov.za
E-MAIL ADDRESS	<pre>imasinga@rustenburg.gov.za &amp;tenders@rustenburg.gov.za</pre>			



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# TERMS AND CONDITIONS FOR BIDDING

1.	BID SORMISSION:		
1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO TH FOR CONSIDERATION.	E CORRECT ADDRESS. LA	TE BIDS WILL NOT BE ACCEPTED
1.2.	ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PRO	OVIDED, COMPLETED WITH	H A BLACK PEN
1.3.	THIS BID IS SUBJECT TO THE RLM SUPPLY CHAIN MANAFRAMEWORK ACT AND THE PREFERENTIAL PROCUREME CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIA	NT REGULATIONS, 2017,	THE GENERAL CONDITIONS OF
2.	TAX COMPLIANCE REQUIREMENTS		
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBL	IGATIONS.	
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S		
2.3	APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED WEBSITE WWW.SARS.GOV.ZA.		
2.4	FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QU	JESTIONNAIRE IN PART B:	3.
2.5	BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE T	OGETHER WITH THE BID.	
2.6	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CON SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.	TRACTORS ARE INVOLVE	D; EACH PARTY MUST SUBMIT A
2.7	WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTE NUMBER MUST BE PROVIDED.	RED ON THE CENTRAL SU	IPPLIER DATABASE (CSD), A CSD
3.	QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS		
3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AF	RICA (RSA)?	☐ YES ☐ NO
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA?		☐ YES ☐ NO
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN	THE RSA?	☐ YES ☐ NO
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RE	SA?	☐ YES ☐ NO
IF TH SYS	<b>IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXA</b> HE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A RE TEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE	QUIREMENT TO REGISTER E (SARS) AND IF NOT REGIS	STER AS PER 2.3 ABOVE.
	AILURE TO PROVIDE ANY OF THE ABOVE PARTICU	-	
NO B	IDS WILL BE CONSIDERED FROM PERSONS IN THE	SERVICE OF THE STA	ATE.
SIGN	ATURE OF BIDDER:		
CAPA	ACITY UNDER WHICH THIS BID IS SIGNED:		



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# MBD 4: DECLARATION OF INTEREST

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

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

In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.
3.1 Full Name of bidder or his or her representative:
3.2 Identity Number:
3.3 Position occupied in the Company (director, trustee, hareholder²):
3.4 Company Registration Number:
3.5 Tax Reference Number:
3.6 VAT Registration Number:
3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
3.8 Are you presently in the service of the state?
(Tick applicable box)
YES NO
3.8.1 If yes, furnish particulars.
<sup>1</sup> MSCM Regulations: "in the service of the state" means to be –  (a) a member of –  (i) any municipal council;  (ii) any provincial legislature; or  (iii) the national Assembly or the national Council of provinces;
(b) a member of the board of directors of any municipal entity; (c) an official of any municipality or municipal entity;

(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act

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

No.1 of 1999);



<sup>2</sup> Shareholder	" means a pers	on who owns	shares in the	company	and is act	tively involv	ed in the
management	of the company	or business	and exercises	control ov	er the co	mpany.	

3.9	Have you been in the service of the state for the past twelve months?  (Tick applicable box)
	YES NO
3.9.1 l	f yes, furnish particulars
3.10	Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?
	(Tick applicable box)  YES NO
3.10.1	If yes, furnish particulars
	Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service state who e involved with the evaluation and or adjudication of this bid?
	(Tick applicable box) YES NO
3.11.1	If yes, furnish particulars
	Are any of the company's directors, trustees, managers, ble shareholders or stakeholders in service of the state?
	(Tick applicable box)
	YES NO
3.12.1	If yes, furnish particulars





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

Full Name	Identity Number	Personal Reference Tax Number	State Employee Number
Signature	<b></b>	Date	
Capacity		 Name of Bidder	



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MBD 5

# DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

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

1	Are you by law required to prepare annual financial statements for auditing?  *YES NO
1.1	If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.
2	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?  *YES NO
2.1 <b>2.2</b>	If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.  If yes, provide particulars.
	ii yoo, provido partiodidio.
3	Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?  *YES NO
3.1	If yes, furnish particulars



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

			"YES	NO
4.1	If yes, furnish particulars			
	CERTIFICATION			
I, THE I	JNDERSIGNED (FULL NAME)			
	Y THAT THE INFORMATION FURNISHED ON THIS DECLARA IND CORRECT.	TION FORM IS		
	PT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE	•		
Name	/s and Surname of Bidder	Signature		
			2021	

Position in the Firm/Company

Date



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# MBD 6.1 PREFERENCE CLAIMED IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

#### 1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to all bids:
  - the 80/20 system for requirements with a Rand value 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

- a) The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable; or
- b) The 80/20 preference point system will be applicable to this tender Points for this bid shall be awarded for:
- (a) Price: and
- (b) B-BBEE Status Level of Contributor.
- 1.3 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	20
Total points for Price and B-BBEE must not exceed	100

- 1.4 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.
- 1.5 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

#### 2. DEFINITIONS

- (a) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act:
- (b) "B-BBEE status level of contributor" means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) "bid" means a written offer in a prescribed or stipulated form in response to an invitation by an organ of



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state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals:

- (d) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) "EME" means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) "functionality" means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) "prices" includes all applicable taxes less all unconditional discounts;
- (h) "proof of B-BBEE status level of contributor" means:
  - 1) B-BBEE Status level certificate issued by an authorized body or person;
  - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
  - 3) Any other requirement prescribed in terms of the B-BBEE Act;
  - (i) "QSE" means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (j) "rand value" means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes:

#### 3. POINTS AWARDED FOR PRICE

#### 3.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

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

Where

Ps = Points scored for price of bid under consideration

Pt = Price of bid under consideration
P min = Price of lowest acceptable bid

#### 4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18



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	DEL I ON A I ENIOD OF THINEE	<u> </u>
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

	8	1	2	
	Non-compliant contributor	0	0	
5.	BID DECLARATION			•
5.1	Bidders who claim points in respe	ect of B-BBEE Status Level of Cor	tribution must complete the follo	owing:
6.	B-BBEE STATUS LEVEL OF CO	ONTRIBUTOR CLAIMED IN TERI	MS OF PARAGRAPHS 1.4 ANI	D 4.1
6.1	B-BBEE Status Level of Contribu	tor: . =(maximu	ım of 10 or 20 points)	
		agraph 7.1 must be in accordance evant proof of B-BBEE status leve		agraph 4.1
7.	SUB-CONTRACTING			
7.1	Will any portion of the contract be	e sub-contracted?		
	(Tick applicable box)			
	YES NO			

7.1.1	If yes, indicate:
	i) What percentage of the contract will be subcontracted% ii) The name of the sub-contractor
	(Tick applicable box)  YES NO

y) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at last 51% owned by:	EME√	QSE√
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		



Any C	OSE
8.	DECLARATION WITH REGARD TO COMPANY/FIRM
8.1	Name of company/firm:
8.2	VAT registration number:
8.3	Company registration number:
8.4	TYPE OF COMPANY/ FIRM
	<ul> <li>□ Partnership/Joint Venture / Consortium</li> <li>□ One-person business/sole propriety</li> <li>□ Close corporation</li> <li>□ Company</li> <li>□ (Pty) Limited</li> <li>[TICK APPLICABLE BOX]</li> </ul>
8.5	DESCRIBE PRINCIPAL BUSINESS ACTIVITIES
8.6	COMPANY CLASSIFICATION
	<ul> <li>□ Manufacturer</li> <li>□ Supplier</li> <li>□ Professional service provider</li> <li>□ Other service providers, e.g. transporter, etc.</li> <li>[TICK APPLICABLE BOX]</li> </ul>
8.7	MUNICIPAL INFORMATION
	Municipality where business is situated:
	Registered Account Number:
	Stand Number:
8.8	Total number of years the company/firm has been in business:
8.9	I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the point claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:
	i) The information furnished is true and correct;
	ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 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 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct:
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have
  - (a) disqualify the person from the bidding 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 bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury 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.

WITNESSES	
1	SIGNATURE(S) OF BIDDERS(S)
2	DATE:ADDRESS



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#### **CONTRACT FORM - RENDERING OF SERVICES**

MDB 7.2

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SERVICE PROVIDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SERVICE PROVIDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

# PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)

1.	-		render services			_	•		
	accorda Number	ance with the rr acceptance	ne requirements by the Purchase	and task	directives the price/s	/ proposals quoted. My of	specifications offer/s remain bi	stipulated nding upon	in Bid me and
2.	The follo(i)  (ii)  (iii)	Bidding doct Inv Inv Pric Fill Pre Co De De Spe	itation to bid; c compliance stating schedule(s) ed in task directive ference claims intribution in termical claration of interection of bidden crificate of Independent Conditions of Contral	tus (CSD rep ; ve/proposal; for Broad is of the Prefe est; er's past SCN endent Bid De of Contract;	ort); Based Blaerential Prod	ick Economicurement Reg	c Empowermer		
3. 4.	quoted obligation	cover all the ons and I acce t full responsib	satisfied myself services specified that any mistability for the properties as the principal	ed in the bio akes regardir er execution a	lding docung price(s) a and fulfilmen	nents; that th nd rate(s) and t of all obligat	e price(s) and in d calculations wi ions and conditions	rate(s) cove	r all mý wn risk.
5.	I declar	•	no participation in					erson regard	ding this
6.		n that I am du (PRINT)	ly authorised to	sign this cont	l l	WITNESSE	S		
	CAPAC	ITY				1			
	SIGNA	TURE				2			
	NAME (	OF FIRM				DATE:			
	DATE								
								23	



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MBD 7.2

# **CONTRACT FORM - RENDERING OF SERVICES**

# PART 2 (TO BE FILLED IN BY THE PURCHASER [RLM])

1.	Iaccept your bid under reference rendering of services indicated he	number	·····	dated	for the	;
2.	An official order indicating service	delivery instruction	ns is forthcoming.			
3.	I undertake to make payment for contract, within 30 (thirty) days aft			ce with the terms	and conditions of the	!
	DESCRIPTION OF SERVICE	PRICE (ALL APPLICABLE TAXES INCLUDED)	COMPLETION DATE	B-BBEE STATUS LEVEL OF CONTRIBUTIO N	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)	
4.	I confirm that I am duly authorized	I to sign this contra	ct.			
SIGNE	O AT	ON				
NAME (	(PRINT)					
SIGNA	TURE			WITNESSI		
OFFICI	AL STAMP			1		
				DATE:	•••••••	



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# MBD 8: DECLARATION OF ABUSE OF SUPPLY CHAIN MANAGEMENT SYSTEM

- 1 This Standard Bidding Document must form part of all bids invited.
- It serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- The bid of any bidder may be disregarded if that bidder, or any of its directors have
  - a. abused the institution's supply chain management system;
  - b. committed fraud or any other improper conduct in relation to such system; or
  - c. failed to perform on any previous contract.
- In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.



Item	Question Question	Yes	Λ
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?	Yes	N
	Companies or persons who are listed on this Database were informed in writing of this		
	restriction by the Accounting Officer/Authority of the institution that imposed the restriction after		
	the audi alteram partem rule was applied). The Database of Restricted Suppliers now resides		
	on the National Treasury's website ( <u>www.treasury.gov.za</u> ) and can be accessed by clicking		
	on its link at the bottom of the home page.		
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website ( <a href="www.treasury.gov.za">www.treasury.gov.za</a> ) by clicking on its link at the bottom of the home page.	Yes	
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years?	Yes	N
4.3.1	If so, furnish particulars:		
4.4	Was any contract between the hidder and any organ of state terminated during the past five	Vaa	- NI
4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes	No
4.4.1	If so, furnish particulars:		
	CERTIFICATION		
INFO ADDI	E UNDERSIGNED (FULL NAME)CERTIFY THA RMATION FURNISHED ON THIS DECLARATION FORM IS TRUE AND CORRECT. I ACCEPT THAT TION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS ARATION PROVE TO BE FALSE.	, IN	
 N	Name/s and surname of Bidder Signature		
F	Position in the Firm/Company Date		



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#### MBD 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Municipal Bidding Document (MBD) must form part of all bids<sup>1</sup> invited.
- Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
  - a. take all reasonable steps to prevent such abuse;
  - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system: and
  - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
  - 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
  - In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

I the undersigned in submitting the accompanying hid:

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

	(Bid Number and Description)
in response to the invitation for the bi	d made by:
	(Name of Municipality / Municipal Entity)
do hereby make the following statement	ents that I certify to be true and complete in every respect
I certify, on behalf of:	tha
	(Name of Bidder)

<sup>&</sup>lt;sup>1</sup> Includes price quotations, advertised competitive bids, limited bids and proposals.



- 1. I have read and I understand the contents of this Certificate;
- 2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
- 3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
- 4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
- 5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
  - (a) has been requested to submit a bid in response to this bid invitation;
  - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
  - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
- 6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
- 7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - (a) prices;
  - (b) geographical area where product or service will be rendered (market allocation)
  - (c) methods, factors or formulas used to calculate prices;
  - (d) the intention or decision to submit or not to submit, a bid;
  - (e) the submission of a bid which does not meet the specifications and conditions of the bid;or
  - (f) bidding with the intention not to win the bid.
- 8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act



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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.

<sup>3</sup> 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.			
Signature	Date		
Position	Name of Bidder		



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# **SECTION 38: DECLARATION FORM**

Having examined the BID and the general conditions thereto, I/we hereby certify that the bid price in the bid schedules and the preference points claimed are correct.

I/We furthermore certify that I/we/the Company comply/complies with the issues around Section 38 of the Supply Chain Management Policy inter alia:

# IF ALL IS IN PLACE IN RESPECT OF THE CONTRACTUAL ISSUES LISTED IN THE TABLE BELOW; THE ANSWER SHOULD BE YES. ATTACH SUPPORTING INFORMATION IF ANY OF THE ANSWERS IS NO.

Note that the Municipality's Procurement Section will verify the statements.

I/we certify the following:

No.	CONTRACTUAL ISSUES	YES	NO
1.	In terms of Section 38 (1) (c) that the Bidder or any of the Directors is not listed as a person		
	prohibited from doing business with the Public Sector		
2.	In terms of Section 38 (1)(d) (i) that the Bidder or any of the Directors does not owe rates		
	and taxes or Municipal service charges to any Municipality that is in any arrears for more		
	than three (3) months. Copies of the latest Municipal service charges statement of the		
	Bidder and the Directors must be attached to the tender/bid document		
3.	In terms of Section 38 (1) (d) (ii) that the Bidder or any of the Directors has not failed to		
	perform satisfactorily on a previous/previous contract/s with the Municipality or any organ		
	of state		
4.	In terms of Section 38 (i) (9) that the Bidder or any of the Directors has not been convicted		
	for fraud or corruption during the past five (5) years		
5.	In terms of Section 38 (i) (9) (iv) that the Bidder or any of the Directors has not been listed		
	in the Register Of Tender Defaulters in terms of Section 29 of the Prevention and		
	Combating of Corrupt Activities Act, (Act No. 12 of 2004)		

	2021.
SIGNATURE OF BIDDER	DATE
FULL NAME AND SURNAME OF BIDDER IN BLOCK LETTERS	
COMPANY NAME:	
PHYSICAL ADDRESS:	
TELEPHONE NUMBER:	
EMAIL ADDRESS:	
WITNESS 1: WITNESS 2:	



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#### T1.2 BID DATA

#### **GENERAL**

The Conditions of Bid applicable to this contract is the Standard Conditions of Bid in Annex F of the CIDB Standard for uniformity in Construction Procurement in Board Notice No 12 of 2009 in Government Gazette No 31823 of January 2009.

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 preference in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Bid.

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

#### F.1.1 Actions

The Employer for this Contract is the Rustenburg Local Municipality

#### F.1.2 Bid Documents

(a) The Bid Document consists of the following:

#### THE BID

Part A: Invitation to bid and bidding procedures

Part A-I: Administrative evaluation (document completion and attachment of mandatory

documents)

#### THE CONTRACT

Part J: Agreement and Contract Data

Form of Offer and Acceptance

Contract Data

Part K-N: Pricing Data

Schedule of quantities Technical specification Technical data schedules

Annexures Bid drawings

#### F.1.4 Communication and Employer's Agent

All communication during the Bid Enquiry period shall be made to the Employer's representative as follows:

The Employer's representative is:

Name : **Mr. P Bergh** Tel. : **(014)** 590 3371

Fax : **N/A** 

E-mail address : pbergh@rustenburg.gov.za

# F.1.6.2 Competitive Negotiation Procedure

This clause is not applicable.



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# F.1.6.3 Proposal procedure using the two stage-system

This clause is not applicable.

#### F.2 Tenderer's obligations

Only those Bidders who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum Bid for an Electrical Engineering class of construction work, are eligible to submit Bids.

Joint ventures are eligible to submit Bids provided that:

- 1. every member of the joint venture is registered with the CIDB:
- the lead partner has a contractor grading designation in the <u>Electrical Engineering</u> class of construction work;
- 3. the combined contractor grading designation calculated in accordance with the Construction Industry

  Development Regulations is equal to or higher than a contractor grading designation determined in accordance
  with the sum Bided for an Electrical Engineering class of construction work.

For the sake of clarity and subject to satisfactory proof of a tenderer's ability to perform the work specified at the tendered rate, the Employer lists in the table below the margins it considers reasonable. In the event of the total bid value exceeding the margins shown then such tender shall be deemed unresponsive.

ADJUSTMENTS TO TENDER VALUE RANGES IN TERMS OF THE CONSTRUCTION INDUSTRY DEVELOPMENT REGULATIONS, 2004 (AS AMENDED)

These adjustments come into effect on 07 October 2019

GRADE	Upper limits as per CIDB Regulation 17	Approved Adjustment
1EP	R 200 000	R500 000
2EP	R 650 000	R1 000 000
3EP	R2 000 000	R3 000 000
4EP	R4 000 000	R6 000 000
5EP	R6 500 000	R10 000 000
6EP	R13 000 000	R20 000 000
7EP	R40 000 000	R60 000 000
8EP	R130 000 000	R200 000 000
9EP	No Ilmit	N/A

It will be the responsibility of all bidders to verify that the bid value of the entire Bid or portion thereof is below the margins upper limit of the grading the respective bidder qualifies for.

### F.2.7 Site inspection visit and clarification meeting

A compulsory clarification session will be held as stated in the bid advertisement.

#### F.2.10 Pricing the bid offer

As detailed in clause all rates and prices shall be fixed per financial contract year for the duration of the contract.



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# F.2.13 Submitting a Bid Offer

**F.2.13.3** Bid offers shall be submitted as an original document. Bidders are to ensure that they retain their own copy of the bid submission as this will not be provided by the Employer. It must be noted that an original copy will have to be provided on appointment of a successful contractor when requested by RLM.

#### F.2.13.5 Delivery of Bid

The Clients address for delivery of bid offers and identification details to be shown on each bid offer package are:

- (a) The returned bid offers shall be submitted as an original sealed in an envelope clearly marked with the bid number and description
- (b) The closing date and company name must also be endorsed on the envelope.
- (c) The sealed envelope must be placed in the bid box in the foyer of the Municipal Offices, Missionary Mpheni House, C/O Beyers Naude and Nelson Mandela Drive, Rustenburg later than the closing date stipulated in the bid advertisement.
- **F.2.13.6** This clause is not applicable.
- **F.2.13.7** This clause is not applicable.
- **F.2.14** A non-responsive bid will be disqualified prior to evaluation.

### F.2.15 Closing Time

The closing time for submission of Bid Offers is stipulated in the bid advertisement.

Telephonic, telegraphic, telex, facsimile, electronic, mailed or e-mailed bids will not be accepted.

#### F.2.16 Bid offer validity

The Bid Offer validity period is 90 calendar days from the closing time for submission of bids.

**F.2.16.3** Where a bidder wishes to withdraw or substitute a bid submission that has already been submitted notice should not be given to any Employer's Agent **but to the Employer directly**.

#### F.2.22 Return of Bid Documents

Where a bidder who received a bid document does not submit a bid, the bid documents issued to him must be returned to the Employer within 28 days after the closing date for submission of bids.

### F.2.23 Certificates

Various certificates, etc are required to be submitted with the bid submission as stated the document.

### F.3.5 Two-envelope system

This clause is not applicable.

#### F.3.9 Arithmetical errors, omissions and discrepancies

- **F.3.9.2** Check responsive bid offers for arithmetical errors, correcting them in the following manner:
  - (a) Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.
  - (b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted governs, unless in the opinion of the *Principal Agent* there is an obviously



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gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted governs, and the unit rate is corrected.

- (c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the bidder's addition of prices, the total of the prices shall govern.
- (d) In the event of there being any rate or rates that are declared by the employer to be unacceptable because of correction of arithmetical errors as in (b) and (c) above, or because the bided rates are unbalanced and unrealistic, the bider shall, in terms of clause F.2.17 be requested to consider the amendment and revision of such rate or rates and other selected item prices and their rates while retaining the bided amount unchanged.

Consider the rejection of a bid offer if the bidder does not correct or accept the correction of his arithmetical errors in the manner described above.

#### F.3.11 Evaluation of Bid Offers

The method of evaluation for this contract shall be Method 2 – Financial offer and preference.

#### F.3.11.2 Method 1: Financial Offer

This clause shall not be applicable.

#### F.3.11.3 Method 2: Financial Offer and Preferences

The procedure for the calculation of bid evaluation points of responsive bids is Method 2.

#### (a) Financial Offer

The financial offer will be scored using the following formula:  $Nf = W1 \times [1-(P-Pm) / Pm]$ 

where:

Nf = The number of bid evaluation points awarded for the financial offer

W1 = 80

Pm = the value of the comparative offer of the most favourable bid;

P = the value of the comparative offer under consideration

#### (b) Preferences

Up to 20 points will be awarded to bidders who are found to be eligible for the preference points claimed.

Preference points shall be awarded as per the table below as determined by the bidder's BBBEE Verification Certificate.

Criteria	Details	Price and Preference points for bid Evaluation
Price	Total cost to implement the project	80
Preference	BBBEE Level 1	20
	BBBEE Level 2	18
	BBBEE Level 3	16
	BBBEE Level 4	12
	BBBEE Level 5	8
	BBBEE Level 6	6
	BBBEE Level 7	4
	BBBEE Level 8	2



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	No BBBEE Verification	0
Total possible points		100

#### F.3.11.4 Method 3: Financial Offer and Quality

This clause shall not be applicable.

#### F.3.11.5 Method 4: Financial Offer, Quality and Preference

This clause shall not be applicable.

### F.3.11.7 Scoring Financial Offers

This clause shall not be applicable.

#### F.3.11.9 Scoring Quality

This clause shall not be applicable.

### F.3.13 Acceptance of Bid Offer

- **F.3.13.1** Further to clause F3.13 Bid Offers will only be accepted on condition that:
  - (a) The bid submission is found to be responsive and contains all the necessary returnable documents as noted in this Bid Enguiry Document.
  - (b) the bidder or any of its directors is not listed on the Register of Bid Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; and
  - (c) the bidder has not:
    - (i) abused the Employer's Supply Chain Management System; or
    - (ii) failed to perform on any previous contract and has been given a written notice to this effect.
  - (d) the bid offer is properly completed and signed by a person authorized to sign on behalf of the Bidder;
  - (e) only one bid has been submitted by a bidder. Each bidder shall submit only one bid for the same project, either individually as a bidder or as a partner in a joint venture. No firm can be a subcontractor while submitting a bid individually or as a partner of a joint venture in the same bidding process. A firm, if acting in the capacity of subcontractor in any bid, may participate in more than one bid, but only in that capacity. A bidder who submits or participates in more than one bid will cause all the proposals in which the bidder has participated to be disqualified.

#### F.3.17 Provide copies of contracts

The number of paper copies of the signed contract to be provided by the Employer is: **One** - But it must be noted that an original copy will have to be provided on appointment of a successful contractor when requested by RLM.

#### F.3.18 Provide written reasons for actions taken

This clause shall not be applicable.



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# CIDB Standard Conditions of Tender

(January 2009 edition)

As published in Annex F of the CIDB Standard for Uniformity in Construction Procurement in Board Notice 12 of 2009 in Government Gazette No 31823 of 30 January 2009

#### F.1 General

#### F.1.1 Actions

- **F.1.1.1** The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.
- **F.1.1.2** The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note:

- A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.
- 2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.
- F.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

### F.1.2 Tender Documents

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

### F.1.3 Interpretation

- **F.1.3.1** The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.
- **F.1.3.2** These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.
- **F.1.3.3** For the purposes of these conditions of tender, the following definitions apply:
- a) conflict of interest means any situation in which:
  - someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially:
  - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit: or
  - iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.



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- b) **comparative offer** means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to be made between offers on a comparative basis
- corrupt practice means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff
  or agents in the tender process; and
- d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels
- e) organization means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body
- f) quality (functionality) means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs

#### F.1.4 Communication and employer's agent

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

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

- **F.1.5.1** The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a tenderer for such cancellation and rejection, but will give written reasons for such action upon written request to do so.
- **F.1.5.2** The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received and such tender was returned unopened to the tenderer.

### F.1.6 Procurement procedures

#### F.1.6.1 General

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

# F.1.6.2 Competitive negotiation procedure

- **F.1.6.2.1** Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.
- **F.1.6.2.2** All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of F.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.
- **F.1.6.2.3** At the conclusion of each round of negotiations, tenderers shall be invited by the employer to make a fresh tender offer, based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.
- **F.1.6.2.4** The contract shall be awarded in accordance with the provisions of F.3.11 and F.3.13 after tenderers have been requested to submit their best and final offer.

# F.1.6.3 Proposal procedure using the two stage-system

#### F.1.6.3.1 Option 1

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of



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evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

#### F.1.6.3.2 Option 2

- **F.1.6.3.2.1** Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.
- F.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

# F.2 Tenderer's obligations

### F.2.1 Eligibility

- **F.2.1.1** Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.
- **F.2.1.2** Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

### F.2.2 Cost of tendering

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.

#### F.2.3 Check documents

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

### F.2.4 Confidentiality and copyright of documents

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

#### F.2.5 Reference documents

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

#### F.2.6 Acknowledge addenda

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

#### F.2.7 Clarification meeting

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

#### F.2.8 Seek clarification

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

#### F.2.9 Insurance

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



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### F.2.10 Pricing the tender offer

- **F.2.10.1** Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.
- F2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.
- **F.2.10.3** Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.
- **F.2.10.4** State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

#### F.2.11 Alterations to documents

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. Erasures and the use of masking fluid are prohibited.

#### F.2.12 Alternative tender offers

- **F.2.12.1** Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.
- **F.2.12.2** Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

#### F.2.13 Submitting a tender offer

- **F.2.13.1** Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.
- **F.2.13.2** Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.
- **F.2.13.3** Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
- **F.2.13.4** Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.
- **F.2.13.5** Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- **F.2.13.6** Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
- **F.2.13.7** Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.
- **F.2.13.8** Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.



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

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

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

# F.2.15 Closing time

- **F.2.15.1** Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.
- **F.2.15.2** Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

## F.2.16 Tender offer validity

- **F.2.16.1** Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.
- **F.2.16.2** If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.
- **F.2.16.3** Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted.
- **F.2.16.4** Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as "SUBSTITUTE".

# F.2.17 Clarification of tender offer after submission

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

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

# F.2.18 Provide other material

- **F.2.18.1** Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), 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.
- F.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

#### F.2.19 Inspections, tests and analysis

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

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

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

#### F.2.21 Check final draft

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



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#### F.2.22 Return of other tender documents

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

#### F.2.23 Certificates

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

# F.3 The employer's undertakings

#### F.3.1 Respond to requests from the tenderer

- **F.3.1.1** Unless otherwise stated in the tender Data, respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.
- **F.3.1.2** Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:
- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

#### F.3.2 Issue Addenda

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

#### F.3.3 Return late tender offers

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

# F.3.4 Opening of tender submissions

- **F.3.4.1** Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.
- **F.3.4.2** Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, preferences claimed and time for completion for the main tender offer only.
- **F.3.4.3** Make available the record outlined in F.3.4.2 to all interested persons upon request.

### F.3.5 Two-envelope system

- **F.3.5.1** Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.
- **F.3.5.2** Evaluate the quality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the quality evaluation more than the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.



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### F.3.6 Non-disclosure

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

## F.3.7 Grounds for rejection and disqualification

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

#### F.3.8 Test for responsiveness

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

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

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

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

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

### F.3.9 Arithmetical errors, omissions and discrepancies

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

**F.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 F.3.11 for:

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

**F.3.9.3** 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.

**F.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.

#### F.3.10 Clarification of a tender offer



# RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS

### F.3.11 Evaluation of tender offers

#### **F.3.11.1 General**

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

#### F.3.11.2 Method 1: Financial offer

In the case of a financial offer:

- a) Rank tender offers from the most favourable to the least favourable comparative offer.
- b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated.

### F.3.11.3 Methods 2: Financial offer and preference

In the case of a financial offer and preferences:

- a) Score each tender in respect of the financial offer made and preferences claimed, if any, in accordance with the provisions of F.3.11.7 and F.3.11.8.
- b) Calculate the total number of tender evaluation points ( $T_{EV}$ ) in accordance with the following formula:

 $T_{EV} = N_{FO} + N_{P}$ 

where: NFO is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

NP is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated

### F.3.11.4 Method 3: Financial offer and quality

In the case of a financial offer and quality:

- a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.
- b) Calculate the total number of tender evaluation points (*T<sub>EV</sub>*) in accordance with the following formula:

 $Tev = N_{FO} + N_{Q}$ 

where: NFo is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

No is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated.

### F.3.11.5 Method 4: Financial offer, quality and preferences

In the case of a financial offer, quality and preferences:



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a) Score each tender in respect of the financial offer made, preference claimed, if any, and the quality offered in accordance with the provisions of F.3.11.7 to F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.

b) Calculate the total number of tender evaluation points (*T<sub>EV</sub>*) in accordance with the following formula, unless otherwise stated in the Tender Data:

 $Tev = N_{FO} + N_{P} + N_{Q}$ 

where: NFO is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

NP is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.

No is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated.

#### F.3.11.6 Decimal places

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

# F.3.11.7 Scoring Financial Offers

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

 $N_{FO} = W_1 \times A$ 

where: Neo is the number of tender evaluation points awarded for the financial offer.

W<sub>1</sub> is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender

Data.

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

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

Formula	Comparison aimed at achieving	Option 1 <sup>a</sup>	Option 2 <sup>a</sup>	
1	Highest price or discount	A = (1 + (P - Pm))	A = P / Pm	
Pm				
2	Lowestpriceorpercentage	A = (1 - ( <u>P - Pm</u> ))	A = Pm / P	
	commission / fee Pm			
a Pr	is the comparative offer of the most fav	ourable comparative offer.		
Р	P is the comparative offer of the tender offer under consideration.			

### F.3.11.8 Scoring preferences

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

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

### F.3.11.9 Scoring quality

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

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

 $N_Q = W_2 \times S_0 / M_S$ 



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where: So is the score for quality allocated to the submission under consideration; Ms is the maximum possible score for quality in respect of a submission; and

W2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

#### F.3.12 Insurance provided by the employer

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

#### F.3.13 Acceptance of tender offer

Accept the tender offer, if in the opinion of the employer, it does not present any unacceptable commercial 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, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data, and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

#### F.3.14 Prepare contract documents

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

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the employer and the successful tenderer.
- F.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

#### F.3.15 Complete adjudicator's contract

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

# F.3.16 Notice to unsuccessful tenderers

- **F.3.16.1** Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.
- **F.3.16.2** After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

# F.3.17 Provide copies of the contracts

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

#### F.3.18 Provide written reasons for actions taken



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



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Record of Addenda to Bid documents

We con	We confirm that the following communications received from the Employer before the submission of this Bid offer, amending ne Bid documents, have been taken into account in this Bid offer:				
	Date	Title or Details			
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
Attach a	additional pages if more space is	required.			
	Signed	Date			
	Name	Position			
	Ridder				



# RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS

**Compulsory** Enterprise Questionnaire

The following particulars must be furnise each partner must be completed and su		joint	venture, <b>separat</b>	e enterpri	se questionnair	es in respect of
Section 1: Name of enterprise:						
Section 2: VAT registration numbe	r, if any:					
Section 3: CIDB registration number	er, if any:					
Section 4: Particulars of sole propr	rietors and partners	in p	artnerships			
Name*	Identity	numl	per*	Pers	onal income to	ax number*
* Complete only if sole proprietor or par	tnership and attach	separ	rate page if more t	han 3 par	tners	
Section 5: Particulars of companie	s and close corpora	ation	s			
Company registration number						
Close corporation number						
Tax reference number						
Section 6: Record of service of the Indicate by marking the relevant boxes principal shareholder or stakeholder in service of any of the following:	with a cross, if any s					
<ul> <li>a member of any municipal counce</li> <li>a member of any provincial legislate</li> <li>a member of the National Assemble</li> <li>Council of Province</li> </ul>	ature			entity or	constitutional in	, national or estitution within the ent Act, 1999 (Act
<ul> <li>a member of the board of director entity</li> </ul>	rs of any municipal		a member of an provincial public		g authority of a	ny national or
□ an official of any municipality or municipal □ an employee of Parliament or a provincial legislature entity		l legislature				
If any of the above boxes are marked	I, disclose the follo	wing	:			
Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	organ of state and position held (tick appropriate co					
months						



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	VAILABLE FOR A PENIOD OF THIRLE FLAN	2		
*insert separate page if necessary				
Indicate by marking the relevant boxes	Iren and parents in the service of the state with a cross, if any spouse, child or parent of a sole ider or stakeholder in a company or close corporation by of the following:			
<ul> <li>a member of any municipal counce</li> <li>a member of any provincial legisle</li> <li>a member of the National Assemble</li> <li>National Council of Province</li> <li>a member of the board of direct municipal entity</li> <li>an official of any municipality or municipal entity</li> </ul>	ature provincial public entity or constitu ply or the meaning of the Public Finance M (Act 1 of 1999)	itional institu anagement a rity of any na	tion within the Act, 1999 ational or	
Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	(tick a	of service ppropriate	
		current	olumn) Within last 12 months	
*insert separate page if necessary				
<ul> <li>i) authorizes the Employer to obtain a matters are in order;</li> <li>ii) confirms that the neither the name of wholly or partly exercises, or may exercises, or may exercise ablished in terms of the Prevention iii) confirms that no partner, member, dienterprise appears, has within the iv) confirms that I / we are not associated other relationship with any of the Bi interpreted as a conflict of interest;</li> </ul>	/she is duly authorized to do so on behalf of the enter tax clearance certificate from the South African Reversity of the enterprise or the name of any partner, manager xercise, control over the enterprise appears on the Ron and Combating of Corrupt Activities Act of 2004; irector or other person, who wholly or partly exercises last five years been convicted of fraud or corruption; ed, linked or involved with any other Biding entities sudders or those responsible for compiling the scope of the second sestionnaire are within my personal knowledge and a	enue Service degister of Bi s, or may ex- submitting Bio f work that c	other person, wh d Defaulters ercise, control over I offers and have ould cause or be	o er the no
Signed	Date			<b>-</b> ,
Name	Position			<b>-</b> -
Enterprise name				



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# **Certificate of Authority for Joint Ventures**

This Returnable Schedule is to be completed by joint ventures.
We, the undersigned, are submitting this Bid offer in Joint Venture and hereby authorize Mr/Ms
, authorized signatory of the company
, acting in the capacity of lead partner, to sign all documents in connection with the Bid offer and any contract resulting from it on our
behalf.



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NAME OF FIRM	%	ADDRESS	DULY AUTHORISED SIGNATORY



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	AVAILABLE FOR A PERIOD OF THIRLE TEAR	<u>u</u>
Lead partner		Signature
		Name
Isint Vantuus vastuus		Designation
Joint Venture partner - 1		Signature
		Name
		Designation
L'AVA		
Joint Venture partner - 2		Signature
		Name
		Designation
Joint Venture partner - 3		
		Signature
		Name
		Designation
		<u> </u>
Signed	Date	
	B. W	
Ridder		



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### **Schedule of Proposed Subcontractors**

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

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

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

	Name and address of proposed Subcontractor	Nature and extent of work	Previous experience with Subcontractor.
1.			
2.			
-			
3.			
<u> </u>	0		
	Signed	Date	
	Name	Position	
	Bidder		



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# **Schedule of Plant and Equipment**

The following are lists of m	ajor items of relevant equipment that I/we presently own or lease and will have available for this	
ontract or will acquire or hire for this contract if my/our Bid is accepted.		
ontitude of will doquile of th	no for the contract if my our Bia is accopted.	
a) Details of major	equipment that is owned by and immediately available for this contract.	
Quantity	Description, size, capacity, etc.	
Quantity	Description, Size, capacity, etc.	
A ( )   1   1   1   1   1   1   1   1   1		
Attach additional pa	ages if more space is required.	
) Details of major eq	uipment 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.



# RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS

Signed	Date	
Name	Position	
Bidder		

# Schedule of the Bidder's Experience

The following is a sta	The following is a statement of similar work successfully executed by myself/ourselves:				
Employer, contact person and telephone number.	Description of contract	Value of work inclusive of VAT (Rand)	Date completed		



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 Date	Signed
Position	Name
	Bidder



# RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS

Proposed amendments and qualifications

The Bidder should record any deviations or qualifications he may wish to make to the Bid documents in this Returnable Schedule. Alternatively, a Bidder may state such deviations and qualifications in a covering letter to his Bid and reference such letter in this schedule.

The Bidder's attention is drawn to clause F.3.8 of the Standard Conditions of Bid referenced in the Bid Data regarding the employer's handling of material deviations and qualifications.

Page	Clause or item	Proposal

Signed		Date
Name	Pos	osition
Bidder		



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# PROOF OF REGISTERED CIDB

# FORM 2.2.3 PROOF OF REGISTRATION WITH CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

The bidder is to affix to this page either:

One Bidder appointed.

# Written proof of his registration with the CIDB as a Category of (as stated in the advert) or Higher

Or

Written proof of his application to the CIDB for registration as a contractor in the category listed above.

#### Note:

- Failure to affix such documentation marked as Annexure G to the bid document shall result in this bid not being further considered for the award of the contract.
- 2. Should this bid be considered for award of the contract, based on proof of submission of application for registration in the appropriate category with the CIDB, and should proof of such subsequent registration not be forthcoming to the employer before the end of business, at the last working day, prior to evaluation by the Consultant/RLM Evaluation Team of the contract, then this bid will no longer be considered for the award of the contract.



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# **FORM 2.2.4 DECLARATION**

We, the undersigned:

Bid to supply and deliver to the Municipality all or any of the supplies and to render all or any of the articles, goods, materials, services or the like described both in this and the other Schedules to this Contract;

Agree that we will be bound by the specifications, prices, terms and conditions stipulated in those Schedules attached to this bid document, regarding delivery and execution;

Further agree to be bound by those conditions, set out in, "PARTS T1; T2; C1; C2; C3 and C4", attached hereto, should this bid be accepted in whole or in part;

Confirm that his bid may only be accepted by the Municipality by way of a duly authorized Letter of Acceptance;

Declare that we are fully acquainted with the Bid document and Schedules, and the contents thereof and that we have signed the Schedule of Quantities and completed the Returnable Schedules and declarations, attached hereto;

Declare that all amendments to the bid document have been initialized by the relevant authorized person and that the document constitutes a proper contract between the Municipality and the undersigned;

Certify that the item/s mentioned in the bid document, qualifies/qualify for the preference(s) shown;

Acknowledge that the information furnished is true and correct;

Accept that in the event of the contract being awarded as a result of preference claimed in this bid document, I may be required to furnish documentary proof to the satisfaction of the Municipality that he claims are correct. If the claims are found to be inflated, the Municipality may, in addition to any other remedy it may have, recover from me all cost, losses or damage incurred or sustained by the Municipality as a result of the award of the contract and/or cancel the contract and claim any damages which the Municipality may suffer by having to make less favourable arrangements after such cancellation;

Declare that no municipal rates and taxes or municipal service charges owed by the bidder or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three (3) months; (Attached marked *Annexure E* to the bid document) and

Declare that I have not failed to perform satisfactorily during the last five (5) years on a previous contract with the Municipality, Municipal entity or any other organ of state, after written notice was given to me that my performance was unsatisfactory.

Signed at		this	day of	2021
Authorized Signature		: _		
Name of Bidding Entity	:			
Date		:		
Witness	:			



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# C1.1 Form of Offer and Acceptance (Agreement)

#### Offer

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

BID NO RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS

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

0	THE POTTLE OF THE PROCESSIVE OF TALK	E ABBEB TAKTO	
		Rand (in words);	
R	(in figures)		
one copy of		ptance part of this form of offer and acceptance and reference of validity stated in the Bid data, whereupon the ontract identified in the contract data.	
Signature		Date	
Name			
Capacity			
The Bidder (Company	Name)		
Signature of	f Witness	Date	
Acceptance	e		

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.



# RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS

The terms of the contract, are contained in:

Signature

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

Part C2: Pricing data
Part C3: Scope of work.
Part C4: Site information

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

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

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

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

Name		
Capacity		
The Employer	Rustenburg Local Municipality Missionary Mpheni House c/o Beyers Naude & Nelson Mandela Drive Rustenburg	
Signature of w	itness	Date
Schedule of D	Deviations	
Details		
Details		
-		



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Details		
5. Subject		
Details		
schedule of deviations as listed in the Bid sch	d representatives signing this agreement, the employer and the Bidder agree to and accept the foregoing as as the only deviations from and amendments to the documents listed in the Bid data and addenda thereto nedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Biddering this process of offer and acceptance.	
of the Bid documents	that no other matter whether in writing, oral communication or implied during the period between the issue and the receipt by the Bidder of a completed signed copy of this Agreement shall have any meaning or between the parties arising from this agreement.	
FOR THE BIDDER:		
Signature(s)		
Name(s)		
FOR THE EMPLOYER		
Signature(s)		
Name(s)		



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#### C1.2 Contract Data

The General Conditions of Contract for Construction Works (2004) published by the South African Institution of Electrical Engineering, is applicable to this contract. Copies of these conditions of contract may be obtained from the South African Institution of Electrical Engineering (Tel 011-805 59;47).

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

Also The "General Conditions of Contract, Electrical and Mechanical Engineering Works", First Edition (1985), issued by the South African Association of Consulting Engineers (S.A.A.C.E.) will be applicable to this contract and is obtainable direct from S.A.A.C.E.

#### SPECIAL CONDITIONS OF CONTRACT

The following clauses simplify the General Conditions of Contract and highlight areas in that document that require specific attention, and where further details are required to suit the particular circumstances of each contract and the specific locality of the Works.

NB: Certain information below is to be supplied by the successful Tenderer (Contractor) and shall be included with his tender.

### Definitions (Clause 1)

➤ Employer: The Employer shall be **Rustenburg Local Municipality** 

Engineer: The Engineer shall be Edgar Phiri

➤ Completion Date: As per schedule

#### Precedence of documents (Clause 4.3)

The various documents concerning the Contract shall rank in the following order of precedence.

- i. Form of Agreement
- ii. Special Conditions of Contract
- iii. Conditions of Contract
- iv. Detail Specification
- v. Schedule of Quantities
- vi. General Technical Specification

Time for completion (Clause 7.1)

As per completion date



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The successful tenderer will be requested to issue a surety of which the particulars is stipulated below:

> Value of surety: 10% of tendered contract value

Period of validity: 14 days after final handover

Procedure if forfeit: Arbitration

Arrangements for release: Written request to the Engineer

Currency of bond: South African Rands

### Programme (Clause 12.1) (When requested)

Time limit for submission of programme is 7 days after acceptance of tender.

#### Contractor's Equipment (Clause 14.1)

The Employer shall not provide any equipment or facilities.

#### Material and Equipment (Clause 14.2)

The Contractor shall be liable until the contract is taken over by the Employer.

#### Electricity and Water (Clause 14.3)

No electricity or water is available on site.

# Employer's Lifting Equipment (Clause 14.4)

The Employer will supply no lifting equipment.

### Limit of Liability (Clause 16.4)

Contractor's liability shall not exceed 100% of the contract value.

The Contractor's liability shall expire 12 months after the RLM Engineer has issued the taking-over certificate to the Contractor for each job.

# Insurance of Works (Clause 17.1)

The amount of insurance during Defects Liability Period shall be 10% of the contract value.

### Amount of Third Party Insurance cover of Tenderer (Clause 17.2)

The minimum sum of the Third Party Insurance cover shall be R2,000,000-00.

# Occupational Health and Safety Act (Clause 18.3)

Add the following sub clause after Clause 18.2:

"The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act 1993 (Act 85 of 1993, hereinafter referred to as the Act) that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:

- i. The Contractor undertakes to acquaint the appropriate officials and Employees of the Contractor with all relevant provisions of the Act and the regulations promulgated in terms of the Act.
- ii. The Contractor undertakes that all-relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations will be fully complied with.
- iii. The Contractor hereby accepts sole liability for such due compliance with the relevant duties; obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from itself being obliged to comply with any of the aforesaid duties, obligations and prohibitions.
- iv. The Contractor agrees that any duly authorized officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the Contractor has complied with his undertakings as set out more fully in paragraphs (a) and (b) above, which steps may include, but will not be limited to, the right to inspect



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any appropriate site or premises occupied by the Contractor, or to inspect any appropriate records held by the Contractor.

v. The Contractor shall be obliged to report forthwith to the Employer and Engineer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this contract, and shall, on written demand, provide full details in writing, to the Employer and Engineer, of such investigation, complaint or criminal charge."

#### Import permits (Clause 20.6)

The Contractor shall obtain all the necessary permits at his own cost.

### Time for completion (Clause 30)

Add the following to this clause:

"Delays due to abnormal weather which may occur will not automatically entitle the Contractor to an extension of time for the completion of the works. Only under justifiable circumstances and at the sole discretion of the Engineer will extension of time due to abnormal weather conditions be granted."

#### Delay in completion (Clause 31.1)

Replace this clause with the following:

"If the Contractor shall fail to complete the works or sections thereof within the period prescribed in clause 7.1 hereof, or within the period agreed on by the Employer at the time of acceptance of the tender, or within such extended period as may have been granted in terms of clause 30 hereof, the Contractor shall pay the Employer the sum of R 250-00 as penalty in respect of such failure for each day which expires between the time prescribed by clause 2.2.1 hereof, or the period agreed on at the time of acceptance of the tender, or the extended period as the case may be, and the date of completion of the works.

The Employer may in his sole discretion reduce the penalty amount on completion of the works.

#### Bonus (Clause 31.3)

Bonus for early completion shall not be applicable to this contract.

# Defects liability period (Clause 33.1)

The Defects liability period shall be 12 months.

#### Liability after taking over (Clause 33.3)

The Contractor shall be liable for latent and patent defects for a period of 12 months from the date of taking over.

### Notice of Defects (Clause 33.11)

The extension of the defects liability period shall not exceed 12 months.

### Variations exceeding 20 percent (Clause 34.5) (N/A)

This tender is a Contractual time based contract and <u>not</u> a Contractual amount based contract due to the amount of different works / projects and "Bills of Quantities" over the contract period

Notwithstanding anything to the contrary contained in the General Conditions of Contract, the Employer reserves the right to decrease the amount of work to be done under this contract without any adjustment to the tendered rates.



# RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL) SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS

### Ownership of plant (Clause 35.1)

All plant -

- a) upon delivery to site, or
- b) when stored at places other than on the Site and for which a written agreement between the Contractor and the Employer has been signed, by which agreement the provisions of this clause become applicable to such plant

Shall immediately upon delivery to the Site, or, in the case of material not delivered to Site, immediately after signing the said agreement, become the property of the Employer. All equipment not delivered to site shall be clearly marked indicating that the Employer owns the equipment.

The Contractor shall, prior to delivery to the Site or prior to the signing of the above said Agreement regarding plant being stored at places other than on the site, furnish proof of his ownership of all plant.

# Advance and Progress Payments (Clause 37.5)

Advance and progress payments shall

- i. only be made for completed plant, and shall not be made for plant in any other stage of manufacture
- ii. only be made in terms of the provisions of Clause 35.1 hereof.

#### Payment conditions (Clause 40)

The following payment conditions shall apply:

For the supply and delivery of plant:

- i. 80% of the tendered rate when the Engineer certifies that the plant has been delivered to site in good condition and the contractor has submitted proof of ownership of the plant.
- ii. 15% of the tendered rate on completion of installation in compliance with specification.
- iii. 2.5% when equipment and/or material is successfully commissioned.
- iv. 2.5% after the defects liability period has expired where required.

For the installation, commissioning and testing:

- i. 95% of the tendered rate on completion of installation in compliance with the specifications.
- ii. 2.5% when equipment and/or material is successfully commissioned.
- iii. 2.5% after the defects liability period has expired where required.

The Employer will make payment to the Contractor within thirty (30) days from receipt of the payment certificate.

Notices (Clause 50) The Contractor's domicilium citandi is:	
The Employer's domicilium citandi is: RUSTENBURG LOCAL MUNICIPALITY Missionary Mpheni House	
C/O Beyers Naude and Nelson Mandela Drive	
Rustenburg 0299	

Default by the Employer

Failure to pay the Contractor within 30 days after certification by the Engineer.



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# GENERAL CONDITIONS OF CONTRACT (NOT TO BE ALTERED)

# PROCUREMENT: GENERAL CONDITIONS OF CONTRACT Dated July 2010 as set out by the National Treasury: Republic of South Africa TABLE OF CLAUSES

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#### **General Conditions of Contract**

#### 1. Definitions

- 1. The following terms shall be interpreted as indicated:
- 1.1 "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.



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- 1.2 "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3 "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
- 1.4 "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.
- 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
- 1.6 "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 1.7 "Day" means calendar day.
- 1.8 "Delivery" means delivery in compliance of the conditions of the contract or order.
- 1.9 "Delivery ex stock" means immediate delivery directly from stock actually on hand.
- 1.10 "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the goods are so delivered and a valid receipt is obtained.
- 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
- 1.12"Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 "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 or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 "GCC" means the General Conditions of Contract.
- 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the goods covered by the bid will be manufactured.



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- 1.17 "Local content" means that portion of the bidding price, which is not included in the imported content provided that local manufacture does take place.
- 1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 "Project site," where applicable, means the place indicated in bidding documents.
- 1.21 "Purchaser" means the organization purchasing the goods.
- 1.22 "Republic" means the Republic of South Africa.
- 1.23 "SCC" means the Special Conditions of Contract.
- 1.24 "Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25 "Supplier" means the successful bidder who is awarded the contract to maintain and administer the required and specified service(s) to the State.
- 1.26 "Tort" means in breach of contract.
- 1.27 "Turnkey" means a procurement process where one service provider assumes total responsibility for all aspects of the project and delivers the full end product / service required by the contract.
- 1.28 "Written" or "in writing" means hand-written in ink or any form of electronic or mechanical writing.

# 2. Application

- 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services (excluding professional services related to the building and construction industry), sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific goods, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

#### 3. General

- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a nonrefundable fee for documents may be charged.
- 3.2 Invitations to bid are usually published in locally distributed news media and on the municipality/municipal entity website.

#### 4. Standards



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4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

# 5. Use of contract documents and information inspection

- 5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.
- 5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
- 5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.
- 5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

# 6. Patent Rights

- 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.
- 6.2 When a supplier developed documentation / projects for the municipality / municipal entity, the intellectual, copy and patent rights or ownership of such documents or projects will vest in the municipality / municipal entity.

# 7. Performance security

- 7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3 The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:
- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
- (b) a cashier's or certified cheque.
- 7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified.

# 8. Inspections, tests and analyses

8.1 All pre-bidding testing will be for the account of the bidder.



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- 8.2 If it is a bid condition that goods to be produced or services to be rendered should at any stage be subject to inspections, tests and analyses, the bidder or contractor's premises shall be open, at all reasonable hours, for inspection by a representative of the purchaser or organization acting on behalf of the purchaser.
- 8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the goods to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5 Where the goods or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such goods or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6 Goods and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7 Any contract goods may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected goods shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with goods, which do comply with the requirements of the contract. Failing such removal the rejected goods shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute goods forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected goods, purchase such goods as may be necessary at the expense of the supplier.
- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 22 of GCC.

### 9. Packing

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, and in any subsequent instructions ordered by the purchaser.

# 10. Delivery and documents

10.1 Delivery of the goods and arrangements for shipping and clearance obligations shall be made by the supplier in accordance with the terms specified in the contract.

#### 11. Insurance



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11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified.

# 12. Transportation

12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified.

#### 13. Incidental Services

- 13.1 The supplier may be required to provide any or all of the following services, including additional services, if any:
- (a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
- (d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
- (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
- 13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

### 14. Spare parts

- 14.1 As specified, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:
- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and;
- (b) in the event of termination of production of the spare parts:
- (i) advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and (ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

### 15. Warranty

- 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise.



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- 15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the supplier shall, within the period specified and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
- 15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

# 16. Payment

- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified.
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand unless otherwise stipulated.

### 17. Prices

17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized or in the purchaser's request for bid validity extension, as the case may be.

#### 18. Variation orders

18.1 In cases where the estimated value of the envisaged changes in purchase does not vary more than 15% of the total value of the original contract, the contractor may be instructed to deliver the goods or render the services as such. In cases of measurable quantities, the contractor may be approached to reduce the unit price, and such offers may be accepted provided that there is no escalation in price.

### 19. Assignment

19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

#### 20. Subcontracts

20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under these contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

# 21. Delays in the supplier's delivery and/or performance



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- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, it's likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
- 21.3 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the goods are required, or the supplier's services are not readily available.
- 21.4 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of penalties.
- 21.5 Upon any delay beyond the delivery period in the case of a goods contract, the purchaser shall, without cancelling the contract, be entitled to purchase goods of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

#### 22. Penalties

22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

#### 23. Termination for default

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
- (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
- (b) if the supplier fails to perform any other obligation(s) under the contract; or
- (c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
- 23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner, as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.
- 23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.



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23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the supplier as having no objection and proceed with the restriction.

23.5 Any restriction imposed on any person by the purchaser will, at the discretion of the purchaser, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with

which enterprise or person the first-mentioned person, is or was in the opinion of the purchaser actively associated.

- 23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:
- (i) the name and address of the supplier and / or person restricted by the purchaser;
- (ii) the date of commencement of the restriction
- (iii) the period of restriction; and
- (iv) the reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website

#### 24. Antidumping and countervailing duties and rights

24.1 When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the supplier to the purchaser or the purchaser may deduct such amounts from moneys (if any) which may otherwise be due to the supplier in regard to goods or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

#### 25. Force Majeure

25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in

Performance or other failure to perform his obligations under the contract is the result of an event of force majeure. 25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall

continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.



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#### 26. Termination for insolvency

26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the purchaser.

#### 27. Settlement of Disputes

- 27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- 27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
- 27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
- 27.4 Notwithstanding any reference to mediation and/or court proceedings herein,
- (a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and(b) the purchaser shall pay the supplier any monies due the supplier for goods delivered and / or services rendered according to the prescripts of the contract.

#### 28. Limitation of Liability

- 28.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6;
  - (a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and
- (b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

#### 29. Governing language

29.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.

#### 30. Applicable law

30.1 The contract shall be interpreted in accordance with South African laws, unless otherwise specified.

#### 31. Notices

- 31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice.
- 31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.



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#### 32. Taxes and duties

- 32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.
- 32.2 A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.
- 32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid SARS must have certified that the tax matters of the preferred bidder are in order.
- 32.4 No contract shall be concluded with any bidder whose municipal rates and taxes and municipal services charges are in arrears.

#### 33. Transfer of contracts

33.1 The contractor shall not abandon, transfer, cede assign or sublet a contract or part thereof without the written permission of the purchaser

#### 34. Amendment of contracts

34.1 No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary shall be in writing, shall also be in writing.

#### 35. Prohibition of restrictive practices

- 35.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of **restrictive practices** 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder(s) is / are or a contractor(s) was / were involved in collusive bidding.
- 35.2 If a bidder(s) or contractor(s) based on reasonable grounds or evidence obtained by the purchaser has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in section 59 of the Competition Act No 89 0f 1998.
- 35.3 If a bidder(s) or contractor(s) has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.



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#### **TERMS OF REFERENCE/ SPECIFICATIONS**



### **DESIGN PACKAGE**

Project	VOLTAIRE-BOITEKONG 132kV LINE
•	
Title:	
Project No.	

### **Project Overview**

This document contains information for the Voltaire-Boitekong 132kV double circuit, Kingbird powerline mounted on concrete poles. The total length of the line is **819m** and a total of **7** new 132kV structures are required.

DESCRIPTION	TITLE	REV	ATTACHED
Volume 1	Preliminary design	0	Y
Volume 2	Design philosophy	0	Υ
Volume 3	Details Scope of work	0	Υ
Volume 4	Bill of Material	0	Υ
Volume 5	Annexures	0	Υ
Volume 6	Drawings	0	Υ
Volume 7	Control Plant Design	0	N
Volume 8	Civil Design	0	N
ed Projects:			

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/Structures, and other relevant documentation.



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### VOLUME 1 PRELIMINARY DESIGN

**VOLTAIRE-BOITEKONG 132kV LINE DEVIATION** 

INID				
IND			Γ	
		CRIPTION	PAGE	Attached Y/N
1.	Project Initiation			
<b>2.</b> 2.1	Project Sheet Project Scope of Work		2	Υ
2.1	Project Information		2 2	Ϋ́
2.3	Electric Diagrams		3	N
2.4	Network Diagram		3	N
2.5 2.6	Geographical/Route Map Sequence of Events		4 5	Y
<b>3.</b>	Technical Recommend	ation		1
4.	Capital Approval (CIC)			
Relat	ed Projects:			
		Construction of New Feeder Bay at Volt		
		Construction of new 2 x 20MVA, 132/17	IKV Boitekong 5/5	
Revis	ion Detail: Rev. 0			



2.1	SCOPE OF WORK				
Substat	ation Power Plant: (Civil, Steel, Facilities & Electrical)				
Item	Description				
		Not Applicable			
	DI (	(0 0 1 1 5 1 1 1 1 0 0 1 1 5 )			
	ower Plant:	(Survey, Structural, Electrical & Construction)			
Item		Description			
1	Scope: The scope of work comprises the installation of an 819m long 132kV double circuit powerline from Voltaire Substation to Boitekong Substation. The line will consist of Kingbird conductor mounted on concrete poles. A total of 7 structures will be required. Installation of approximately 4935m of OPGW. The existing 11kV line in the span will also need to be dismantled.				
	ion Control Plant:	(Protection, Metering, Telecommunication, Scada, DC Plant & Quality			
Monitori	ng)				
Item	Description				
	Not Applicable				
Other:	r: (Miscellaneous)				
Item	,	Description			
Revision	Details: Rev. 1				

2.2 PROJECT INFORMATIO	N			
Lines Information: Voltaire - Boitekong	Lines Information: Voltaire - Boitekong 132kV Line			
Item	Description			
Line System Voltage	132kV			
Line Length	0.819km			
Number of lines	1			
Number of circuits (single/double)	Double			
Structure Type (Wood/Steel/Conc./Lat.)	Concrete Poles			
Number of conductors per circuit	1			
Series Tower (Suspension)	4			
Series Tower (Strain)	1			
Series Tower (Termination)	2			
Conductor Type	Kingbird			
Earth wire Type	1 x 16kA OPGW			
Average Span Lengths	~150m			
Single Phase fault level Voltaire	TBC			
Single Phase fault level Boitekong	TBC			



2.3	ELECTRICAL DIAGRAM – VOLTAIRE S/S
Revisio	n Details: Rev.0



2.4a NETWORK DIAGR	AM – VOLTAIRE 132kV SYSTEM
	T -
Revision Details:	0



2.4b	NETWORK DIAGRA	AM – BOITEKONG 132kV SYSTEM
Revision	n Details:	



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#### 2.5 GEOGRAPHICAL/ROUTE MAP



Revision Details:

#### 2.6 SEQUENCE OF EVENTS

- Contractor to appoint a Professional Surveyor to survey and peg the new line as per route indicated by RLM.
- Construct a 0.819km long, 132kV Kingbird double circuit line between Voltaire Substation and Boitekong Substation Line to Structure B5 and also from Structure B3 to Boitekong S/S.
- > Decommission the existing 11kV line between Voltaire substation and pole No. P7
- Commission 132kV Line.

Pavision Details:	1	ſ



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Rustenburg Local Municipality
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### VOLUME 2 DESIGN PHILOSOPHY

Project Title: VOLTAIRE-BOITEKONG 132kV LINE

			DEVIATION			
		Project No.				
INDEX						
DESCRI	PTION			PAGE	Attached Y/N	
1.	HV Line Design	Philosophy				
<b>1.1</b> 1.1.1	Electric Design For Levels Conductor					Y
1.1.2 1.1.3	Rating Line Earthin					
<b>2.</b> 2.2.1 2.2.2	Structural Design Selection Span Le Mechanical Streng	ngths				Y
2.2.3 <b>3.</b>	Civil Design Foundation Selecti	on			YY	
3.3.1	Legal Requirement Clearances	nts				
4	Stays					
4.4.1 4.4.2						
		nnexure		PAGE	Attached Y/N	
A.	Conductor Burn-o	ff Times				Y

Davisian Dataila David		
Revision Details: Rev.0		05
		85



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#### 1. HV Line Design Philosophy: 132kV, Kingbird, Double Circuit:

The scope of work comprises the installation of an 819m long 132kV double circuit powerline from Voltaire Substation to Boitekong Substation. The line will consist of Kingbird conductor mounted on concrete poles. A total of 7 structures will be required.

#### 1.1 Electric Design

#### 1.1.1 Fault Levels

The highest fault level expected at Voltaire substation is as indicated below in table V2.1:

Table V2.1 Expected fault levels at 132kV substation.

Voltaire SS	Phase	Fault (kA)
HV (132kV)	30	TBC
	10	TBC

#### The highest fault levels expected at Boitekong substation is as indicated in table V2.2:

Table V2.2 Expected fault levels at substation

Boitekong SS	Phase	Fault (kA)
HV (132kV)	30	TBC
	10	TBC



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Because the line is a ring feed, each station can be considered as a source or load depending on the network configuration at a specific time.

#### 1.1.2 Conductor Rating

#### a) Mechanical Properties

Table V2.3 : Mechanical properties **KINGBIRD ACSR** 

Stranding and wire diameter	18/1/4.8
Overall diameter (mm)	23.88
Mass @ 20°C (kg/km)	1028
Ultimate Tensile Strength (kN)	69.8

Note: The pilot wire should be sized accordingly to be able to handle the tensions and weight for the purpose of stringing the KINGBIRD ACSR phase conductor.

#### b) Electrical Properties

Table V2.4 : Electrical properties Kingbird ACSR

Thermal Limit	50° C Normal Rating	50° C Emergency Rating
Current (A): KINGBIRD ACSR	586	831
DC resistance @ 20°C (Ω/km) Kingbird	0.08946	

#### a) Mechanical Properties

Table V2.5: Mechanical properties - OPGW 53K57z - 7079 Prysmian or similar

intechanical properties – Of GW 551072 – 10151 Tyshilan of similar				
Stranding	11/3.35 Outer Layer			
Overall diameter (mm)	15.3			
Mass @ 20°C (kg/km)	570			
Normal break load (kN)	>=60			
Everyday Tension (C value) @ 15°C (m)	2100m			

#### b) Electrical Properties

Table V2.6: Electrical properties - OPGW 53K57z - 7079 Prysmian or similar

. Licetifeat properties of GVV content for	73 i Tysiillaii oi siiillai
	Limit
Short Circuit Current Rating	12kA (1 sec)



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#### c) Burn off Time

The burn-off time of the earth wires allows for sufficient time for the earth fault protection to operate.

Table V2.7: Burn Off Times – Voltaire or Boitekong, 1 x OPGW

Type of fault	Fault Current (kA)	Burn Off Time OPGW 53K57z /7079 Prysmian or similar
Three phase fault (Voltaire S/S)	TBC	12kA 1 sec
Three phase fault (Boitekong S/S)	TBC	12kA 1 sec

#### 1.1.3 Line Earthing

#### 1.1.3.1 Resistivity Tests

In accordance with RLM's standard: Earthing of Transmission Line Towers, 240- 130615862 and 240-75880946, the footing resistance of the structures up to 1km from the substation on132kV lines shall be less than 20W. Should the footing resistance of the structures be less than 10W, then shield conductor jumper leads shall be fitted on strain structures only.

Footing resistance measurements shall be done in accordance with 240-75880946 section 3.1.13.

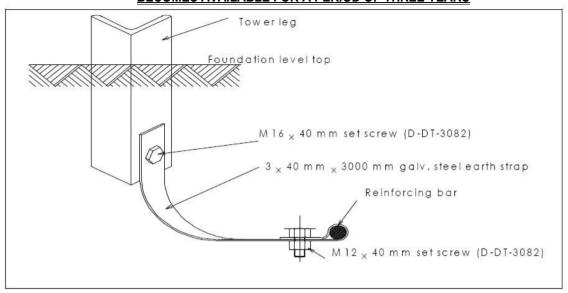
#### 1.1.3.2 Tower Footage Earthing

The tower footing resistance must be measured for all poles and if any structures have less than 2011, the concerned structure shall be earthed in strict accordance to drawing D-DT 0640.

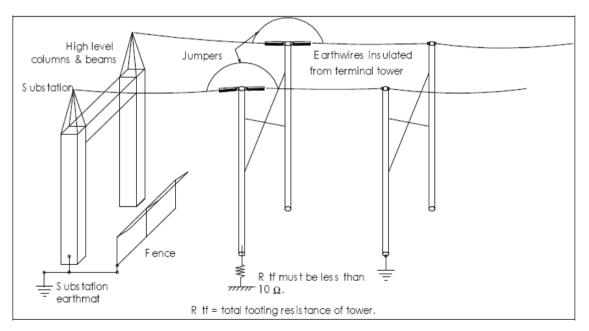
The leg of the terminal tower shall be bonded to the main substation earthmat using a bonding strap as shown below;



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Where it is not possible to bond the terminal tower to the earthmat, an earthing system shall be installed as follows ensuring that the footing resistance of the terminal structure is less than 101;



The earth conductors shall be insulated from the terminal tower using earth wire insulators with earth wire jumpers.

There are no railways in close proximity to the new 132kV Voltaire-Boitekong OHL hence no insulated earth wires/OPGW are necessary except as stated above.



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#### 1.1.3.3 Conductor specification (earthing rods)

The conductor to be used shall comply with the following:

40% 7.3mm diameter fully annealed copper-clad steel rod complying with NRS 102 and ASTM B910/B910M and tested to IEEE Std 837.

#### 2. Structural Design

#### 2.1 Tower Selection

The structures that will be used to support the 132kV double circuit Kingbird ACSR line from Voltaire S/S to Boitekong S/S are as follows:

#### a) Strain structures

DDT 7634 single circuit stayed angle strain structures (0-90° deviation) will be used for the strain structures. Stay location and assembly for temporary as well as permanent installation to be strictly as per DDT 7634.

#### b) Intermediate structures

DDT 7630 single circuit intermediate structures will be used for all intermediate structures. The existing B5 Pole will be converted to Intermediate Structure from the New Structure P7. The existing Pole B3 to be converted to an Intermediate Structure

#### c) Terminal towers

DDT 7635 single circuit stayed angle strain structures will be used to terminate the line.

#### 2.2 Stays

The stays used for this line will be adjustable assemblies in accordance with DDT 7325. All stays shall be installed to sustain the UTS of the wire being used, 115 kN i.e. M24 adjustable stays.



#### 2.3 Span Lengths

Table V2.8– Span Lengths for the Voltaire S/S to Boitekong B5 Structure 132kV feeder Line

Tower No PLSCAD	Structure Type	Pole Length (m)	Att. Height- Bottom (m)	Label Number	Span Length Ahead (m)	Crossing Ahead	Line Crossing Label Y/N	E/W Insulation Y/N	Comment
				Volt	aire S/S to	Boitekong S/S 132kV Line			
1	DDT 7635	24	16.6	P1	120	Farm road	N	N	
2	DDT 7630	20	13	P2	145		N	N	
3	DDT 7630	20	13	P3	98	Major road	N	N	
4	DDT 7630	20	13	P4	190			N	
5	DDT 7630	20	13	P5	133	Farm road		N	
6	DDT 7630	24	16.6	P6	133	Road		N	
7	DDT 7630	24	16.6	P7	-		N	N	This pole ties into the exiting pole (B5)
8	DDT 7630	24	16.6	P8	170	Shacks	N	N	This Pole ties into existing line (B3)
9	DDT 7635	24	16.6	P9	170	Shacks		N	



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#### RSAT 5.1

Kingbird data

Page 1

Printed: 2021/10/01 08:04:47

UTS:71320 N

C Value:1800

Area:340.96 mm^2

Diameter:23.9 mm

Limits

Limit 1: Temperature = 15, C Value 1800, Wind 0 PA, on Final

Limit 2: Temperature = -5, % UTS 50, Wind 700 PA, on Initial

Limit 3: Temperature = -5. % UTS 40, Wind 700 PA, on Final

Poles	Spans	Sag at	5 degs	10 degs	15 degs	20 degs	25 degs	30 degs	35 degs
P1-2	120		0.57	0.6	0.62	0.65	0.69	0.72	0.77
Section	Tension		32167.53	30750.21	29343.54	27949.41	26570.08	25208.23	23867.09
Boitekong	1323Action -	1	Spans =	2	Equiv span =	120	Length =	120	
P2-3	145		0.85	0.89	0.93	0.98	1.03	1.08	1.14
P3-4	98		0.39	0.41	0.43	0.45	0.47	0.5	0.52
P4-5	190		1.46	1.52	1.6	1.67	1.76	1.85	1.95
P5-6	133		0.72	0.75	0.78	0.82	0.86	0.91	0.96
P6-7	133		0.72	0.75	0.78	0.82	0.86	0.91	0.96
Section	Tension		31319.07	29949.07	28595.49	27260.91	25948.28	24660.99	23402.85
Boitekong	1323Action -	2	Spans =	2	Equiv span =	149.2	2 Length =	699	
P7-8	45		0.08	0.09	0.09	0.1	0.1	0.11	0.11
Section	Tension		32599.46	31116.43	29635.06	28155.69	26678.77	25204.87	23734.74
Boitekong	1329Action -	3	Spans =	2	Equiv span =	45	Length =	45	
B3-4	170		1.28	1.34	1.41	1.48	1.55	1.64	1.72
B4-5	170		1.28	1.34	1.41	1.48	1.55	1.64	1.72
Section	Tension		28500.28	27208.2	25942.04	24705.24	23501.54	22334.86	21209.21
00000									



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#### 2.4 Mechanical Strengths

The structure series used in this design was specifically designed to have maximum tip load strength of 23kN which is applied at 300mm below the pole top. The conductor that will be used for this line is Kingbird ACSR conductor which has a weight of weight 1028 kg/km. The design specifications of the structures thus support the use of Kingbird ACSR conductor since the wind and weight span capabilities have been based around the tip load capacity of the pole.

To minimise vibration on the Kingbird ACSR phase conductor and OPGW, multi-frequency vibration dampers will be installed.

To determine the number of multi frequency vibration dampers required:

Table V2.9 – Number of dampers required

1	2	3	4
Span (m)	Number of dampers per span per conductor	Arrangement of dampers per conductor	Damper placement
0 to 369	2	1 damper at each end	0.7 x L from ends
370 to 550	4	2 dampers at each end	0.6 x L from 1st damper

Position of dampers on the span:

The following equation shall be used to determine the position of installation of the damper onto the span:

$$L = \frac{2.703}{V} * D * \sqrt{\frac{H}{W}}$$
 in m (3)

$$C = H/W$$
  
 $H = C^* W$  in N (4)

where

F<sub>c</sub> is the critical frequency (frequency giving rise to shortest loop length)

L is the loop length, (m)

V is the wind speed perpendicular to the conductor, (m/s)

D is the conductor diameter, (m)

H is the conductor tension, (N)

W is the conductor mass per unit length, (kg/m)



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The position of the damper is measured from the point of contact between the dead end or suspension hardware and the conductor. A damper is placed at each end of the span at a distance of 70% of the loop length, i.e. 0.7xL.

#### a) Vibration dampers on the phase conductor

The loop length was calculated at **2.165m**. The position of the first vibration damper was calculated at **1.5m** from the dead end or suspension hardware which is 0.7 of the loop length.

#### For phases strung with Kingbird ACSR

Table V2.10 – Kingbird ACSR Conductor Data

To - Ningbird AOON Conductor Data	
Conductor Type	Kingbird
Diameter, m	0.02388
Wind Velocity, m/s	Average 4m/s
Mass per unit length, kg/m	1.028
C-value	1800
Tension UTS, N	18500 (based on T = C/w)

Where no wind speed data are available, 4m/s may be used to calculate the loop length and critical frequency. No wind speed data is available for the area between Voltaire S/S and Boitekong S/S therefore an average of 4 m/s is used for calculating the loop length.

Multi frequency vibration dampers shall be installed in accordance with D-DT 7322 for a prevailing wind speed of 4m/s as indicated below.

Table V2.11: Number of dampers required per span

1	2	3	4
Span (m)	Number of dampers per span per conductor	Arrangement of dampers per conductor	Damper placement
0 to 365	2	1 damper at each end	1.5m from clamp
366 to 550	4	2 dampers at each end	1.3m from 1st damper

Table V2.12 - Number of Vibration dampers needed for Kingbird ACSR conductor per span according to span plans

Tower No According To Profile	Structure Type	Span Length Ahead (m)	Conductor per phase Single or Twin to next pole	Number of dampers per phase for span	Total number of dampers per span
Voltaire S/S t	o Boitekong	S/S 132kV	Line		
1	DDT 7635	120	1	1	1
2	DDT 7630	145	1	1	1
3	DDT 7630	98	1	1	1
4	DDT 7630	190	1	1	1
5	DDT 7630	133	1	1	1
6	DDT 7630	133	1	1	1
7	DDT 7630	-	1	1	1
8	DDT 7630	170	1	1	1
9	DDT 7635	170	1	1	1
10	DDT 7635	120	1	1	1
Tota	I number of Vibrat	tion dampers nee	ded for phase conductor on l	lines	30

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#### b) Earth wire / Shield wire – OPGW 53K57z – 7079 Prysmian or similar

The loop length was calculated at **1.5m**. The position of the first vibration damper was calculated at **1.05m** from the dead end or suspension hardware which is 0.7 of the loop length.

#### 3. Civil Design

#### 3.1 Foundation Selection

The correct foundation will be selected on site where the specific pole must be placed. It should be specified as soil types 1, 2, 3, 4 or rock. This must be done by an experienced Pr.Eng Civil Engineer. Foundations to be used will be as specified on the structure drawings.

All foundations for stays must also be nominated by an experienced Pr.Eng Civil Engineer.

#### 4. Requirements

#### 4.1 Legal Requirements (Clearances)

The line profile for the 132kV line will satisfy the clearances given in the Occupational Health and Safety Act, Act No. 85 of 1983 (OHSA) detailed in the following table. Refer to the Construction Handbook for the minimum vertical clearances of power lines at maximum sag and swing. The clearances are tabulated as follows;

Table V2.13 Minimum Clearances

Description	Clearances (m)
Safety Clearances:	
Phase to Earth	1.48
Phase to Phase	1.68
Vertical Clearances:	
Outside townships	6.3
Inside townships	6.3
Roads in townships or proclaimed roads outside townships	7.5
To buildings, poles and structures not forming part of the power line	3.8
Other power lines	2.0

An additional buffer of 400mm has been added to the clearances for survey inaccuracies and for slight tower moves on site during construction if necessary.



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#### 4.2 Stavs

No stays are required on intermediate structures unless the contactor requires such for construction.

The stays used for strain monopoles on the new 132kV Voltaire – Boitekong OHL are 19/2.65 steel wires. The installed tension shall be 5% of the UTS of the stay wires being used. All stays shall be installed in accordance with the drawings and so that the UTS is not exceeded under any load case/weather condition. Where the stays are planted in normal Type 2 soil, the standard assembly, as per **D-DT-7325/2-WT-1288**, can be used. The Contractor may use rock anchors if necessary and if this is economically viable. The designs for these anchors shall be submitted to RLM for acceptance before installation.

All stays shall be proof loaded after installation, according to the following table:

Table V2.14 Stay information

Type of Stay	UTS (kN)	Proof Load (kN)		
19/2.65 wire	115	51		

#### Please Note:

In addition, the stay wire assembly (the portion above the stay rod) shall be tested as a unit. Tests shall be witnessed by RLM representative and results shall be given to the COW/Project Manager for acceptance before stays are installed.



#### ANNEXURE A CONDUCTOR BURNOFF TIMES

#### **Kingbird Conductor**

### **Ratings Of Conductors**

Table 7: IEC 60865-1 METHOD OF CALCULATION

TIME(S)	KINGBIRD
3.00	18565
2.00	22737
1.00	32155
0.90	33895
0.80	35951
0.70	38433
0.60	41512
0.50	45475
0.40	50842
0.30	58707
0.20	71902
0.10	101684



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<b>VOLUME 3 DETAIL 9</b>	SCOPE OF
WORK	

Rustenburg Local Municipality

Project Title: VOLTAIRE-BOITEKONG 132kV LINE DEVIATION

Project No.

#### INDEX

	DESCRIPTION	PAGE	Attached Y/N
1.	Primary Plant Specifications		
1.1	NEC Small Works Contract	2	YY
1.1.1	Bill of Quantities Voltaire-Boitekong 132kV 0.819km line Summary	2	Υ
1.1.2	Works Information: Appendix A	8	YYYY
1.1.3	Specifications/Standards	9	
	Works Information: Appendix B		Y
1.1.4	List of contract drawings	10	
	Works Information: Appendix C		
1.1.5	List of other documents attached	11	
	Technical Specifications		
2.		12	
	Safety Risk Analysis Specifications		
3		24	

#### DETAILED SCOPE OF WORK

The following scope of works shall be undertaken to ensure that the objectives of this project are achieved.

- Surveying and Pegging of Pole Positions
- Eskom Liaison for Tie-In configurations
- Pole Excavations
- Pole Installations
- Line Stringing
- Dismantling of existing line
- OPGW Installation

Revision Details: Rev.0		
		99



#### 5. Existing 132kV Line Structures





String Lower section of existing line with Kingbird Conductor – Free Issue



6. Existing 11kV Line to be Dismantled







Dismantle existing MV Structures as per pictures above

7. Voltaire Substation Tie – In Configurations (Investigation with Eskom to be conducted)









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#### 8. Primary Plant Specifications

#### 8.1 Section A Bill of Quantities

Please note that no tender will be considered if the provided bill of quantities are not fully completed. The quantities provided in the schedules are estimated figures and are subject to change, if no quantities are given the contractor must provide estimated figures.

ITEM	REFDWG	DESCRIPTION	UNI T	QTY	MRAT E	LRAT E	мтот	LTO T	PRICE
1	1.1	NEC Short Contract							
Α	SABS1200A	PRELIMINARIES							
<b>4.1</b>		Client's specific requirements							
1		Contractual requirements	item						
2		Establishment of facilities on site such as plant, sheds, lighting, fridge, security lighting, etc.	item						
3		Supply and install electrical connection to site camp.	item						
4		Supply and install a water connection to site camp.	item						
5		Removal of site establishment	item						
6		Other fixed - charges (Specify):							
6.1		Other fixed - charges (Specify):	item						
١.2		Contractor's time related items:							
1		Contractual requirements	item						
2		Operation & maintenance of facilities	item						
3		Supervision	item						
4		Company & head office overhead costs	item						
5		Machinery hire purchase costs, transport cost to and from site.	item						
6		Delivery of material.	item						
7		Receiving, taking control and administering material.	item						
8		Arrangement with Client, obtaining permits, arranging outages, etc. and to energise sub.	item						
9		Site security, safe guarding material in site camp and during construction.	item						
10		Other (Specify):							
		1) Accommodation and LOA	item						
		2)							
<b>\.</b> 3		Construction regulations:							
1		Cost for Compliance to Construction Regulations requirements as well as Cost for Compliance to the Health and Safety Plan,etc; Refer to Sections 2 and 3.	item						
2		Cost for compliance to the Environmental Management Plan.	Item						
		Cost for workers to undergo HV safety and induction programs for the purpose of working on above.	Item						
\.4		Test Joint							
	T 04TB-040	Before construction commences, joint test must done by the authorised person and witnessed by the Clerk of Works and test certificates to be part of the Hand Over Documentation.							



_							
	·		Supply all material and perform the following test at an approved body: (Refer to Volume 4 for required material)				
	1		1 x Kingbird test joint	each			
9	Subtota	al carried to I	tem 1 of Summary		R		



	OF THREE TEARS								
Item	REFDWG	DESCRIPTION	Unit	Qty	Mrate	Lrate	Mtotal	Ltotal	Price
В		BUSH CLEARING							
	ESKASABG3	Contractor to identify the extent of bush clearing		0.8					
1	Rev1 &	and quote to do bush clearing on the whole line in accordance with the standard.							
	DISTIZAC2	accordance with the Standard.	km						
B2		CLEARING 132kV ROUTE							
2		LINE FOUNDATION STUDY							
		It is the responsibility of the line Contractor to test							
		all foundations and keep all result which shall be handed to project Manager on completion of the	ea	7					
2.1		project	Ga	,					
		,							
С		LINE CONSTRUCTION							
C.1		Foundations			1				
1a	D DT 7000	Total foundations for all D-DT 7630 (2602-03) pole structures (i.e. total)	ea						
	D-DT 7630			4					
1b		Total foundation for all D-DT 7634 (2602-05) pole structures (i.e. total)							
10	D-DT 7634	, ,		1					
10		Total foundations for all D-DT 7635 (2602-06) pole	00						
1c	D-DT 7635	structures (i.e. total)	ea	2	<u> </u>				
4.1	D DT 7000	Total foundations for all D-DT 7802 pole structures							
1d	D-DT 7802	(i.e. total)	ea						
		Transport imported material to pole position,		2					
		excavate, dispose excavated material, barricade, supply and install complete foundations for							
1.1	D-DT 7850	drawing D-DT 7850 Sheet 2: Type 1	ea						
		T		0					
		Transport imported material to pole position, excavate, dispose excavated material, barricade,		2					
		supply and install complete foundations for							
1.2	D-DT 7850	drawing D-DT 7850 Sheet 3: Type 2	ea						
		Transport imported material to pole position,		1					
		excavate, dispose excavated material, barricade,							
4.0	D DT 7050	supply and install complete foundations for							
1.3	D-DT 7850	drawing D-DT 7850 Sheet 4: Type 3	ea						
-		Transport imported material to pole position,		1					
		excavate, dispose excavated material, barricade,							
1.4	D-DT 7850	supply and install complete foundations for drawing D-DT 7850 Sheet 5: Type 4	ea						
1.7	5 51 7000	and the second of the second o	Sa						
		Transport imported material to pole position,		1					
		excavate, dispose excavated material, barricade, supply and install complete foundations for							
1.5	D-DT 7850	drawing D-DT 7850 Sheet 1: Rock and soft rock	ea						
					ļ				
С		LINE CONSTRUCTION			<del> </del>				
C.2		Erection of Structures (Poles) Supply, transport to pole position, install and erect		-	1	+			
		Supply, transport to pole position, install and erect							
		132kV STRAIN 60-90°, 24m (32kN) Rocla Concrete				1			
1	D-DT 7634 (2602-05)	poles Deviation, 20m 23kN	ea	1					
<b>-</b>	D-DT 7630 (2602-	Suspension Structure, 24m (32kN) Rocla Concrete	ea	4	1	+			
2	03)	pole							
-	D-DT 7635 (2602-06)	H-POLE, 132kV TERMINAL STRAIN, 24m (32kN) Rocla	ea	2	1	1			
3	5 51 1000 (2002-00)	Concrete poles	Ga						
					1	1			

Subtotal carried to Item 2 of Summary	R



		OF TRICE TEARS							
Item	REFDWG	DESCRIPTION	Unit	Qty	Mrate	Lrate	Mtotal	Ltotal	Price
С		LINE CONSTRUCTION							
C.3	D-DT 0640	Tower Earthing							
		Note: All earthing and bonding work to be done before constructing cap concrete							
1	D-DT 0640	Excavate, supply and install complete 3 point star earth electrode in actual site (incl. rocky terrain), Copper clad earths required.	ea	7					
2	D-DT 0640	Bond 3 poles of 3-pole structures to each other by using 19/2.65 steel wire, buried 1m deep. Price to include supply, excavation, installations and backfilling in any terrain.	ea						
3	D-DT 0640	Bond terminal structure to substation earthmat using 2 x 19/2.65 steel wire, buried 1m deep. The 2 conductors needs to be connected to the 2 outer poles of each terminal structure. Price to include supply, excavation, installation and backfilling. Note that the existing connection may require complete re-installation.	m	1					
4		Testing of tower footing resistance	ea	7					
7		resumg of tower rooting resistance	Ca	'					
С		LINE CONSTRUCTION STAY							
C.4		Foundation and Stay Assemblies. It is the responsibility of the line Contractor to test all foundation as per volume 6 and keep all result and to be handed to project Manager on completion of the project.(NB: BUY AS PER PEG)							
1	D-DT-7325 & D-DT- 7346	Supply and transport to site complete 19/2.65mm steel wire stay assembly for <b>permanent</b> stays, assembled according to D-DT-7325	ea	36					
1.1	2-WT/1143	Excavate and transport imported material, barricade and dispose of excavated material and install complete <b>permanent</b> 19/2.65mm stay rod assemblies for drawing 2-WT/1143:	ea	36					
		Excavate and transport imported material, barricade and dispose of		36					

1.2	2-WT-1062 excavated material and install complete permanent 19/2.65mm stay rod assemblies for drawing 2-WT-1062:	ea			
2	Supply and transport to site complete D-DT-7325 19/2.65mm steel wire stay assembly for & D-DT- <b>temporary</b> stays, assembled according 7346 to D-DT-7325 and remove all temporary stays after construction.	ea			
2.1	Excavate and transport imported material, barricade and dispose of excavated material and install complete 2-WT/1143: temporary 19/2.65mm stay rod assemblies for drawing 2-WT/1143:	ea			



	<u> </u>		ILAIV	<u> </u>				
	Excavate and transport imported material, barricade and dispose of excavated material and install complete 2-WT-1062 temporary 19/2.65mm stay rod assemblies for drawing 2-WT-1062:	ea						
Subto	otal carried to Item 3 of Summary		R					



•	DEEDWO		IREE Y		In a .	l	he				
tem	REFDWG	DESCRIPTION	Unit	Qty	Mrate	Lrate	Mtotal	Ltotal	Price		
С		LINE CONSTRUCTION									
C.5		Pole Dressing									
		Supply, transport to pole position, install and erect									
1		132kV STRAIN 60-90° on 24m (32kN) Rocla Concrete poles	ea	1							
2	03)	Suspension Structure on 24m (32kN) Rocla Concrete pole	ea	4							
3	D-DT 7635 (2602-06)	H-POLE, 132kV TERMINAL STRAIN on 24m (32kN) Rocla Concrete poles	ea	2							
D		CABLE INSTALLATION									
C.5		88kV Single Core HV Cables									
		Single (1) Core 500mm2 compacted Class 2 Aluminum Conductor to IEC 60228, Triple Layer, Simultaneously Extruded, Linked Semi conductive conductor screen, Cross Linked Polyethylene Insulation, Non-Strippable Cross-Linked Semi conducting core screen insulation. Corrugated Seamless Aluminum (CSA) screen and black MPDE sheath, resistant and protected against radial and longitudinal water penetration and meets the requirements of IEC 60840and Embossed									
		Supply, transport to pole position, install, Test and erect.	b								
1		88kV Single Core Cable	m	1800							
2		88kV Single Core Terminations	ea	15							
3		88kV Single Core Joints (Supply Only)	ea	3							
					1						
					-						
Subtot	Subtotal carried to Item 2 of Summary					R					



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DESCRIPTION	Unit	Qty	Mrate	Lrate	Mtotal	Ltotal	Price
STRINGING and REGULATION							
Stringing							
Transport to site and string the							
following (Length  Phase Conductor - Single Kingbird	d (includes						
5% scrap & sag)	m (includes m	5790					
Earth wire - OPGW 70	091/similar m	970					
(includes 5% scrap)							
132kV Post insulators	ea	30 36					
132kV long rod insulators  Crossings, Prepare tel	ea	36					
structures and do stringing for o	mporary crossing						
Allow for all the crossings. (11kV, 66kV, 132kV, 275kV, 400kV, roads, telephone lines, rail lines, etc.) as per the profile and Volum design.	pipelines,						
Live line works							
String between two structures to c line using live line construction	cross with new Rate only						
Joints, Supply and install the following compression joint	,						
Mid span joint Kingbird	ea	3					
Dead-end termination (Kingbird)	ea	36					
OPGW joint (7091/similar)	ea	1					
Supply and install repair sleeved damaged conductor	s for						
Kingbird	Rate only						
OPGW (7091/similar)	Rate only						
Making off and Regulation							
Making off phase conductor - Kingbird	ea	18					
Regulating - Kingbird	ea	18					
Making off OPGW – 7091/similar		6					
Regulating OPGW – 7091/similar	ea	6					
Clamping In Clamping-in phase conductor (suspension poles)	ea	12					
Clamping –in OPGW – 7091/simil	lar ea	4					
Vibration Dampers							
Supply and install asymmetrical vidampers on the phase conductors		72					
indicated in Volume 2 Supply and install asymmetrical v dampers on the OPGW as indicat Volume 2	vibration ted in ea	12					
Access gate							
Normal gate	Rate only						
LABELLING	Offity						
Supply and Install pole identification	<del>c</del> a	7					1
Supply and install line crossing lab indicated in Volume 2	ea						
Install phase disc label on the term structures	ninal ea	2					
Install line designation	ea	2					
			ea 2	ea 2	ea 2	ea 2	ea 2



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TENIOD OF THIREE TENIO									
Accredited Training for 88kV Termination &	Person	10							
Cable Jointing and Installation									
Accredited HV Switching Training	Person	10							



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Subtotal carried to Item 4 of Summary						R			
Item	REFDWG	DESCRIPTION	Unit	Qty	Mrate	Lrate	Mtotal	Ltotal	Price
G		OHL DISMANTLING AND REMOVAL							
G.1		Dismantling							
		Dismantling of existing OHL	Lot						
G.2		Removal							
		Removal of material from existing OHL and returning to RLM stores or as required	Lot						
Subto	tal carried t	to Item 2 of Summary			R				

# **8.1.1** Summary

Item	Description of the item	Page	Price (R)			
No.						
Α	Preliminaries	2				
В	Bush clearing	3				
C1	Line Construction-Foundations	3				
C2	Line Construction-Erection of Structures	3				
C3	Line Construction-Tower Earthing	4				
C4	Line Construction-Stay Assembly	4				
C5	Line Construction-Dressing	5				
D	Stringing and regulation	6				
Е	Labelling	6				
F	Documentation	7				
G	Existing OHL dismantling and removal					
Total of	the Prices excluding VAT Value	RR				
added Ta	ах	R				
Total of	Total of the Prices including VAT					



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8.1.2 Works Information: Appendix A Specifications

List and attach all standard specifications and other documentation applicable to this contract. Publicly available standard documents should not be attached as they can be *Employer* specific variations to standard specifications are also listed and attached.

Specification No.	Rev.	Title and Publisher	Attached Y/N
SANS 1700-7-1 to 10	1991	ISO metric bolts, screws and nuts (hexagon and square) (course thread free fit series) - SANS	N
SANS 935	1988	Hot-dip (galvanised) zinc coatings (other than on continuously zinc-coated sheet and wire) - SANS	N
SANS 1200	-	Standard specification for civil engineering construction - SANS	N
240-75880946	_	Earthing Standard - Eskom	N
240-120804300	1	Standard for labelling of high voltage equipment - ESkom	N
DISASZAA2	0	Application standard for Distribution equipment labels – Overhead Lines	N
TRMSCAAC1	2	Transmission lines and line construction - Eskom	N
TRMSCAAC5	3	Design and manufacture of high voltage equipment labels - Eskom	N
240-130615862	1	Earthing of transmission line structures - ESkom	N
SCSASABG1	0	Sub-transmission lines standard : Steel Mono Pole Series	N
240-66418968	1	GUIDELINE ON THE ELECTRICAL CO-ORDINATION OF PIPELINES AND POWER LINES	N
240-75883154	1	CURRENT CARRYING COMPRESSION FITTINGS FOR OVERHEAD SUB-TRANSMISSION SYSTEMS	N
240-75883896	1	Outdoor Post and Long Rod Insulators for New and Refurbished Powerlines for 66kV and 132kV Standard	N
240-75521456	1	SPECIFICATION FOR PHASE CONDUCTOR FOR DISTRIBUTION LINES AND SUBSTATIONS	N
240-75883378	1	SPECIFICATION FOR STEEL POLE OVERHEAD LINE SUPPORTS	N
240-755884108	1	Sub Transmission Lines Section9: Steel Mono Pole 132kV Suspension Structures (Suspension Arm)	N
240-75884084	1	SUB-TRANSMISSION LINES SECTION 2: CONDUCTORS	N
240-98155879	1	VIBRATION DAMPERS FOR SINGLE CONDUCTOR SUBTRANSMISSION LINES	N
240-100991892	1	Copper-Clad Steel Conductor for Earthing of Distribution Transformer Installations	N



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8.1.3 Works Information: Appendix B List of contract drawings

List all drawings applicable to the works or the asset and temporary works,

A.F.U. Drawing No. Rev. Title Y/N Concrete pole structures 2602-05 В 132kV Angle Strain Structure Υ 2602-04 С Υ 132kV Concrete pole 132kV Terminal 'H' Structure (TWIN CIRCUIT) 2602-06 Α Υ С 2602-03 132kV Concrete Suspension structure Υ 2602-16 132kV Concrete Strain Pole Miscellaneous 2-WT/1148 0 Installation of labels on concrete and steel poles Υ D-DT 7347 3 Perching Bracket for Mono Steel Structures Υ Ÿ D-DT 0640 1 88-132kV Structures footing earth electrode details 3 D-DT 7322 Position of vibration dampers Y Y 3 Stay assembly drawings D-DT 7325 Υ D-DT 7346 4 Stay location chart 2 D-DT 7857 Monopole cap and earthing details



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8.1.4 Works Information: Appendix C attached to this contract form:

List of other documents

List all other documents which are attached and part of this contract so that a complete record exists of what the Parties agreed as constituting the contract. Do NOT include tenderers letters or any other document relating to the enquiry phase as the contract itself must reflect only what has been agreed as a result of the tender and its final

Document No.	Rev.	Title



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# 8.1.5 Works Information: Appendix D - Scope of works information:

# a) Scope of works:

The contractor shall supply labour, transport and materials to construct a complete section of overhead line from the existing Line at Voltaire substation to Boitekong substation..

Soil nominations shall be completed before the new 132kV structures are planted to ensure that the correct foundations are installed. Soil resistivity test will be performed and the new 132kV structures will be earthed in accordance with the applicable Distribution standards considering the materials mentioned in the bill of materials in volume 4. Volume 6 will be completed by contractor.

The scope of works includes site establishment and all other activities in order to complete installation as described in the technical specification and attached drawings.

The contractor shall produce and submit a quality plan and construction program to the Employer within one week of acceptance. The construction program will be in a bar chart format.

The contractor shall provide all plant and materials. The contractor shall provide equipment and labour for the whole of the works (including installation of free-issue material), which includes:

#### Temporary work

Clear the right of way and campsite in order to erect the necessary site offices, own accommodation facilities, sanitary units, bulk water containers, site store, etc.

The works also include the cleaning up of site camp and site store, as well as transportation of excess materials not used back to employer stores.

Temporary materials used on site shall be cleared and discarded in an appropriate manner. This includes cleaning round structure locations.

#### Access roads

Access roads shall be constructed by the contractor where access to the existing servitude is not suitable. The location of these roads shall be submitted to the Client for acceptance before construction of the roads commences. Road shall be constructed to limit erosion and shall be in accordance with environmental requirements.

#### Safety installations

Open excavations shall be barricaded in accordance with OHS Act requirements. No uncovered excavations are permitted. Excavation depths shall be limited in accordance with the OHS Act.



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The contractor shall request surveyor to suitably mark the position all poles and all stays.

The shield wire will be OPGW (7091/similar) and shall be installed by an approved installer. Sag and tension charts, approved for construction, shall be supplied by the approved installer. Stringing shall be done from gantry to gantry.

Conductors will be strung in accordance with the sag and tension charts provided and stringing shall be done from gantry to gantry.

The contractor shall excavate the required pole foundations and stays and shall backfill and compact as necessary for poles and stays in layers no greater than 300mm. D-DT-7325 & D-DT-7346 shall be applied and stays shall be installed in accordance with the applicable Distribution standard.

HV structures shall be assembled and installed according to the applicable Distribution standards.

The scope of works includes testing and commissioning of the complete project.

All materials must be new and inspected by clerk of works. No re-use of material removed from the existing OHL is permitted.

The work will be taken over by the employer upon completion, provided that the necessary inspections and tests have been completed.

# **C)** Restrictions in providing the works:

Before construction commences and before entering the site, every properties owner shall be contacted to arrange for site access.

The contractor shall treat property owners in a courteous, friendly and polite manner and keep them informed of changes to the required access.

The contractor shall foster close relationships with recognized community structures in the area.

The contractor shall employ staff from the local community as far as possible.

# d) Definition of completion

The works are to be completed in accordance with the specifications in all respect and taken- over by the employer, except cleaning of the site and breaking of camp which may be within 1 week after completion.

All services shall be in accordance with RLM distribution services standard and specification.



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# **Work Specification**

The contractor shall allow for the following specific requirements:

Office accommodation for meetings held on site.

In addition to the specific requirements detailed above, the contractor shall allow for his own preliminaries and/or overhead costs as required for the execution of the contract. It shall be divided into the following two sections:

a) Fixed-charge items such as:

(SANS 1200A - 8.3)

Contractual requirements.

Establishment of facilities on site such as plant, sheds, water, electricity, lighting, etc.

- 1 Removal of facilities from site after completion of work.
- 2 Any other fixed-charge items.

b) Time related items such as: (5

(SANS 1200A - 8.4)

- Contractual requirements.
- 2 Operation & maintenance of facilities on site.
- 3 Supervision.
- 4 Company and head office overhead costs.
- 5 Other time related items.

# **Material Specification**

The specific contractor shall supply, transport and off-load his own facilities such as sheds, water, electricity, lighting, and no open fire on construction site.

The contractor shall also be responsible to remove all facilities established on site after his work is completed.



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# 2 TECHNICAL SPECIFICATIONS

Note: Unless otherwise specified the material shall be in accordance to the specifications listed in the NEC Small Works Contract.

# 2.2 Preliminaries

# 2.2.1 Work Specification

- a) The contractor shall allow for the following specific requirements: a ) Office accommodation for meetings held on site.
- In addition to the specific requirements detailed above, the contractor shall allow for his own preliminaries and/or overhead costs as required for the execution of the contract. It shall be divided into the following two sections:
  - a) Fixed-charge items such as: (SANS 1200A 8.3)
    Contractual requirements.

Establishment of facilities on site such as plant, sheds, water, electricity, lighting, etc.

- a) Removal of facilities from site after completion of work.
- **b)** Any other fixed-charge items.
- b) Time related items such as: (SANS 1200A 8.4)
- Contractual requirements.
- 1. Operation & maintenance of facilities on site.
- 2. Supervision.
- 3. Company and head office overhead costs.
- 4. Other time related items.

# 2.2.2 Material Specification

The specific contractor shall supply, transport and off-load his own facilities such as sheds, water, electricity, lighting, etc. on the site. The contractor shall also be responsible to remove all facilities established on site after his work is completed.

#### 2.3 Line construction

### 2.1.A. Works Specifications

#### NOTES:

- a) All work shall be in accordance the relevant SABS 1200 documents
- b) All labour cost shall be included in quoted rate.

#### 2.1.A.1 Foundations shall include:

- a) Supply and erecting complete foundations according to the relevant drawing from SCSASABG1 including excavations, formation, reinforcing, holding down bolts, concrete casting and backfilling with the appropriate mixture.
- b) Risk of collapse and keeping excavations free of water shall be included in the guoted rate.



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- c) All excavations shall be kept covered or barricaded, if not attended to, in a manner accepted by the Client to prevent injury to people or livestock.
- d) The contractor shall notify the Clerk of Works upon completion of the excavation for the foundation. No shuttering, reinforcing steel or concrete shall be placed until the Clerk of Works has inspected the excavations and acknowledge his approval.
- e) For construction purposes the correct foundation shall be installed for the type of soil conditions and structure to be installed.
- f) Foundation type nominations shall be done by the contractor before construction of the line takes place.
- g) The nominations shall be done in the vicinity of each supporting structure position where the foundation is to be installed.
- h) Steel plates shall be used for setting all holding down bolts.
- The nominated foundation types shall be re-evaluated on site by the contractor, in conjunction with the Clerk of Works, after the excavation of the initial foundation type has been done.
- The final foundation nomination shall be the responsibility of the contractor and shall be logged in the Construction Handbook.
- k) The authorised person responsible for the foundations shall sign the 'Foundation' certificate in the Construction Handbook.

#### 2.1.A.2 Tower earthing shall include:

#### Poles:

- a) Install an earthing electrode should the desired tower footing resistance not be achieved.
- b) Excavation in all materials 200mm wide trenches for the earth electrode.
- c) Risk of collapse and keeping excavations free of water shall be included in the quoted rate.
- d) The earth electrode for the steel poles shall be a three point star as shown on drawing 2-D-WT/763.
- e) The earth electrode used shall be Copper clad 26mm² stranded 7/2.17.
- f) The earth electrode shall be bonded to the steel pole using 7/2.12 (25mm²) stranded copper conductor having a crimped lug on the end that will be bonded to the steel pole.
- g) The lug shall be fastened to the pole with a M12 galvanised bolt.
- h) All visible copper protruding above the ground shall be painted with the same type and colour paints of the equivalent or supports which it is bonded to.
- i) The footing resistance of each tower shall be measured before stringing takes place and shall be logged in the Construction Handbook.
- j) The authorised person responsible for the tower earthing shall sign the 'Earthing' certificate in the Construction Handbook.
- k) The nominal tower footing resistance shall be less than 20...
- I) The first five steel poles from the substation, shall have a footing resistance less than 101, if not the shield wire on these structures shall be insulated.
- m) Where the specified tower footing resistance have not been obtained using standard earthing methods, additional earthing shall be installed.
- n) The additional earthing shall be counter poise conductors in accordance to SCSASABF9.



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#### Terminal Structures:

- Earthing of the terminal structure shall be according to the latest revision of SCSASABF9 and to Eskom earthing Standard.
- b) The terminal structure shall be bonded to the main substation earth mat with a single 50x3mm copper strap.
- c) The copper strap will be installed by the substation contractor and bonded by the line contractor.
- d) The copper strap shall be bonded to the terminal tower legs with M16 bolts.
- e) All visible copper protruding above the ground shall be painted with the same type and colour paint of the equivalent or supports which it is bonded to.
- f) The footing resistance of the terminal tower shall be measured before stringing or bonding to the main substation earth mat takes place and shall be logged in the Construction Handbook.
- g) The authorised person responsible for the tower earthing shall sign the 'Earthing' certificate in the Construction handbook.
- h) The nominal tower footing resistance shall be less than 10...
- i) Where the specified tower footing resistance have not been obtained using standard earthing methods, additional earthing shall be installed.
- j) The additional earthing shall be in accordance to SCSASABF9.

#### 2.1.A.3 Planting of poles shall include:

- All poles shall be positioned plumbed vertical in the centre of the excavations viewed from any direction according to the relevant steel pole drawings.
- b) Nylon or fabric slings shall be used when handling poles.
- c) Back-filling shall be done according to SCSASABK8 Distribution Standard for soil compaction for stay and pole foundations.
- d) Imported soil shall be used for the soil/cement mixture and shall not consist of any excavated Black Turf or sand soil.
- e) The layers shall be compacted to a minimum density of 90% MOD AASHTO before the next layer of soil/cement mixture is placed.
- f) For stayed poles with concrete anchors, the pole shall not be erected until the concrete has had 21 days in which to cure.
- g) The authorised person responsible for the installation of the towers shall sign the 'Tower Installation' certificate in the Construction Handbook.

# 2.1.A.4 Assembly and erection of terminal structures shall include :

- a) The terminal towers shall be assembled and erected on the complete tower foundation.
- b) Towers shall not be erected until the concrete foundation has had 14 days in which to cure.
- c) Terminal tower material in storage shall be blocked off the ground with sufficient number of blocks to prevent bending or warping of individual members.
- d) Nylon or fabric slings shall be used when handling steel members.
- e) Tower material shall not be dumped or dropped from trucks, but shall be carefully off-loaded and stacked.
- f) Steel towers that become bent, twisted or deformed during transport, assembly or erection shall be replaced at the expense of the contractor.
- g) The threaded portions of any bolt shall project through the corresponding nuts by an amount not exceeding 15mm and not less than 3mm.
- h) All bolts shall be tightened and thereafter fixed in position by punching four indentations symmetrically around the threads with a round pointed centre punch.



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- i) All nuts and exposed bolt threads shall be painted with an accepted calcium plum bate based galvanised iron primer.
- j) The authorised person responsible for the installation of the towers shall sign the 'Tower Installation' certificate in the Construction Handbook.

### 2.1.A.5 Installing stay rod assembly shall include:

- a) Supply and install complete stay rod assembly according to drawing 2-WT/1143 and 2-D-ET/13437 including excavations, concrete casting, backfilling and compaction.
- b) Risk of collapse and keeping excavations free of water shall be included in the quoted rate.
- c) All excavations shall be kept covered or barricaded in a manner accepted by the Client to prevent injury to people or livestock when no casting is done.
- d) The contractor shall notify the Clerk of Works upon completion of the excavation for the stay rod. No concrete shall be placed until the Clerk of Works has inspected the excavations and acknowledge his approval.
- e) For construction purposes the correct holes type shall be installed for the type of soil conditions and stay rod assembly to be installed.
- f) The excavation shall be done at a distance away from the pole so that the angle of the stay wire after being installed is 45° as shown on drawing 2-WT/1143 Sheet 1.
- g) Excavation nominations shall be done by the contractor before construction of the line takes place.
- The nominations shall be done in the vicinity of each supporting structure position where the stay rod is to be installed.
- i) The nominated excavations shall be re-evaluated on site by the contractor, in conjunction with the Clerk of Works, after the excavation of the stay rod hole has been done.
- j) The final excavation nomination shall be the responsibility of the contractor and shall be logged in the Construction Handbook.
- k) The soil will be compacted in strict accordance to SCSASABK8.

# 2.1.A.6 Perching Bracket

- a) The perching brackets must be installed on all intermediate structures.
- b) The attachment of the perching bracket must be done as indicated on drawing D-DT 7347.

#### 2.1.A.7 Installing stay wire shall include:

- a) The stay wires shall be handled with care to prevent damage to the individual strands.
- b) The stay wire shall be long enough to be tied to the stay rod at, at least two positions as indicated on drawing 2-WT/1143 Sheet 1.



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# 2.1.A.8 Dressing structures shall include:

- a) Installing all hardware according to the relevant tower drawings.
- b) All bolts shall be secured with stainless steel split pins.
- c) All bolts and split pins of the hardware shall be installed pointing in one direction so that the split pins are visible from one side of the line only.
- d) Earth wire insulators shall be installed on the terminal structure, on the substation side of the terminal structure only.
- e) The earth wire shall be bonded to the steel structure for all other structures.
- f) The strain insulators shall be installed in such a way that the jumpers connected to the existing line are supported sufficiently

# 2.1.A.9 Disposal of excavated material shall include:

- a) Removal of excavated sand or any other soil unsuitable for back-filling and transporting it to borrow pits.
- b) The excavated material shall be disposed of in borrow pits or a suitable place, indicated by the client's site representative or the environmental representative.
- c) The contractor shall make his own arrangements for the provision to dispose of the excavated material on such a disposal place.
- d) Free haul shall be the distance within a radius of 1.5km from the pole/tower position.
- e) Limited haul shall be the first 1km beyond the end of the free haul distance by the shortest practicable route.
- f) Long haul shall be the remainder of the distance beyond the limited haul by the shortest practicable route.

### 2.1.A.10 Importing soil shall include:

- a) Transporting imported soil from borrow pits to pole/tower position.
- b) In areas where the excavated soil is rocky or Sand , imported soil shall be used for the soil/cement mixture.
- c) The contractor shall make his own arrangements for the provision of a suitable borrow-pit for importing soil.
- d) Free haul shall be the distance within a radius of 1.5km from the pole/tower position.
- e) Limited haul shall be the first 1km beyond the end of the free haul distance by the shortest practical route.
- f) Long haul shall be the remainder of the distance beyond the limited haul by the shortest practical route.

#### 2.1.A.11 Transportation shall include:

- Transporting all material and equipment from the construction camp to the pole/tower position.
- b) Free haul shall be the distance within a radius of 1.5km from the construction camp.
- c) Limited haul shall be the first 1km beyond the end of the free haul distance by the shortest practicable route.
- d) Long haul shall be the remainder of the distance beyond the limited haul by the shortest practicable route.
- e) If the contractor is planning to use a batching plant not located in the construction camp, the cost due to transporting the concrete from the batching plant to the construction camp shall be at the expense of the contractor.



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# 2.2.B Material Specification

#### NOTES:

a) Unless otherwise specified, all the material necessary to complete the construction of this line, shall be supplied by the contractor

#### 2.2.B.1 Foundations:

- a) Unless otherwise specified, all material and equipment necessary for the supporting structure foundations along the line route shall be supplied by the contractor. The contractor shall transport all the material and equipment to the construction camp.
- b) At the end of the day, the contractor shall transport all the equipment and material not used, back to the construction camp.

### 2.2.B.2 Tower earthing:

- The contractor shall supply all the equipment necessary for installing the tower earthing.
- b) Conductive concrete where required, shall be supplied by the contractor.
- c) All bolts with nuts and washers for the tower earthing shall be supplied by the contractor and be in accordance to the relevant tower drawings.
- d) All bolts and nuts shall be in accordance to SANS 1700- 7- 1 to 10 with a strength grade of 4.8.
- e) All bolts with nuts and washers used for bonding shall be hot dipped galvanised to SANS 935.

### 2.2.B.3 Planting poles:

- a) The contractor shall supply all the equipment necessary for planting the poles.
- b) All additional bolts with nuts and washers not supplied with the pole shall be supplied by the contractor and be in accordance to the relevant tower drawings.
- c) All bolts and nuts shall be in accordance to SANS 1700-7 1 to 10 with a strength grade of 4.8.
- d) All bolts with nuts and washers used for bonding shall be hot dipped galvanised to SANS 935.

#### 2.2.B.4 Terminal tower assembly and erection:

- a) The contractor shall supply all the equipment necessary for assembling and erecting the terminal towers.
- b) All additional bolts with nuts and washers not supplied with the pole shall be supplied by the contractor and be in accordance to the relevant tower drawings.
- c) All bolts and nuts shall be in accordance to SANS 1700- 7- 1 to 10 with a strength grade of 4.8.
- d) All bolts with nuts and washers used for bonding shall be hot dipped galvanised to SANS 935.

### 2.2.B.5 Stay rod installation:

- a) The contractor shall supply all the equipment necessary for installing the stay rods.
- b) The contractor shall supply the concrete where applicable and imported soil for the stay rod assemblies.



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# 2.2.B.6 Perching Bracket

a) The contractor shall supply all the equipment necessary for installing the perching brackets.

# 2.2.B.7 Installing stays wires:

a) The contractor shall supply all the equipment necessary for installing the stay wires.

#### 2.2.B.8 Dressing the structures:

- a) The contractor shall supply all the equipment necessary for dressing all the structures.
- b) Additional bolts with nuts and washers shall be supplied by the contractor.
- c) Bolts, nuts and washers shall be hot dipped galvanised to SANS 935.
- d) Bolts shall be to SANS 1700 1 to 10 with a strength grade of 4.8.

### 2.2.B.9 Disposal of excavated material:

- a) The contractor shall be responsible for disposing of excavated soil not used for backfilling.
- b) The contractor shall transport all the excavated soil not used for backfilling to the suitable borrow pit.

# 2.2.B.10 Importing soil:

- a) The contractor shall be responsible for supplying imported soil. If not otherwise specified, the imported soil shall be in accordance to SANS 1200.
- b) The imported soil shall not contain notable quantities of organic matter or stones of average dimension exceeding 150mm.
- c) The contractor shall transport all the imported soil from the borrow pit to the pole position.

#### 2.2.B.11 Transportation:

a) The contractor shall transport the concrete from the batching plant to the pole position.

#### 2.2.B.12 Documentation:

- The contractor shall complete all the sections of the Construction Handbook that applies to the construction of the line.
- b) The sections shall include all the job description and check list tables, building of the line table and earthing table.
- c) The contractor shall appoint a responsible person for each task listed on the 'Authorised Persons' sheet and fill their names in on this sheet.
- d) The contractor shall ensure that the authorised person shall sign the task certificate after the completion of the work.
- e) After completing the Construction Handbook, the contractor shall return the Construction Handbook back to the Client for review.



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# 2.3 Stringing and regulation

# 2.3.A Works Specifications

#### NOTES:

- a) All work shall be done according to Eskom Specification TRMSCAAC1.
- b) Stringing, jointing, conductor repairs and regulation shall be reported in the Construction Handbook.
- c) All labour cost shall be included in quoted rate.
- d) The successful tender shall prepare and test a test string according to TRMSCAAC1 before any stringing takes place. The tender shall submit four copies of the test report to RLM for review.
- e) No stringing shall take place before written approval is received from the Client.
- f) Copies of calibration certificates, test reports, etc. for all the instruments and equipment used in the stringing and regulation process shall be submitted to the Client's representative for review.

# 2.3.A.1 Stringing conductors shall include:

- a) Stringing of the closing span at gentry structure.
- b) The top phase on the poles shall be the WHITE phase.
- c) If the phases should be rotated, it should be done at the strain tower.
- d) Tension Stringing shall be used to string the phase conductors and earth wires.
- e) All stringing shall be done according to the provided Sag and Tension Charts.
- f) Suitable structures under each phase conductors shall be erected to protect all fences from conductor damage during stringing.
- g) Adequate protection shall be provided where there may be danger of a conductor being crossed over by vehicles, or damaged by other equipment or objects.
- h) Conductors shall not be left in contact with the ground, vegetable matter or any conducting or semi-conducting material.
- i) Wood lagging shall be used to protect the conductor when working at ground level.
- j) Jumpers shall be formed in a manner as to provide the maximum amount of clearance from earthed hardware, and tower steelwork.
- k) Where temporary stays are required, the contractor shall be responsible for making the suitable arrangements.
- I) Conductors shall not be anchored to any part of the steel poles/towers.

# 2.3.A.3 Conductor joints shall include:

- Only suitably trained and experienced coded jointers shall be authorised to carry out joints on phase conductors and earth wires.
- b) Each coded jointer shall further be issued with his own unique identification number or sign, which he shall use to punch completed joints as a register of his acceptance.
- c) The number of joints over the total length of the line shall be kept to a minimum.
- d) Joints shall not be closer than 15m from suspension towers.
- e) Joints shall not be closer than 30m from strain towers.
- f) Joints shall not be installed in spans crossing railways, proclaimed roads, power or communication lines
- g) In no case shall there shall be more than one joint in a given span.
- h) Joints shall not be installed in spans that is dead-ended at both ends.
- i) No joint shall pass through a stringing pulley.
- j) All conductor joints shall be reported on in the Construction Handbook.
- k) The authorised person responsible for the jointing shall sign the 'Joint and Damage' certificate in the Construction Handbook.



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#### 2.3.A.4 Conductor damage repairs:

- a) Damage to conductors caused by the contractor shall be repaired in a manner determined by the Clerk of Works, at the expense of the contractor.
- b) Where there is repeated damage in the same span, or in consecutive spans, the entire conductor in such spans shall be replaced.
- c) All conductor repairs shall be reported on in the Construction Handbook.
- d) The authorised person responsible for the conductor repairs shall sign the 'Joint and Damage' certificate in the Construction Handbook.

#### 2.3.A.5 Making off shall include:

- a) Making off, phase conductors and earth wires at each steel pole structure, including clamping-in all conductors and attaching armour rods and vibration dampers to the conductor.
- b) Cutting the conductors where the new lines will be connected onto the existing lines
- c) Connecting the cut conductors onto the new towers.
- d) Connecting the jumpers from the old lines to the new lines.
- e) The earth wire at the terminal structure shall be made off according to drawing 2-D- WT/816.
- f) All regulation shall be done according to the provided Sag and Tension Charts.
- g) The conductor temperature shall be determined by means of a Celsius thermometer as shown in Annexure E of the Construction Handbook.
- h) All conductors in a regulated section shall be clamped-in, beginning at the second structure from the forward end of the pulling, and shall progress structure by structure, until the conductors at all structures are clamped-in.
- i) The conductors shall be clamped-in in such a manner that no additional tension is placed on the insulators
- j) Armour rods shall be installed according to the manufacturer's specifications.
- k) The suspension clamps and U-bolts shall be torque to manufacturer's specifications.
- Asymmetrical vibration dampers shall be installed on the phase conductors and Spiral vibration dampers shall be installed on the earth wires.
- m) Two Asymmetrical vibration dampers shall be installed on all tensioned spans, one on each side of the span. The dampers shall be placed at a distance of 904mm, measured from the middle of a suspension clamp or from the edge of a strain clamp.
- n) Two Spiral dampers shall be installed on all tensioned spans, one on each side of he span. The dampers shall be installed a hand-width from the ends of the guy grip dead-end or other hardware.
- o) The vibration dampers shall be installed and torque according to the manufacturer's specifications.
- p) The authorised person responsible for the regulation shall sign the 'Sag and Tension' certificate in the Construction Handbook.

#### 2.3.A.6 Documentation:

- a) The contractor shall complete all the sections of the Construction Handbook that applies to the stringing and regulation of the line.
- b) The sections shall include all the job description and check list tables and the regulation table.
- c) The contractor shall appoint a responsible person for the stringing, jointing and regulation tasks listed on the 'Authorised Persons' sheet and fill their names in on this sheet.
- d) The contractor shall ensure that the authorised person shall sign the task certificate after the completion of the work.



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e) After completing the Construction Handbook, the contractor shall return the Construction Handbook back to RLM for review.

# 2.3.B Materials Specifications

#### NOTES:

- a) Unless otherwise specified, all material necessary for stringing the line shall be supplied by the contractor.
- b) The contractor shall transport all equipment and material from the construction camp to the position where stringing will take place.
- c) All material necessary for the test string shall be supplied by the contractor at the contractor's expense. The contractor shall be responsible for arranging the test location, setting up and testing the test string.

### 2.3.B.1 Conductor damage repairs:

a) Damage caused by the contractor shall be repaired, at the expense of the contractor.

### 2.3.B.2 Documentation:

- a) The Construction Handbook shall be supplied by the Clerk of Works or the Client's representative.
- b) The contractor shall complete the Construction Handbook and return it to the Client.

# 2.4 Labelling

## 2.4.A.1 Works Specifications

# NOTES:

- a) All labels shall be in according to RLM Specification.
- b) All labour cost shall be included in quoted rate.
- c) All labels shall be manufactured according to RLM Specification.
- d) All labels, except line crossing labels, shall be black lettering on yellow background.

# 2.4.A.1 Pole identification labels:

- a) All poles from substation to substation shall be re-labelled
- b) The bottom of the identification labels shall not be less than 5m from the base of the steel pole.
- c) The pole identification labels shall be strapped to the pole with not less than three 12mm stainless steel straps.
- d) The off structure shall be numbered as the first structure.
- e) The numbers shall be changed to correlate with the existing numbering.

### 2.4.A.2 Line designation labels:

a) A line designation label shall be installed on the first structure on the at and substation on the line side of the line



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- b) The line designation label shall be installed between the top phase conductor and the earth wire.
- c) The line designation shall be installed below the line crossing label.
- d) The line designation labels shall be strapped to the pole with not less than three 12mm stainless steel straps.

e)

#### 2.4.A.3 Line crossing labels:

a) No line crossing labels shall be installed on this line.

#### 2.4.A.3 Phase Disk Labels

a) Terminal structures at substation shall have phase disk labels installed on each corresponding phase.

# 2.4.B Materials Specifications

- Unless otherwise specified, all material necessary for installing the line labels shall be supplied by the contractor.
- b) The contractor shall transport all equipment and material from the construction camp to the pole positions.
- 2.4.B.1 Pole identification labels, Line designation labels and Line crossing labels:
  - a) All fixing straps, bolts with nuts and washers for the labels shall be supplied by the contractor.
  - b) The fixing straps shall be 12mm stainless steel straps.
  - c) All bolts, nuts and washers shall be hot dipped galvanised to SANS 935.
  - d) All bolts shall be in accordance to SANS 1700 1 TO 10 with a strength grade of 4.6.
  - e) All labels shall be in accordance to ESKASAAN0 and DISASZAA2...
  - f) All labels shall have a vitreous enamel finish.



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	SAFETY RISK ANALYSIS							
Rustenburg Local Municipality								
	Project Title:	VOLTAIRE-BOITEKONG 132kV LINE DEVIATION	Rev.	0				

### 1. Procedures

All Safe Work Procedures must be adhered to, special attention must be given to the procedures for the following tasks:

- Stringing (Tension and Terminate)
- How to do closing span on existing/new lines
- Outages

# 2. Stringing (Tension and Terminate)

#### 2.1 Definition

Stringing means the tensioning and termination of conductors in the prescribed manner and specifications.

- 2.2 Dangers
- 2.2.1 Falling objects
- 2.2.2 Workmen can fall from towers
- 2.2.3 Induction from other lines
- 2.2.4 Traffic-Roads and/or railway
- 2.3 Procedure
- 2.3.1 The equipment and methods used for stringing the conductors (including earth conductors) shall be such that the conductors will not be damaged. Particular care shall be taken at all times to ensure that the conductors do not become kinked, twisted or abraded in any manner.
- 2.3.2 Stringing shall be done in daylight hours only.
- 2.3.3 Tensions, while pulling, must be sufficient to clear all obstacles safely without damage to the conductor. At no time shall the pulling tension exceed the tension shown on the sag charts.
- 2.3.4 Adequate protection shall be provided where there may be danger of a conductor being crossed over by vehicles, or damaged by other equipment and objects.
- 2.3.5 Radio communications shall be used to relay information and instructions between the conductor tensioning station, intermediate check points, mobile stations and the pulling station at all times during the stringing-tensioning operation.
- 2.3.6 Whenever joints or dead-ends are made, auxiliary erection clamps and hauling devices shall not be placed closer than 8m to the point of joint or dead-end.
- 2.3.7 The conductor shall be cut with a ratchet or guillotine cutter to produce a clean cut, retaining the normal strand lay and producing minimum burrs. The aluminium strands shall then be stripped from the steel core by using an acceptable stripper. Under no circumstances shall high tensile hack-saw blades be used to cut conductor.



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- 2.3.8 The contractor shall string all conductors and earth conductor to the appropriate sags and tensions as determined from the conditions specified in the contract documents.
- 2.3.9 Conductors and earth conductors shall be strung to the appropriate sag determined for the actual span length, and the equivalent span of the strain section involved.
- 2.3.10 The contractor shall provide, and maintain in good condition, suitable dynamometers, sag boards or other accepted apparatus for the proper checking of the work. Dynamometers shall read in Newton and shall be tested and re- calibrated at regular intervals
- 2.3.11 In pulling the conductor, caution shall be used to avoid pulling the conductor above sag.
- 2.3.12 All conductors, except for conductors in sag sections over flat terrain, shall be plumb-marked at each structure for the complete section regulated, before clamping-in or dead-ending of the conductor is begun.



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# 3. How to do closing span on existing/new lines

#### 5.1 Definition

Closing span means the connection of newly built lines onto an existing live line.

# 5.2 Dangers

- 5.2.1 Energised overhead power lines
- 5.2.2 Falling objects

#### 5.3 Procedures

- 5.3.1 Ensure existing live line is isolated and earthed in accordance with Reg. 5.04.5 (HV Regs).
- 5.3.2 Dress the existing pole with the necessary hardware.
- 5.3.3 Remove all personnel, equipment and tools.
- 5.3.4 Cancel permit (if issued).

# 4. Outages

#### 6.1 Definition

Outages mean the switching off of all sources of supply of power so that work can be done on a specific point or apparatus.

# 6.2 Dangers

- 6.2.1 Switching, linking and earthing errors
- 6.2.2 Static
- 6.2.3 Fall from heights
- 6.2.4 Falling objects
- 6.2.5 Weather (e.g. lightning)
- 6.2.6 Back feed through network
- 6.2.7 Work on wrong line

#### 6.3 Procedure

# Prior to outage date

- 6.3.1 Ensure work planning is complete and reflected in the duration of outage required.
- 6.3.2 Supervisor liaise with Project Management timeously to allow a 14 day notification period to national control liaison may occur on site with all stake holders present. A date, time and duration is set in the minute.

#### On outage date

- 6.3.3 Field Services represented by the Appointed Operator performs the required operating, makes the area required safe for work and issues a work permit to Constructions appointed Responsible
- 6.3.4 Responsible Person ensures asset to be worked on is safe according to regulations and accepts the permit by signing as Responsible Person.
- 6.3.5 Responsible Person informs all Construction persons under his supervision of the status of the asset as well as to their specific duties.
- 6.3.6 Responsible Person constantly supervises to ensure adherence to ORHVS and general safe working practices during the outage period.



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### Completion and handing over

- 6.3.7 Responsible Person ensures that all elements of the asset are as per contract requirement and that all materials, personnel, equipment and machinery are removed to enable safe operation of the asset.
- 6.3.8 Responsible Person hands back the asset to the Appointed Operator by signing off to permit after which the Appointed Operator will carry out his function. This is also done in liaison with national control. In the case of a new asset being put into operation, a handing over certificate to Field Services by Project Management.



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#### List of Information Required and Requirements that Need to be Adhered To:

1. List the names of your sub/co-contractors that you will be using or intending to utilize on this project.

If, at this stage when compiling your Safety, Health and Environmental plan you have not any intention of appointing sub/co-contractors, then indicate so. But, during the project phase, if you then, decide to appoint sub/co-contractors, you would have to indicate it to the Client's project manager first before appointing. You would then be required to review your Safety, Health and Environmental plan and include the necessary information that your newly appointed sub/co-contractors as per this Safety, Health and Environmental specifications.

- 2. Acknowledgement that your company and any sub/co-contractors, that you may appoint on this project, is aware of and shall comply with the requirements of the Construction Regulations, and the other regulations and sections, as promulgated, by the Occupational Health and Safety Act No.85 of 1993, and, including the requirements contained in this Safety, Health and Environmental Specification and your approved Safety, Health and Environmental Plan and any additional ad-hoc requirements and/or information that the project manager may request and/or provide during the project phase. No work shall commence if the Health and Safety Plan is not approved.
- 3. A copy of your Health and Safety Plan must be available at all times on request, on project site. This plan would be audited.



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- **4.** Proof of "Notification of Construction Work" to Department of Labour.
- **5.** Proof of registration and in good standing with the compensation fund or with a licensed compensation insurer for your company and each of your sub/co-contractors'. This must remain valid for the period that you and your sub/co-contractors are appointed for, for this project.
- **6.** Provide detailed provision for the cost of Safety, Health, and Environmental measures during construction work (example: health and safety training; personal protective equipment; etc.).
- 7. Provide details on: the necessary competencies (for every employee in your company including employees of your sub/co-contractors that will be working on this project) and the resources to carry out the work safely and in a manner to ensure duty of care to the environment.
- 8. <u>Information that Contractors need to be aware of and address in their Health and Safety</u> <u>Plan: Project Site Specific Health and Safety Hazards</u>

132kV line is new 0.819km Kingbird conductor line to be constructed.

The static capacitance due lines in the area due to 22kV 88kV 132kV and 400KV and all lower voltage as above and earthing kit will be required.

The section of line is in the hill and it recommended to work with co-works due to able to see each other when stringing or removing conductors.

This line is considered to be a dangerous section when constructing or stringing the line.

The line will run across different type of farms. Fire is not permitted. Snake and bees can be found any where along the route.

To compensate for this situation and ensure that contractors are aware of relevant site conditions, Site Condition will be discussed at first site and project meeting.

Initial issue frequency is one week, but this may be changed when change conditions are more rapid.

Anticipated changes in the issue frequency will be communicated via Site meeting prior to the change.

It is the contractor's responsibility to ensure that his Health and Safety Plan reflects conditions stated in the latest site meeting.

The contractor shall, at all times, have a current site meeting on his Site Health and Safety file, and shall demonstrate that the conditions described in the current site meeting have been considered in his Risk Assessment, Method Statements, working methods and operational arrangements.

Contractor's staff must be made aware of the latest changes to the Site and to the Health and Safety plan, as an update to their induction. This must be recorded in an appropriate register.

**9.** Provide details as to how you would manage your sub/co-contractors (even if you intend appointing them later in the project phase) with regard to ensuring co-operation between all sub/co-contractors to enable them to comply with all the requirements as specified in point 2 above.



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- 10. Any person can report unsafe and/or unhealthy practices or which poses a threat to the environment, to the project manager. The respective principal contractor is to ensure that corrective training to be given to the person/s involved. Record to be kept of the circumstances giving rise to the stoppage and the actions taken and any corrective measures that were implemented.
- **11.** RLM has a right to stop any contractor from executing construction work, which is not in accordance the principal contractor's health and safety plan or which poses a threat to the health and safety of persons.
- 12. Client requirement: Health and Safety Staffing

# 12.1 Number of Health and Safety Practitioners

When on site for more than two weeks the following shall apply:

- 12.1.1 one trained Health and Safety Representative for every 10 employees or part thereof;
- 12.1.2 one Health and Safety practitioner for every 50 persons on site or part thereof. Part time Health and Safety practitioners shall be allowed based on the risk profile and the type of work to be done this shall be negotiated;
- 12.1.3 One first aider trained to Level 2 per team of workers. The size of the team of workers shall be determined by the risk exposure and the nature of the work.

### 12.2 Competency Requirements of Key Personnel

- 12.2.1 Curriculum Vitae, training certificates and proof of experience of key Health and Safety Personnel shall be submitted with the Health and Safety Plan.
- 12.2.2 Health and Safety Competency assessments may be conducted by RLM on Health and Safety practitioners before site establishment.
- 12.2.3 The training requirements of key health and safety personnel shall include, but will not be limited to, the following:

#### 12.2.3.1

### Construction Supervisor (C.R 6.1 appointee)

- Three years applicable experience in construction management
- Risk Assessment training
- · Incident investigation and root cause analysis
- Occupational Health and Safety Act orientation course
- Training in the Construction Regulations

#### 12.2.3.2 Health and Safety Practitioner (C.R 6.6 appointee)

- Three years applicable experience in managing construction health and safety.
- Health & Safety Risk Management
- Risk Assessment training
- · Incident investigation and root cause analysis
- · OHS Act orientation course
- Training in the Construction Regulations
- Emergency Preparedness coordination training and experience

# 12.2.3.3 Team Leader/Supervisor

- Attended an accredited supervisors health and safety course
- Risk Assessment training
- Incident investigation training



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- · Root cause analysis training
- · Introduction to the OHS Act

#### 12.2.3.4 Health and Safety Representatives

- Accredited Health and Safety Representative Training
- · Hazard identification and Risk assessment
- · General health and safety training

#### 12.2.3.5 First - Aiders

Contractors are required to provide proof that:

- All First Aiders are in possession of a valid level 2 first aid certificate from an accredited first aid training service provider
- Risk specific training is included in the initial training, which is based on the incidents most likely to occur on this project site.
- First Aiders attend at least 2 hours of supervised practice training per month which shall be based on potential site incident risks
- **13.** Provide the following appointment letters and proof of each appointees' competency (where certain appointments are not applicable provide an explanation as to why):
  - **13.1** Construction Supervisor as specified in terms of Construction Regulations, Regulation 6(1).
  - **13.2** Assistant Construction Supervisor/s as specified in terms of Construction Regulations, Regulation 6(2).
  - **13.3** Health and Safety practitioner as specified in terms of Construction Regulations, Regulation 6(6).
  - **13.4** Responsible person for the preparation of the fall protection plan as specified in terms of Construction Regulations, Regulation 8(1) (a).
  - **13.5** Supervisor for Formwork and Support work Operations as specified in terms of Construction Regulations, Regulation 10(a).
  - **13.6** Supervisor for Excavation work as specified in terms of Construction Regulations, Regulation 11(1).
  - 13.7 Supervisor for Demolition work as specified in terms of Construction Regulations, Regulation 12(1).
  - **13.8** Supervisor for Scaffolding work Operations as specified in terms of Construction Regulations, Regulation 14(2).
  - **13.9** Supervisor for Suspended Platform work Operations as specified in terms of Construction Regulations, Regulation 15(1).
  - **13.10** Daily Inspector for Material Hoists as specified in terms of Construction Regulations, Regulation 17 (8) (a).
  - **13.11** Operator and Supervisor for Batch plants as specified in terms of Construction Regulations, Regulation 18(2).
  - 13.12 Daily Inspector for Construction Vehicles and Mobile Plant as specified in terms of Construction Regulations, Regulation 21 (1) (j).
  - **13.13** Controller of all temporary electrical installations as specified in terms of Construction Regulations, Regulation 22(e).
  - **13.14** Supervisor for all Stacking and Storage on the project site as specified in terms of Construction Regulations, Regulation 22(a).
- **14.** Monthly Health & Safety Statistics that needs to be reported to the Project Manager:



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- The n a m e o f sub/co-contractors appointed; & per sub/co-contractor he following information is required:
  - Number of contractors
  - Actual Man-hours worked (contractors)
  - Number of first aid, medical & disabling incidents
  - Number of near miss incidents

#### 15. Conditions of Work:

#### 16.2 Housekeeping

Contractors shall institute a housekeeping program to ensure that a work site is clean and safe before work commences, during work, and after work has been completed.

#### 16.2 Working after Normal Working Hours

Contractors shall notify their Clint's Representative of any work that needs to be performed after hours according to the agreed arrangements. (The application needs to be submitted timeously). Where applicable, the notification should include proof of application for overtime to the Department of Labour and /or the letter of approval from the Department of labour.

#### 16.3 Manpower Status

Contractors shall provide the Client with a list of employees who will work on the site prior to site establishment. This list shall be updated and submitted to the Client in writing as soon as the manpower status changes.

### 16.4 Changes in Working Conditions

The Project Manager may make amendments to the Health and Safety Specification to address Health and Safety matters of concern that arises during the project execution.

The contractor shall amend his Health and Safety Plan accordingly. Time lines to implement changes shall be risk based and shall be agreed upon between the parties in writing.



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# **VOLUME 4 – Bill of Materials**VOLTAIRE-BOITEKONG 132kV LINE DEVIATION

	DESCRIPTION	PAGE	Attached Y/N
1.	Primary Plant Design Bill of Materials		
.1 to 1.10	Design Bill of Materials	2	Y
2.	Primary Plant Ordering Schedules		
2.1	Structures Ordering Bill of Materials	9	Υ
2.2	Miscellaneous Equipment Ordering Bill of Materials	10	Υ
2.3	Non-stock Equipment Ordering Schedule	10	Υ
2.4.5	Label Ordering Schedule	14	Y

# Comments:

This document consists of all the information needed to build a 0.819km 132kV line between Voltaire and Boitekong substations. This 132kV line will be supported on double circuit concrete monopoles and H-pole structures. The conductor to be used for this line will be single Kingbird conductor per phase and the earth wires will be 1 x 16kA OPGW.

# Please note:

Do not order material specified on design bill of materials documents. Material to be ordered is specified on the Order bill of materials documents.

#### Please Note:

All materials supplied by the contractor shall be in accordance with Rustenburg Local Municipality and Eskom standards and specifications and the Eskom buyers' guide. All materials shall be approved by the Client.

Revision Details: Rev.1	



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# VOLUME 4 1. DESIGN BILL OF MATERIALS

DESCR	IPTION
1.1	D-DT-7630 – Suspension Structure
	D-DT-7633 – Free Standing Strain Structure
1.3	D-DT-7633 – Free Standing Terminal Structure
	Closing Span at substation
	Closing Span at substation
	Miscellaneous items
	Material for Kingbird conductor Test joint
1.8	Earthing material for 3-point star Earth Electrode
Comm	ents:
00111111	<del>onto.</del>
Please N	Note: The Design Bill of Materials in the following section is not to be used for ordering
purpose	
purpose	<b>5</b> ,
(See Secti	on 2: Ordering Bill of Materials, for equipment ordering quantities.)
Rev.1	



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# 1.1. Structure D-DT-7630 – 132kV DOUBLE CIRCUIT FREE STANDING CONCRETE POLE GERNERAL SUSPENSION STRUCTURE

Poles										
ITEM	DESCRIPTION	DRW. NO	SAP	UNIT	QTY	TOT				
1	POLE, CONC SPUN 19.2m 65kN T/LD D/CD7115	D-DT-7115	0164735	ea	4	4				
Insulat	or Assembly - Intermediate Assembly as	per D-DT-732'	1							
1	Insul, Line Post 132kV 5.3kN T/C 20C	D-DT-7013	0167535	ea	3	12				
2	Armour Rod, HF- Cond. 18.18/19.97mm AL	D-DT-7034	0168765	ea	3	12				
3	Clamp, Trunnion L/Post Insul 13-27mm	D-DT-7010	0165510	ea	3	12				
Earth V	Vire Assembly - Insulated									
-ounua	ation Details									
As per D	-DT-7850.									
	Type 1 (300kPa): Sheet 2									
	Type 2 (150kPa): Sheet 3									
>	Type 3 (100kPa): Sheet 4									
> >	Type 4 (50kPa): Sheet 5									
$\triangleright$										
<b>A</b>	Type 4 (50kPa): Sheet 5 Rock & Soft Rock: Sheet 1									
A A A A	Type 4 (50kPa): Sheet 5 Rock & Soft Rock: Sheet 1 Alternative Foundations: D-DT-7851									
> > > Concre	Type 4 (50kPa): Sheet 5 Rock & Soft Rock: Sheet 1 Alternative Foundations: D-DT-7851  ete Cap and Earthing Details									
> > > Concre	Type 4 (50kPa): Sheet 5 Rock & Soft Rock: Sheet 1 Alternative Foundations: D-DT-7851									



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#### **OF THREE YEARS** 1.2. Structure D-DT-7633 - TWIN CONCRETE POLES 206KN FREE STANDING 15-90 GENERAL ANGLE STAIN STRUCTURE **Poles** ITEM SAP **DESCRIPTION** DRW. NO UNIT QTY TOT 0164726 POLE, CONC SPUN 19.2m 206kN T/LD STR D7110 D-DT-7110 Insulator Assembly - Strain Insulator Assembly as per D-DT-7311 Shackle, Straight Bolt Type 120kN D-DT-7017 0163406 12 24 ea 2 Turnbuckle, Eye Tongue 120kN 0164300 D-DT-7007 6 12 ea 3 Ball Clevis 16mm IEC 120kN 0167508 6 12 D-DT-6059 ea Insul, L/Rod 132kV 120kN B/S 20C 0167606 12 D-DT-7014 6 ea 5 Sock-Tong 16mm IEC 120kN 0010270 6 12 D-DT-6061 ea CLAMP, C D/END ASSY K/BIRD 23.88 ACSR D7000 D-DT-7000 0168747 6 12 ea SAG ADJUSTOR 120kN D7042 D-DT-7042 0175857 6 12 ea Insulator Assembly - Jumper Insulator Assembly as per D-DT-7321 Insul, Line Post 132kV 5.3kN T/C 20C 0167535 D-DT-7013 ea 2 Armour Rod, HF- Cond. 18.18/19.97mm AL 0168765 3 6 D-DT-7034 ea Clamp, Trunnion L/Post Insul 13-27mm 3 D-DT-7010 0165510 3 6 ea Earth Wire Assembly - Insulated **Foundation Details** As per D-DT-7852. Type 1 (300kPa): Sheet 2 Type 2 (150kPa): Sheet 3 Type 3 (100kPa): Sheet 4 Type 4 (50kPa): Sheet 5 Rock & Soft Rock: Sheet 1 Concrete Cap and Earthing Details As per D-DT-7857. Stay Assembly and Location Rev. 1



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	tructure D-DT 7636 – FREE STAN IINAL STRUCTURE	DING IWIN	CONCRE	IL POL	.C U-43	GENERA
Poles						
ITEM	DESCRIPTION	DRW. NO	SAP	UNIT	QTY	TOT
1	POLE, CONC SPUN 19.2m 206kN T/LD TERM D7114	D-DT-7114	0164734	ea	2	4
Insulat	tor Assembly - Strain Insulator Assembly	/ as per D-DT-	7311			
1	Shackle, Straight Bolt Type 120kN	D-DT-7017	0163406	ea	12	24
2	Turnbuckle, Eye Tongue 120kN	D-DT-7007	0164300	ea	6	12
3	Ball Clevis 16mm IEC 120kN	D-DT-6059	0167508	ea	6	12
4	Insul, L/Rod 132kV 120kN B/S 20C	D-DT-7014	0167606	ea	6	12
5	Sock-Tong 16mm IEC 120kN	D-DT-6061	0010270	ea	6	12
6	CLAMP, C D/END ASSY K/BIRD 23.88 ACSR D7000	D-DT-7000	0168747	ea	6	12
7	SAG ADJUSTOR 120kN D7042	D-DT-7042	0175857	ea	6	12
Insulat	tor Assembly - Jumper Insulator Assemb	oly as per D-D	T-7321			
1	Insul, Line Post 132kV 5.3kN T/C 20C	D-DT-7013	0167535	ea	3	6
2	Armour Rod, HF- Cond. 18.18/19.97mm AL	D-DT-7034	0168765	ea	3	6
3	Clamp, Trunnion L/Post Insul 13-27mm	D-DT-7010	0165510	ea	3	6
Earth \	 Wire Assembly – Insulated					
Found	ation Details					
٠.	)-DT-7852.					
A A	Type 1 (300kPa): Sheet 2 Type 2 (150kPa): Sheet 3 Type 3 (100kPa): Sheet 4					
>	Type 4 (50kPa): Sheet 5 Rock & Soft Rock: Sheet 1		T	1	г	
	ete Cap and Earthing Details					
4s per L	D-DT-7857.		1	1	T T	
04						
otay A	ssembly and Location		1	1	l l	
Rev.1						



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1.4. Closing span at Boitekong Substation Insulator Assembly						
1	Shackle, Straight Bolt Type 120kN	D-DT-7017	0163406	ea	6	6
2	Turnbuckle, Eye Tongue 120kN	D-DT-7007	0164300	ea	3	3
3	Ball Eye Oval 16mm 120kN	D-DT-7008	0010258	ea	3	3
4	Insul, L/Rod 132kV 120kN B/S 20C	D-DT-7014	0167606	ea	3	3
5	Socket Clevis IEC 120kN	D-DT-7021	0010259	ea	3	3
6	CLAMP, C D/END ASSY K/BIRD 23.88 ACSR D7000	D-DT-7000	0168747	ea	3	3
7	COND, ACSR KINGBIRD 23.90D UNGRS D3136	D-DT-3136	0400662	m	120	120
Rev. 1						

ITEM	DESCRIPTION	DRW. NO	SAP	UNIT	QTY	TOT
1	COND, ACSR KINGBIRD 23.90D UNGRS D3136	D-DT-3136	0400662	m	5790	5790
2	Joint M/Span Comp Kingbird	D-DT-7001	0165770	ea	6	12
3	Strip Cu FL 3.0x50mm Annealed (1kg = 0.72m) 45kg coils	D-DT-6045	0017204	kg	120	120
4	DAMPER, M/F VIBRATION 20.98-23.90 D7005	D-DT-7005	0168893	ea	12	72

1.6. Material for Kingbird conductor Test Joint							
ITEM	DESCRIPTION	DRW. NO	SAP	UNIT	QTY	TOT	
1	Cond, ACSR Kingbird	D-DT-3136	0400662	m	20	20	
2	Joint M/Span Comp Kingbird	D-DT-7001	0165770	ea	1	1	
3	Clamp, Comp D/End Assy Kingbird	D-DT-7000	0168747	ea	2	2	
Rev. 1							



ITEM	DESCRIPTION	DRW. NO	SAP	UNIT	QTY	TOT
1	Cond, Cu Bare Str 7/1.63 Annealed 16mm SQ	D-DT-3139	0171336	m	50	350
2	Line tap, Br Tin cond 4x16SQ	D-DT-3101	0165442	ea	1	7
3	Lug, Crimp Cu 16.0 SQ x M12 F/H	D-DT-3102	0124515	ea	2	14
4	Clamp, earth rod, 16 rod PH/BRNZ	D-DT-3093	0165559	ea	4	28
5	Earth Rod, Cu 1500LGx16mm dia, threadless	D-DT-3091	0168669	ea	4	28



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**Eskom** 

**DESCRIPTION** 

# VOLUME 4 2. ORDERING BILL OF MATERIALS

2.1 2.2 2.3 2.4	Structures Ordering Bill of Materials Miscellaneous Equipment Ordering Bill of Materials Non-stock Equipment Ordering Schedule Label Ordering Schedule (2.4.5)
Comm	nents:
	Note: The following section to be used by Project Management, regarding equipment es, for ordering purposes.
	of foundations including all materials regarded as part of the foundations, e.g. reinforcing, holding down bolts, cap, etc. not covered in the ordering bill of materials.
Rev.1	



ITEM	DESCRIPTION	DRW. NO	SAP	UNIT	QTY
1	POLE, CONC SPUN 19.2m 65kN T/LD D/CD7115	D-DT-7115	0164735	ea	4
2	POLE, CONC SPUN 19.2m 206kN T/LD STR D7110	D-DT-7110	0164726	ea	2
3	POLE, CONC SPUN 19.2m 206kN T/LD TERM D7114	D-DT-7114	0164734	ea	4



ITEM	DESCRIPTION	DRW. NO	SAP	UNIT	QTY
1	Insul, Line Post 132kV 5.3kN T/C 20C	D-DT-7013	0167535	ea	24
2	Armour Rod, HF- Cond. 18.18/19.97mm AL	D-DT-7034	0168765	ea	24
3	Clamp, Trunnion L/Post Insul 13-27mm	D-DT-7010	0165510	ea	24
4	Shackle, Straight Bolt Type 120kN	D-DT-7017	0163406	ea	54
5	Turnbuckle, Eye Tongue 120kN	D-DT-7007	0164300	ea	27
6	Ball Clevis 16mm IEC 120kN	D-DT-6059	0167508	ea	24
7	Insul, L/Rod 132kV 120kN B/S 20C	D-DT-7014	0167606	ea	27
8	Sock-Tong 16mm IEC 120kN	D-DT-6061	0010270	ea	27
9	CLAMP, C D/END ASSY K/BIRD 23.88 ACSR D7000	D-DT-7000	0168747	ea	29
10	SAG ADJUSTOR 120kN D7042	D-DT-7042	0175857	ea	24
11	Ball Eye Oval 16mm 120kN	D-DT-7008	0010258	ea	3
12	Socket Clevis IEC 120kN	D-DT-7021	0010259	ea	3
13	COND, ACSR KINGBIRD 23.90D UNGRS D3136	D-DT-3136	0400662	m	5930
14	Joint M/Span Comp Kingbird	D-DT-7001	0165770	ea	13
15	Strip Cu FL 3.0x50mm Annealed (1kg = 0.72m) 45kg coils	D-DT-6045	0017204	kg	120
16	DAMPER, M/F VIBRATION 20.98-23.90 D7005	D-DT-7005	0168893	ea	72
17	Cond, Cu Bare Str 7/1.63 Annealed 16mm SQ	D-DT-3139	0171336	m	350
18	Line tap, Br Tin cond 4x16SQ	D-DT-3101	0165442	ea	7
19	Lug, Crimp Cu 16.0 SQ x M12 F/H	D-DT-3102	0124515	ea	14
20	Clamp, earth rod, 16 rod PH/BRNZ	D-DT-3093	0165559	ea	28
21	Earth Rod, Cu 1500LGx16mm dia, threadless	D-DT-3091	0168669	ea	28
Rev.1					



2.3 Noi	n-stock Equipment Ordering Sched	ule			
ITEM	DESCRIPTION	DRW. NO	SAP	UNIT	QTY
Please No	ote:				
No Non-S	Stock Equipment other than the Non-Stock struct	ures themselves as	specified in 2.1		
Rev. 1					



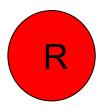
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### 2.4.4 Phase Disk Labels

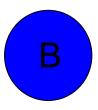
NOTES:

- (a) The terminal towers at and Substations shall be fitted with phase disk labels.
- (b) There are 2x132kV Terminal Structures:

### 2.4.4.1 Terminal structures at Boitekong Substation







NB: To be fitted to all terminal structures



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### 2.4.5 Label Ordering Schedule

ITEM	DESCRIPTION	LAYOUT AND WORDING	REFERENCE	QTY
1	Line Designation Labels	See 1.1 & 1.2	D-DT 5050s1	2
2	Line Crossing Label	See 2.1	D-DT 5050s2	0
3	Pole Identification Label	See 3.1 & 3.2	D-DT 5050s1	7
4	R	See 4.1	D-DT 5047s3	2
5	W	See 4.1	D-DT 5047s3	2
6	В	See 4.1	D-DT 5047s3	2

### Please Note:

Line Crossing Labels to be attached as follows:

Line crossing labels on structures one label on each of the structures; Labels to face towards structure.



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### **VOLUME 5 – Annexures**VOLTAIRE-BOITEKONG 132kV LINE DEVIATION

	DESCRIPTION	Attached Y/N
A.	Quality Assessment Detail Instructions	Υ
B.	Profile & Span Plans	N
C.	Sag & Tension Charts	Υ
D.	Construction Report	Υ
E.	OHS Requirements to be met by Principal Contractors employed by RLM	Y
F.	Construction Regulations	Υ
Ξ.	Land Development	Υ



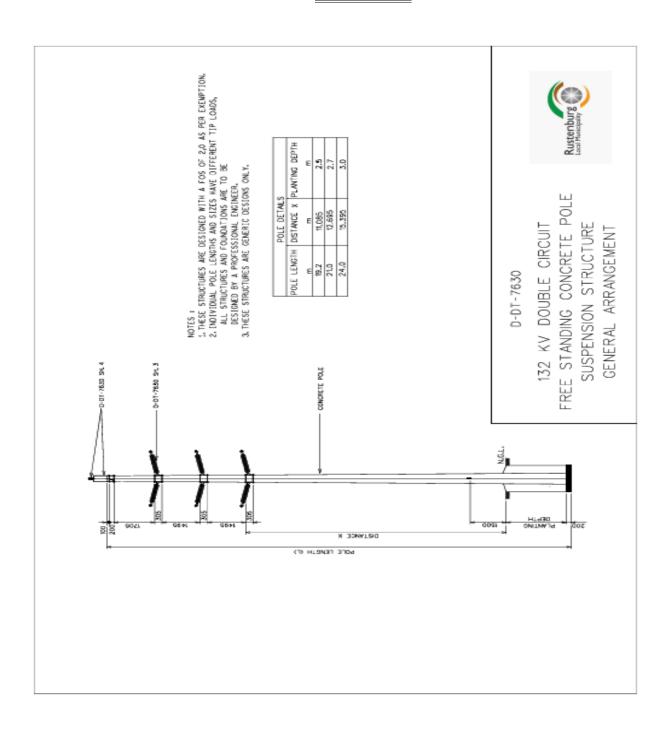
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## VOLUME 6-Design Package Drawings VOLTAIRE-BOITEKONG 132kV LINE DEVIATION

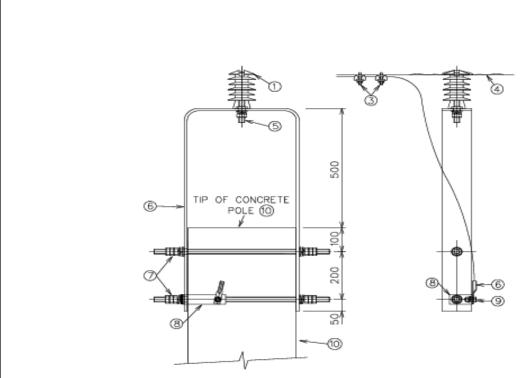
INDEX						
Sub T	itle: Network Diagrams					
Item	Drawing Title	Drawing Number	Qty	Attached (Y/N)		
	41 11 1					
	tle: Hardware	I 5 · N ·	1 01 1	A ((   1   1 / 3 / 3 l)		
Item	Drawing Title	Drawing Number	Qty	Attached (Y/N)		
Sub T	itle: Structures		1			
Item	Drawing Title	Drawing Number	Qty			
1	132kV Concrete Pole Intermediate Structure 0°	D-DT 7630	1	Υ		
2	132kV H-Pole Terminal H-Structure (Twin Circuit)	D-DT 7635	1	Υ		
3	132kV Angle Strain Structure (Concrete poles)	D-DT 7634	1	Υ		
4	132kV Concrete Suspension Pole	D-DT 7630	1	Υ		
5	132kV Concrete Strain Pole	D-DT 7634	1	Υ		







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REF	DESCRIPTION	DRAWING NO.
1	PORCELAIN POST INSULATOR	(D-DT-3017)
2	CRIMPING LUG	(D-DT-3074)
3	CROSBY CLAMP 12mm	(D-DT-7032)
4	WRAPLOCK TIE	(D-DT-3080)
5	M20x50mm SPINDLE	#(D-DT-3050)
6	SHIELD WIRE SUPPORT	# (D-DT-7630)
7	M20x600mm THREADED ROD	# (D-DT-3015)
8	200x40x3mm EARTH STRAP	#(D-DT-7630)
9	M12x30mm SET SCREW	#(D-DT-3082)
10	CONCRETE POLE	#

NOTE: # INDICATES ITEMS THAT ARE SUPPLIED BY THE MANUFACTURER.

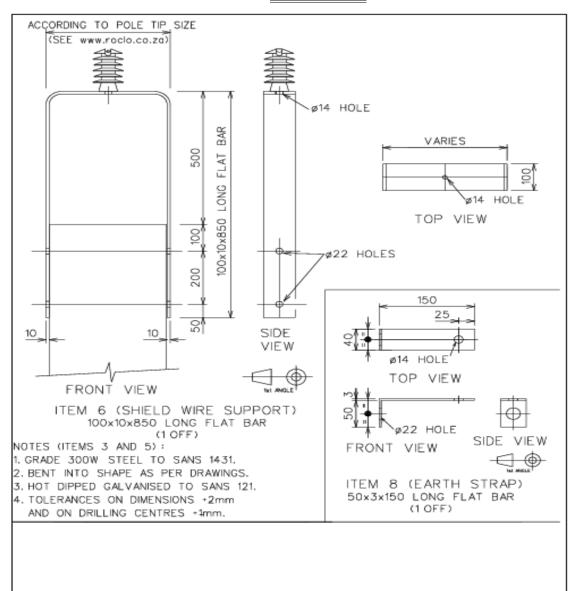
D-DT-7630

SHIELD WIRE SUPPORT SUSPENSION ASSEMBLY





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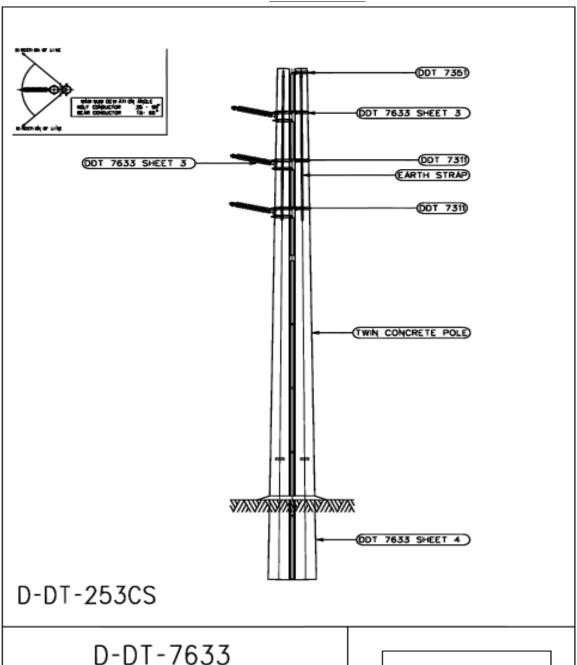


D-DT-7630 Shield wire support and earth strap details





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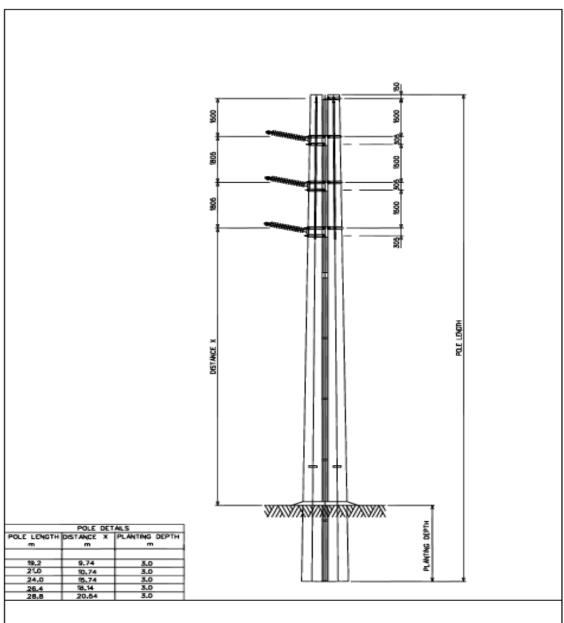


132 KV SINGLE CIRCUIT TWIN CONCRETE POLES 206kN FREE STANDING 15-90° ANGLE STRAIN STRUCTURE GENERAL ARRANGEMENT





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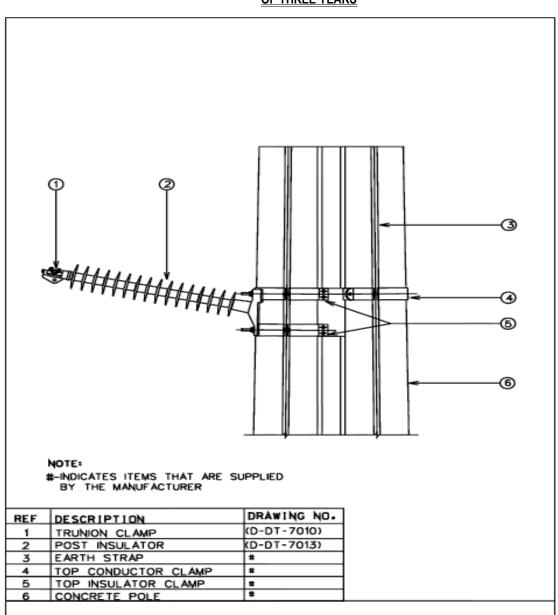
D-DT-7633

132 KV SINGLE CIRCUIT TWIN CONCRETE POLES 206kN FREE STANDING 15-90° ANGLE STRAIN STRUCTURE DIMENSION DRAWING





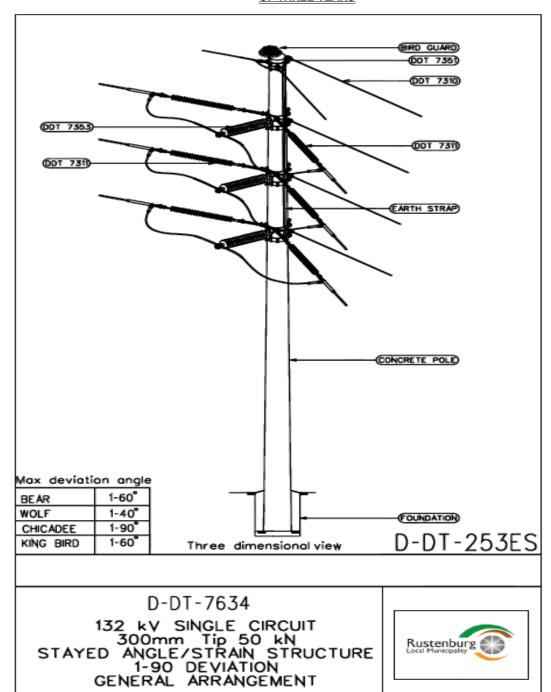
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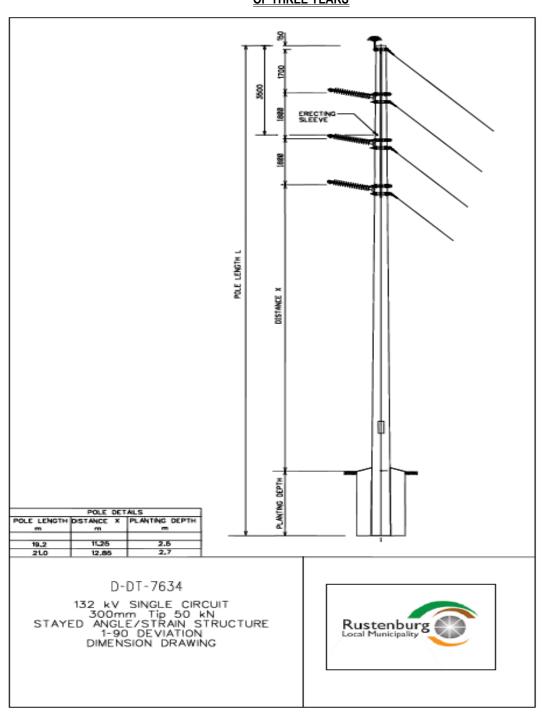
D-DT-7633
DISTRIBUTION TECHNOLOGY
POST INSULATOR DETAIL











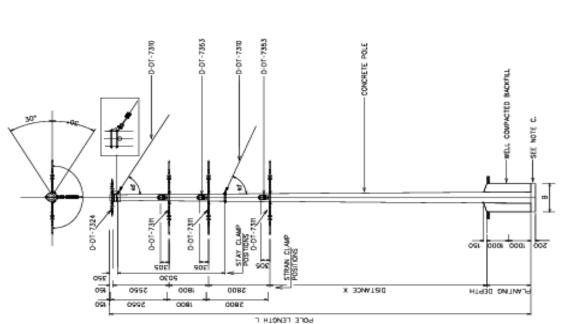


RLM/DTIS/0026/2021/22 - APPOINTMENT OF AN ELECTRICAL CONTRACTOR FOR THE (CIVIL AND ELECTRICAL)
SUPPLY, CONSTRUCTION, COMMISSIONING AND HAND-OVER OF A NEW 2 X 40MVA 88/11KV SUBSTATION IN
BOITEKONG FOR RUSTENBURG LOCAL MUNICIPALITY AS AND WHEN FUNDS BECOMES AVAILABLE FOR A PERIOD OF THREE YEARS





STAYED TERMINAL STRUCTURE D-DT-7635 132 kV SINGLE CIRCUIT GENERAL ARRANGEMENT CONCRETE POLE



1. THESE STRUCTURES ARE DESIGNED WITH A FOS OF 2,0 AS PER EXEMPTION.

INDIVIDUAL POLE LENGTHS AND SIZES HAVE DIFFERENT TIP LOADS,

ALL STRUCTURES AND FOUNDATIONS ARE TO BE

DESIGNED BY A PROFESSIONAL ENGINEER.

PLANTING DEPTH

POLE LENGTH E 5 212

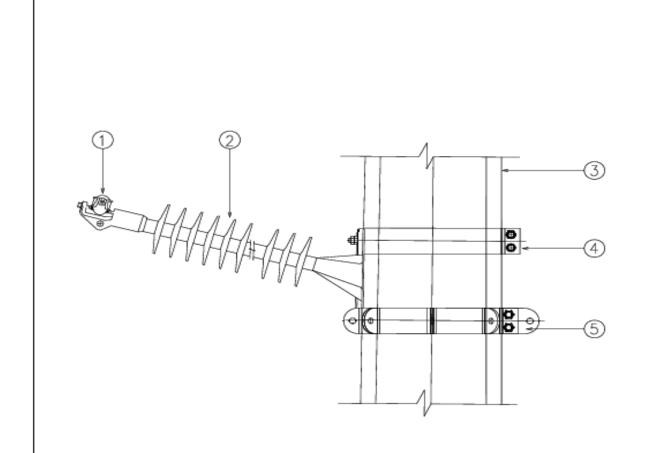
POLE DETALS DISTANCE X 2,5

A. B=0.8m FOR TYPE 1 AND 2 SOILS,

NOTES :



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OF THREE YEARS



REF	DESCRIPTION	DRAWING ND.
1	TRUNION CLAMP	(D-DT-7010)
2	LINE POST INSULATOR 5KN	(D-DT-7013)
3	CONCRETE POLE	#
4	CLAMP	#
5	CLAMP	#

NOTE: # INDICATES ITEMS THAT ARE SUPPLIED BY THE MANUFACTURER.

D-DT-7635 DISTRIBUTION TECHNOLOGY POST INSULATOR DETAIL



