

## **ESKOM ROTEK INDUSTRIES - CONSTRUCTION SERVICES - POWERLINES DIVISION**

The *Contractor* is referred to the full intent and meaning of each clause or item herein. He shall allow opposite each clause or item, whatever payments he may consider necessary, to carry out and observance of same.

## **ESKOM ROTEK INDUSTRIES - CONSTRUCTION SERVICES - POWERLINES DIVISION**

### **PREAMBLES**

- 1 The Tenderer is advised to read and understand all aspects and documentation associated with this Enquiry BEFORE inserting his Prices and or Rates and or Amounts.
- 2 The bill of quantities provides the basis of all valuations of the work and general progress monitoring.
- 3 The amount due at each application for payment is based as measured in terms of the bill of quantities. The Contractor provides all necessary information which is required to determine amounts due at each application for payment relative to the completed works.
- 4 The total of the prices includes for all direct and indirect costs, overheads, profits, on costs, risks, liabilities, obligations, etc. relative to the contract.
- 5 All values are total values prior to any retention and excludes VAT. Retention is not calculated in the forecast rate of payment Bill (FRP).
- 6 Tenderer to check and take responsibility for all descriptions, formulae and structure of this file.

### **A Free issue of Material by the Employer**

- 1 Tenderers are advised that the Employer may provide certain Free Issue Materials and or Components and or Plant and or Equipment to the Contractor at no cost to the Contractor. The Contractor shall price for the taking delivery, protection, inspection, testing, storing as required and installation complete as more fully described within this Enquiry Documentation.

### **B GUIDANCE BEFORE PRICING AND MEASURING**

- 1 The NEC's approach to the Preliminary & General (P&G) section of the bill of quantities assumes use will be made of method related charges for project applied to providing the works based on durations shown in the Accepted Programme. Fixed charges for the use of Equipment that are required throughout the construction phase, time related charges for people working in a managerial and supervisory capacity for the period required, and lump sum charges for other facilities or services not directly related to performing work items typically included in other parts of the bill of quantities.
- 2 The P&G section of the bill of quantities is not used for the assessment of compensation events but can however be used as a guide.

### **C METHOD OF MEASUREMENT**

- 1 The bill of quantities comprises a list of work items and quantities, based on standard methods of measurement, which are either published or stated herein and state the items to be included and how quantities are to be calculated and the items and activities that are deemed to be included within the Rates and Prices inserted by the Tenderer.
- 2 Tenderers shall price the items, taking account all of the information within and associated with the tender documents and shall include for all matters, which are at the Contractors risk.
- 3 All enquiry documents supplied must be considered for pricing the items in the Bills of Quantities for the completion of the works.
- 4 Unless otherwise stated, items are measured net in accordance with the contract drawings, and no allowance has been made for waste or bulking or compaction or evaporation or loss by any means whatsoever.
- 5 The quantities contained in the bill of quantities are provisional shall not be used for ordering purposes. No claims whatsoever, however arising will be entertained, should the bill of quantities have been used for ordering and or procurement purposes.

### **D RATES AND PRICES**

- 1 Rates and Prices shall be expressed to two decimal places (i.e. cents) except in the case of a NIL rate or price.
- 2 The Tenderers Rates and Prices shall be inserted in the bill of quantities are deemed to be the fully inclusive Rates and Prices to the Employer for the work described under the several items. Such Rates and Prices shall cover all costs and expenses that may be required in, and for the prompt and efficient and safe execution of the work described, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in this Enquiry document.
- 3 Rates and Prices for items which are required to be inserted in the bill of quantities by the Tenderer and which have not been duly inserted, are deemed to be covered by other Rates and Prices in the bill of quantities.
- 4 The Tenderers omission to insert Rates and Prices shall not be deemed to be a qualified exclusion to execute such work, activity or responsibility.
- 5 The Rates and Prices are deemed to include (unless otherwise specifically stated in the bill of quantities or herein) all the relevant costs associated with the Clauses of Contract as amended and shall include but not be limited to the following cost components:
- 6 The Tenderer is deemed to have obtained all the necessary information required to adequately price the scope of work associated with this Enquiry and no claim shall be considered resulting from lack of knowledge in this respect.

Item	Description	Unit	Qty (1)	Rates			Total (1)x(2) OR (2)+(3)+(4)
				Fixed	Time Related	Value Related	
				(2)	(3)	(4)	
<b>1</b>	<b>Bill No. 1 - Preliminary and General</b>						
<p>The <i>Contractor</i> is referred to the full intent and meaning of each clause or item herein. He shall allow opposite each clause or item, whatever payments he may consider necessary, to carry out and observance of same.</p> <p>The <i>Contractor</i> shall price <b>Bill No. 1 - Preliminary and General</b> in respect of all payment required for any work, risk, contingency or obligation whatsoever, that is not described in the <i>Bill of Quantities</i> and which is his responsibility under the Contract.</p>							
<b>1.1</b>	<b>WORKS INFORMATION</b>						
1.1.1	Programme ; Contractors Insurance ; Performance Bond ; Drawings & Specifications ; Quality management (incl. Contractor's Quality Plans)	sum	1				-
<b>1.2</b>	<b>SITE COSTS AND OVERHEADS</b>						
1.2.1	Establish staff accommodation and site camp, including sanitation as per OHS ACT's requirements and remove on completion.	sum	12				-
<b>1.3</b>	<b>ADDITIONAL &amp; MISCELLANEOUS COSTS</b>						
1.3.1	Contractor to specify here any costs foreseen not made provision for.	PSU M	1				-
Carried forward to Bill No.7- SUMMARY							-

Item	Description	Unit	Qty (1)	Rates			Total Price (1)x(2) OR (1)x(3) OR (2)+(3)+(4)
				Fixed	Time Related	Value Related	
				(2)	(3)	(4)	
<b>2.0</b>	<b>SAFETY MANAGEMENT</b>						
<b>2.1</b>	<b>Supply of all items of Personal Protective Clothing/Equipment &amp; ensure use thereof for full compliance</b>						
2.1.1	Steel toe capped safety boots. ; Appropriate protective clothing as per Eskom SHE specification. ; Task specific gloves. ; Colour coded hard hats as per latest Eskom specification. ; Ear protection (earplugs etc). ; Eye protection appropriate to task performed. ; Induction tags/cards. ; Luminous high visibility safety vests.	sum	1				
<b>2.2</b>	<b>Supply and provision of Equipment for working at Heights &amp; ensure use thereof for full compliance to OHS ACT and Eskom's SHE spec</b>						
2.2.1	Fall protection equipment incl but not limited to Safety Harness(double lanyard), ropes, pulleys etc. ; Evaluation of physical and psychological fitness of personnel working at heights. ; Access ladders. ; Portable Ladders.	sum	1				
<b>2.3</b>	<b>Barricading Supply &amp; install, including removal upon completion to ensure full compliance to legislation:</b>						
2.3.1	Temporary fence barricading along perimeter of excavated areas ; Marking of excavation and peggings	sum	1				
<b>2.4</b>	<b>SHE File Recording &amp; availability of SHE File/Site</b>						
2.4.1	Compile SHE plan and file.	sum	1				
<b>2.5</b>	<b>Transport</b>						
2.5.1	Transportation of employees in compliance with the Transportation of employees procedure (Preferred usage of local taxi association).	sum	1				
<b>2.6</b>	<b>Compliance</b>						
2.6.1	Full Compliance with latest revision of OHS act.	sum	1				

<b>2.70</b>	<b>SHEQ Appointment</b>						
2.7.1	Appointment of SHEQ OFFICER FULL TIME ON SITE Costs associated with the appointment of Safety personel and actual time spent on implementation, managing, documenting, monitoring, reviewing, internal and external audits, incident investigations and mitigating safety related impacts.		sum	1			
2.7.2	Appointment of a registered Construction Manager FULL TIME ON SITE.		sum	1			
					Carried forward to Bill No.7- SUMMARY		

**BILL No. 3 - INSTALLATION OF FOUNDATIONS CONVENTIONAL**

CONCRETE FOUNDATIONS FOR **ALL TOWER TYPES** COMPLETE WITH ANCHORING BOLTS, STUBS AND EARTHING SYSTEM.  
 The rates of the foundation is per foundation leg inclusive of all materials as per the drawings  
 The quantity includes contingency as priced for in the rates

ITEM	DESCRIPTION	UNIT	QUANTITY (1)	MATERIAL (2)	PLANT (3)	LABOUR (4)	TOTAL PRICE (1)x(2+3+4)
<b>3.1</b>	<b>SELF-SUPPORTING ANGLE STRAIN 0° TERMINAL - ALL TYPES</b>						
<b>c</b>	<b>Concrete Leg Foundations (4 per tower)</b>						
3.1.1	Type 1 Soil	No.	4				-
3.1.2	Type 2 Soil	No.	4				-
3.1.3	Type 3 Soil	No.	4				-
3.1.4	Type 4 Soil	No.	4				-
3.1.5	Hard Rock	No.	4				-
3.1.6	Soft Rock	No.	4				-
<b>3.2</b>	<b>SELF-SUPPORTING SUSPENSION - ALL TYPES</b>						
<b>c</b>	<b>Concrete Leg Foundations (4 per tower)</b>						
3.2.1	Type 1 Soil	No.	4				-
3.2.2	Type 2 Soil	No.	4				-
3.2.3	Type 3 Soil	No.	4				-
3.2.4	Type 4 Soil	No.	4				-
3.2.5	Hard Rock	No.	4				-
3.2.6	Soft Rock	No.	4				-
<b>3.3</b>	<b>GUYED CROSS-ROPE SUSPENSION TOWERS - ALL TYPES</b>						
<b>c</b>	<b>Concrete Dead Man Guy-Anchor Foundations including encasing anchor links in concrete (4 per tower)</b>						
3.3.1	Type 1 Soil	No.	4				-
3.3.2	Type 2 Soil	No.	4				-
3.3.3	Type 3 Soil	No.	4				-
3.3.4	Type 4 Soil	No.	4				-
3.3.5	Hard Rock	No.	4				-
3.3.6	Soft Rock	No.	4				-
<b>c</b>	<b>Concrete Mast (Plinth) Foundations (2 per tower)</b>						
3.3.7	Type 1 Soil	No.	4				-
3.3.8	Type 2 Soil	No.	4				-
3.3.9	Type 3 Soil	No.	4				-
3.3.10	Type 4 Soil	No.	4				-
3.3.11	Hard Rock	No.	4				-
3.3.12	Soft Rock	No.	4				-
<b>3.4</b>	<b>GUYED "V" SUSPENSION TOWERS - ALL TYPES</b>						
<b>c</b>	<b>Concrete Dead Man Guy-Anchor Foundations (4 per tower)</b>						
3.4.1	Type 1 Soil	No.	4				-
3.4.2	Type 2 Soil	No.	4				-
3.4.3	Type 3 Soil	No.	4				-
3.4.4	Type 4 Soil	No.	4				-
3.4.5	Hard Rock	No.	4				-
3.4.6	Soft Rock	No.	4				-

<b>3.5</b>	<b>Concrete Mast (Plinth) Foundations (1 per tower)</b>							
3.4.7	Type 1 Soil		No.	4				-
3.4.8	Type 2 Soil		No.	4				-
3.4.9	Type 3 Soil		No.	4				-
3.4.10	Type 4 Soil		No.	4				-
3.4.11	Hard Rock		No.	4				-
3.4.12	Soft Rock		No.	4				-
<b>3.5</b>	<b>CROSS-ROPE ANGLE STRAIN TOWERS - ALL TYPES</b>							
<b>c</b>	<b>Concrete Dead Man Guy-Anchor Foundations including encasing anchor links in concrete (inner guys - 2 per tower)</b>							
3.5.1	Type 1 Soil		No.	4				-
3.5.2	Type 2 Soil		No.	4				-
3.5.3	Type 3 Soil		No.	4				-
3.5.4	Type 4 Soil		No.	4				-
3.5.5	Hard Rock		No.	4				-
3.5.6	Soft Rock		No.	4				-
<b>c</b>	<b>Concrete Dead Man Guy-Anchor Foundations including encasing anchor links in concrete (outer guys - 2 per tower)</b>							
3.5.7	Type 1 Soil		No.	4				-
3.5.8	Type 2 Soil		No.	4				-
3.5.9	Type 3 Soil		No.	4				-
3.5.10	Type 4 Soil		No.	4				-
3.5.11	Hard Rock		No.	4				-
3.5.12	Soft Rock		No.	4				-
<b>c</b>	<b>Concrete Mast (Plinth) Foundations (2 per tower)</b>							
3.5.13	Type 1 Soil		No.	4				-
3.5.14	Type 2 Soil		No.	4				-
3.5.15	Type 3 Soil		No.	4				-
3.5.16	Type 4 Soil		No.	4				-
3.5.17	Hard Rock		No.	4				-
3.5.18	Soft Rock		No.	4				-
<b>3.6</b>	<b>GUYED SINGLE MAST ANGLE STRAIN TOWERS - ALL TYPES</b>							
<b>c</b>	<b>Concrete Dead Man Guy-Anchor Foundations including encasing anchor links in concrete (inner guys - 2 per tower)</b>							
3.6.1	Type 1 Soil		No.	4				-
3.6.2	Type 2 Soil		No.	4				-
3.6.3	Type 3 Soil		No.	4				-
3.6.4	Type 4 Soil		No.	4				-
3.6.5	Hard Rock		No.	4				-
3.6.6	Soft Rock		No.	4				-
<b>c</b>	<b>Concrete Dead Man Guy-Anchor Foundations including encasing anchor links in concrete (outer guys - 2 per tower)</b>							
3.6.7	Type 1 Soil		No.	4				-
3.6.8	Type 2 Soil		No.	4				-
3.6.9	Type 3 Soil		No.	4				-
3.6.10	Type 4 Soil		No.	4				-
3.6.11	Hard Rock		No.	4				-
3.6.12	Soft Rock		No.	4				-
<b>c</b>	<b>Concrete Mast (Plinth) Foundations (1 per tower)</b>							
3.6.13	Type 1 Soil		No.	4				-
3.6.14	Type 2 Soil		No.	4				-
3.6.15	Type 3 Soil		No.	4				-
3.6.16	Type 4 Soil		No.	4				-
3.6.17	Hard Rock		No.	4				-
3.6.18	Soft Rock		No.	4				-

<b>3.7</b>	<b>SELF-SUPPORTING ANGLE STRAIN 0° TERMINAL - TYPE 517F</b>								
<b>c</b>	<b>Concrete Leg Foundations (4 per tower)</b>								
3.7.1	Type 1 Soil		No.	4					-
3.7.2	Type 2 Soil		No.	4					-
3.7.3	Type 3 Soil		No.	4					-
3.7.4	Type 4 Soil		No.	4					-
3.7.5	Hard Rock		No.	4					-
3.7.6	Soft Rock		No.	4					-
<b>3.8</b>	<b>CROSS-ROPE SUSPENSION TOWERS - ALL TYPES</b>								
<b>c</b>	<b>Concrete Dead Man Guy-Anchor Foundations including encasing anchor links in concrete (4 per tower)</b>								
3.8.1	Type 1 Soil		No.	4					-
3.8.2	Type 2 Soil		No.	4					-
3.8.3	Type 3 Soil		No.	4					-
3.8.4	Type 4 Soil		No.	4					-
3.8.5	Hard Rock		No.	4					-
3.8.6	Soft Rock		No.	4					-
<b>c</b>	<b>Concrete Mast (Plinth) Foundations (2 per tower)</b>								
3.8.7	Type 1 Soil		No.	4					-
3.8.8	Type 2 Soil		No.	4					-
3.8.9	Type 3 Soil		No.	4					-
3.8.10	Type 4 Soil		No.	4					-
3.8.11	Hard Rock		No.	4					-
3.8.12	Soft Rock		No.	4					-
<b>3.9</b>	<b>WEEKEND WORK</b>								
3.9.1	Saturday and Public Holiday work by foundation team on the <i>Project Manager's</i> instruction.(team per day)		No.	4					-
3.9.2	Sunday and Public Holiday work by foundation team on the <i>Project Manager's</i> instruction.(team per day)		No.	4					-
<b>3.10</b>	<b>RELOCATION</b>								
3.10.1	Relocation of foundation team(s) and equipment(s) necessary for out of sequence work due to instruction by the Employer (per move).		No.	4					-

0.00

R 0.00

<b>6 - MINOR WORKS</b>									
ITEM	DESCRIPTION		UNIT	QUANTITY		MATERIAL	PLANT	LABOUR	TOTAL PRICE
<b>6 - MINOR WORKS</b>									
				(1)		(2)	(3)	(4)	(1)x(2+3+4)
<b>6.1</b>	<b>PEGGING OF TOWER POSITIONS</b>								
6.1.1	Self Supporting Angle Strain 0° Terminal - All Types		No.	96					-
6.1.2	Self Supporting Suspension - All Types		No.	96					-
6.1.3	Cross-rope Suspension Towers - All Types		No.	96					-
6.1.4	Guyed "V" Suspension Towers - All Types		No.	96					-
6.1.5	Cross-rope Angle Strain 0° - 15° - All Types		No.	96					-
6.1.6	Guyed Single Mast Angle Strain 15° - 30° - All Types		No.	96					-
6.1.7	Self Supporting Angle Strain 0° Terminal - All Types		No.	96					-
6.1.8	Cross-Rope Suspension - All Types		No.	96					-
<b>6.2</b>	<b>SUPPLY AND INSTALL TOWER LABELS</b>								
6.2.1	Line designation labels.		No.	340					-
6.2.2	Tower identification labels.		No.	340					-
6.2.3	Phase disk labels.		No.	340					-
6.2.4	Tower danger signs to the public area.		No.	340					-
<b>6.3</b>	<b>WARNING DEVICES</b>								
6.3.1	Supply and install bird guards.		No.	96					-
6.3.2	Installation of bird diverters.		No.	168					-
<b>6.4</b>	<b>FOUNDATION LOAD TESTS (On the Project Manager's instruction)</b>								
6.4.1	Proof load test		No.	4					-

<b>6.5</b>	<b>ADDITIONAL &amp; MISCELLANEOUS WORKS</b>									
6.5.1	Backstay at Terminal Tower.		No.	4						-
6.5.2	Supply and install aviation lights (low intensity led steady burning type A light of 10 candellas) on towers.		No.	4						-
Carried forward to Bill No. 7 - SUMMARY										-

**ESKOM ROTTEK INDUSTRIES - CONSTRUCTION SERVICES - POWERLINES DIVISION**

**SUMMARY**

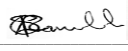
BILL No.	DESCRIPTION	TOTAL
1	PRELIMINARY AND GENERAL	R -
2	SHEQ	-
3	INSTALLATION OF FOUNDATIONS CONVENTIONAL	-
6	MINOR WORKS	-
		-

**FOR ERI:**

BOQ Compiled by:

Name: Segametsi L. Ramoshaba

Job Title: Snr Quantity Surveyor

Signature: 

BOQ Compilation supported By

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Signature: \_\_\_\_\_

**FOR SERVICE PROVIDER:**

Pricing Done By:

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Pricing Approved By

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Signature: \_\_\_\_\_