



MSINGA MUNICIPALITY

QUOTATION NO: QU000011/2020/2021/TEC

INVITATION OF QUOTATION ABOVE R 30 000 TO R 200 000.

Quotations are hereby invited in terms of section 18(a) of the Msinga Municipality's Supply Chain Management Policy together with section 83 of the Municipal Systems Act, No.32 of 2000, as amended and read together with sections 110,111 and 112 of the Municipal Finance Management Act No.56 of 2003 for:

DRILLING OF BOREHOLE AT WARD 11

QUANTITY	DESCRIPTION
01	Drilling of borehole at ward 11 as per attached specification.

The Closing date is 11/05/2021 at 12h00. No late quotations will be considered and Msinga Municipality does not bind itself to accept the lowest of any quotations and reserves the right to accept the whole or any part of the quotation. All quotation must be submitted on sealed envelope and be dropped in the tender box in reception.

NOTICE TO ALL BIDDERS

1. Failure to submit the following documents the tender will be non-responsive:

- Tax Clearance Certificate/Pin number
- CSD
- Company registration documents
- Company municipal rates, electricity or water account not older than 3 Months, proof of Residential lease of rental or sworn affidavit if the business operates at a place of rural residence.
- MBD 1 form of tax compliance

- MBD 3.1 Pricing Schedule – Firm Prices
- MBD 4 form of declaration of interest
- MBD 6.1 Preference points claim form
- MBD 6.2 Declaration certificate for local production and content

- MBD 8 Declaration of Bidder's Past Supply Chain Management Practices.

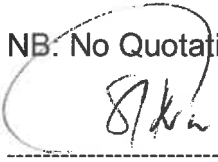
- MBD 9 form of certificate of independent bid determination

2. BBB EE Certificate (**COPY MUST BE CERTIFIED**)/ letter from Auditors in case of EMEs for only points, must be a certified copy.

Quotation will be evaluated in terms of the Council Supply Chain Management Policy on the 80/20 Preferential Point System for regulation 2017.

Price(s) must be valid for at least (90) days from date of your offer.

NB: No Quotations will be considered from persons in the service of the state.



Mr SL Sokhela
Municipal Manager

Date 29/09/2021

SUPPLY AND INSTALLATION OF A NEW BOREHOLE MOTOR AND PUMP DRILLING INCLUDING PUMP TESTING

NEW BOREHOLE GROUNDWATER INVESTIGATION, EQUIPPING AND TEST PUMPING AT

PART 1

1. GENERAL

1.1 SCOPE OF WORK

The current scope of work entails:

1.1.1 Ground water investigation at the clinic site to include:

- 1.1.1.1 Desktop study
- 1.1.1.2 Site assessment
- 1.1.1.3 Geophysical investigation (borehole siting)
- 1.1.1.4 Feasibility report to Municipality.
- 1.1.1.5 Detailed design by the Contractor appointed registered Hydrogeologist/Geohydrologist or Water Engineer.
- 1.1.1.6 Electrical.
- 1.1.1.7 Plumbing.

1.1.2 Implementation:

- 1.1.2.1 Test pumping
- 1.1.2.2 Implementation report
- 1.1.2.3 Equipping
- 1.1.2.4 Commissioning and setting to work
- 1.1.2.5 All necessary approvals certificates including plumbing and electrical work.

1.1.3 WULA

- 1.1.3.1 Water User License Application (WULA)

The contractor shall allow for appointing relevant professionals, all statutory obligations, indemnities and relevant insurances etc. to provide a full turnkey design and build for the work.

1.2 SITE AND MODE OF PROCEDURE

The site is in Msinga, Umzinyathi District, KwaZulu Natal Coordinates - _____ | _____ and supplier/bidder to allow for accessing the Institution in KwaZulu-Natal in the price and rates.

The installations must be to the satisfaction of the uMsinga Municipality.

1.3 CONTRACT DRAWINGS

There are no contract drawings which are issued together with this document.

SUPPLY AND INSTALLATION OF A NEW BOREHOLE MOTOR AND PUMP DRILLING INCLUDING PUMP TESTING

1.4 DRAWINGS ISSUED WITH THIS DOCUMENT

Drawings are to be provided for, designed by a Registered Hydrogeologist/Geohydrologist or Water Engineer contracted by the contractor.

1.5 HYDROGEOLOGIST/GEOHYDROLOGIST'S DESIGN

The contractor must engage and allow for a registered hydrogeologist/geohydrologist to do the field investigation, design all work pertaining to the borehole drilling and equipping including any concrete work, get all necessary approvals including Water User Licence Application (WULA) The hydrogeologist/geohydrologist's certified detailed proposal, design and/or drawings *must accompany* this quotation document. The registered hydrogeologist/geohydrologist will be required to certify the entire installation including equipment.

PART 2

2.1 GENERAL TECHNICAL SPECIFICATION

This Technical Specification is provided as a minimum and only a guideline for bid purposes as the final specification shall be produced by the Hydrogeologist/Geohydrologist appointed by the Contractor.

2.2 STANDARDS

The operation, construction, material and components of the borehole and equipment specified, must comply with the latest requirements of:

- i) The Occupational Health and Safety Act (Act 85, 1993) as amended.
- ii) SANS 10299: Development, Maintenance and Management of Groundwater Resources
- iii) The Environmental Guidelines for Drilling and Test Pumping Operations
- iv) SANS 10142: Code of Practice for Wiring of Premises.
- v) SANS 241: Drinking water
- vi) All building and concrete works shall be in accordance with the Standard Preambles to All Trades.

2.3 PERFORMANCE REQUIREMENTS

The following is indicative and only for pricing purposes as all details shall be firmed up in the design development by the Hydrogeologist/Geohydrologist employed by the Contractor.

BOREHOLE DIAMETER AND DEPTH

The Contractor shall drill to the total appropriate depth depending on the geological formation and to a diameter that shall allow minimum borehole nominal diameter bore of 8 inches (206mm) at the completion of the borehole, including casing installation. In any case the minimum drilled depth should be 120 **meters**.

WATER REQUIREMENTS

SUPPLY AND INSTALLATION OF A NEW BOREHOLE MOTOR AND PUMP DRILLING INCLUDING PUMP TESTING

The anticipated yield is over **60m³-80m³ per day with 16 hours pumping**. It should be noted that this is the minimum yield and any higher yield is desirable. The contractor is to advise the anticipated yield prior to drilling and approval granted by the Municipality.

BOREHOLE CONSTRUCTION

Drilling equipment and depth of drilling

The contractor may use drilling equipment capable of drilling to a depth **25 per cent** deeper than indicated in the 'Table of Tentative Specifications'. The use of cable tool, rotary or down-the-hole hammer (air percussion) rigs is acceptable. The depths indicated in the 'Table of Tentative Specifications' should only be regarded as a guide.

Borehole log

The contractor will supply a detailed borehole log of drilling rates, the appearance of water, soil sampling details and the types of rock found, type and size of borehole casing, position, type and size of screen and other relevant borehole construction details. The contractor will take at least one sample every three meters of drilling and at every change in rock formation.

Gravel pack

Suitable gravel pack shall be supplied by the Contractor. Gravel pack should consist of washed, well-rounded particles of a uniform grading of between **2.5 and 4.0 mm**, shall comprise **90% siliceous material** and must contain no clay, shale, silt, fines, excessive amounts of calcareous material or crushed rock.

Casing and screening

The contractor will supply all casing, screen and fittings for the proper casing of the borehole. Samples of casing and screen must be shown to the Municipality before installation.

BOREHOLE PLUMBNESS AND ALIGNMENT

All boreholes shall be vertical, shall be drilled and cased straight, and all casings/screens shall be set round, plumb and true to line. If required, the Contractor will make a verticality test during and after drilling by approved methods and at his own expense to demonstrate that the departure from the vertical does not **exceed 3mm per 1,000mm** between ground level and the bottom of the borehole.

The borehole will be tested for plumbness and alignment by means of a straight, **12 meters long, steel pipe** that will be passed down the whole depth of the borehole. The maximum external diameter of the pipe will be **13 mm less than the internal diameter** of the borehole casing.

SANITARY SEAL

The borehole shall have a proper protective sanitary seal cast in concrete grout (one part concrete to one part sand) by the contractor. The protective seal shall be placed from **3.5 meters** below ground level to **0.25 meters** above ground and will occupy an annular space between the wall and the outer face of the casing.

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TEST PUMPING

The boreholes will be tested in accordance to **SANS 10299** Development, Maintenance and Management of Groundwater Resources in the manner of a step-test, with the initial step being at **600 litres per hour**. The duration of each step shall be 90 minutes, and a minimum of three steps of increasing discharge will be undertaken. The final step should lower the dynamic water level to approximately three meters above the level of the pump. Discharge for each step should be kept constant. **On completion of the final step, the recovery of water level should be monitored by the Contractor until 95% recovery has been achieved, or until advised by the Supervisor. It is anticipated that the maximum testing and recovery time per borehole should not exceed 24 hours.**

Discharge shall be measured by volumetric methods, or by means of some other approved calibrated measuring device. During the test pumping, the discharged water must be handled and disposed of in an appropriate manner to a point of overland drainage sufficiently far from the borehole to prevent recharge. This distance shall be at least 100m from the borehole, but may be reduced with the approval of the Supervisor if the pumped aquifer is confined.

During all testing operations, once the flow rate has been determined and preliminary adjustments made, the measured discharge rate shall be maintained within 5% of the required rate for the duration of the test or test stage. Persistent fluctuations beyond this tolerance will require abortion of the test.

The Contractor shall provide an operational Electrical Conductivity meter, and shall take Electrical conductivity readings of the discharge water during test pumping.

BOREHOLE DISINFECTION

The borehole shall be disinfected after completion. This can be achieved by placing a chlorine solution into the well so that a concentration of at least 50 mg/l (0.005%) of available chlorine exists in all parts of the well at static conditions. All borehole parts above the water level should be completely flushed with the solution. The solution shall remain in the well a minimum of 12 hours before pumping the well to waste.

WATER SAMPLING AND QUALITY TESTING

The Contractor shall take water samples for testing the physico-chemical and bacteriological quality at the end of the test pumping. For this purpose the Contractor shall supply and keep on site a minimum of 4 suitable two-litre capacity water containers, and shall collect water samples. Samples shall be tested at a certified laboratory and shall conform to **SANS 241** Drinking Water. The test results shall form part of the monthly and End of Contract Reports.

BOREHOLE COMPLETION RECORD

The Borehole Completion Form shall contain the detailed driller's geological log and the borehole design and installation details (as-built drawing)

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2.6 PROGRAMMING OF WORKS

The contractor shall notify the institution seven (7) days prior to carrying out any site work. As the Centre is to remain in full operation for the duration of the works, the works are to be planned and executed so as to cause minimum inconvenience to staff.

2.7 TESTING AND COMMISSIONING

The units shall be tested and commissioned before handing over to the District engineer/maintenance manager.

**SUPPLY AND INSTALLATION OF A NEW BOREHOLE MOTOR AND PUMP DRILLING INCLUDING
PUMP TESTING**

PART 3

3 TABLE OF TENTATIVE SPECIFICATION

3.1 SCHEDULE OF PARAMETERS

The following schedule is to be completed in full. Failure to do so may invalidate the quotation.

Code	Unit	Description By Municipality	Description By Bidder
Location			
Bore hole indicative minimum yield	Liters per hr.	2500 min	
Size(s)	mm	165-206	
Depth	m	120	
Drilling type	-	Percussion	
Cased and screened	-	Yes	
Disinfection	-	Yes	
Pump type	No.	Electric multistage submersible pump	
Pump head	m	130	
Control	-	Automatic with low (dry run protection) and high level float switch in borehole and overhead tank	
24 hour electronic programmable timer.	No.	1	
Accessories	-	Plumbing to existing concrete big Tank	
Quantity	No.	1	

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PART 4

SCHEDULE OF RATES

4. PREAMBLE TO THE SCHEDULE OF RATES

SCHEDULE OF RATES

4.1 ITEMS AND PRICING

The Municipality reserves the right to place an order for any quantities of items included in the Schedules. The Schedule of Rates must also not be assumed to include and describe every detail of the supply requirement, but must be taken and read in conjunction with the other parts of the document. Thus the supplier shall not have claim for further payment in respect of any order which may be described or implied in the contract, although apparently no corresponding items are given in the Schedule of Rates. The supplier shall be deemed to have satisfied himself before quoting as to the correctness and sufficiency of his quote for the contract and of the rates and prices stated in the Schedule of Rates.

4.2 TAX AND DUTIES

Prices, quoted and paid, must include all customs, excise and import duties, and any other tariffs or taxes levied by the government or statutory body having jurisdiction on the goods provided under this contract, **including Value Added Tax (applicable to the current rate).**

4.3 RATES

Except where provision is made in the Schedule of Rates, the rates and prices inserted shall be the full rates and prices for the service delivered described under the respective items and shall cover all labour, transport, overhead charges and profit, etc. as well as the general liabilities, obligations and risks arising out of the Conditions of Contract, the overhead charges and profit being spread proportionately over the rates of the relative items in the Schedule of Rates.

No payment shall be made for abortive work.

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MECHANICAL SCHEDULE OF RATES

WORK TO BE DONE AND SCHEDULE OF RATES:

Item	DESCRIPTION	UNIT	QTY	RATE/ UNIT	
				R	c
	<p>NOTE:</p> <p>1). All rates for items contained in this Schedule of Rates must be computed excluding the applicable Value Added Tax.</p> <p>2). The Municipality reserves the right to Negotiate rates in the Bill of Quantities.</p> <p>3). All rubble shall be removed from site and suitably disposed of.</p>				
	<p><u>INSTITUTION: MSINGA MUNICIPALITY</u></p> <p>NEW BOREHOLE DRILLING INCLUDING GROUNDWATER INVESTIGATION, EQUIPPING AND TEST PUMPING AT NKANDE CLINIC</p> <p>All rates quoted shall be inclusive of transport, labour and profit. All relevant mark-ups for specialist shall be included.</p> <p>The Bidder is advised that the institution is fully functional and Occupied and disruptions to services are to be kept to the bare minimum.</p>				
1	<u>EQUIPMENT AND MATERIALS</u> NEW BOREHOLE				
1.1	Hydrogeologist/GeoHydrologist's Investigation and design: Allow for a registered hydrogeologist /geohydrologist /water engineer to investigate all work listed in 2.2, 2.3 and 2.4 and 2.5 below.	Item	1		
1.2	Desktop study for new borehole	Item	1		
1.3	Site assessment for new borehole	Item	1		
1.4	Geophysical investigation (borehole siting)	Item	1		
1.5	Feasibility report to Municipality	No	1		
1.6	Allow for any Preliminary and General Items e.g. disbursements, set up costs travelling insurances etc.	Item	1		

SUPPLY AND INSTALLATION OF A NEW BOREHOLE MOTOR AND PUMP DRILLING INCLUDING PUMP TESTING

Carried To Collection Summary	PS 1	R
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Item	DESCRIPTION	UNIT	QTY	RATE/ UNIT	
				R	c
	<p>NOTE: 1). All rates for items contained in this Schedule of Rates must be computed excluding the applicable Value Added Tax. 2). The Municipality reserves the right to Negotiate rates in the Bill of Quantities. 3). All rubble shall be removed from site and suitably disposed of.</p>				
	<p><u>INSTITUTION: MSINGA MUNICIPALITY</u> NEW BOREHOLE DRILLING INCLUDING GROUNDWATER INVESTIGATION, EQUIPPING AND TEST PUMPING AT MSINGA All rates quoted shall be inclusive of transport, labour and profit. All relevant mark-ups for specialist shall be included. The Bidder is advised that the institution is fully functional and Occupied and disruptions to services are to be kept to the bare minimum.</p>				
	<p><u>EQUIPMENT AND MATERIALS</u> NEW BOREHOLE</p>				
2.1	Borehole drilling the yield must be 2500min, size 165mm depth should be 120m, drilling type is percussion, disinfection to be connected and cascade and screen to be included	Item	1		
2.2	Test pumping	Item	1		
2.3	Implementation report	Item	1		
2.4	Equipping the borehole	Item	1		
2.5	Installation of submersible pump, pump head 130m and the type of pump is electrical multistage submersible. The control of the pump should be automatic with low dry run protection and high level float switch in the borehole and overhead tank				
2.6	Trenching(300mmX500mm, laying and connection of all electrical cables including all glands to complete work contractor to measure on site briefing meeting	m	750		
2.7	Trenching(500mmX800mm), laying and	m	750		

SUPPLY AND INSTALLATION OF A NEW BOREHOLE MOTOR AND PUMP DRILLING INCLUDING PUMP TESTING

	connection of 40mm SABS HDPE underground piping including all necessary fittings to complete work contractor to measure on site briefing meeting N.B Contractor to include on the rate of breaking of concrete/asphalt and reinstatement				
2.8	Commissioning and setting to work	Item	1		
2.8.1	All necessary approvals certificates including plumbing and electrical work	Item	1		
2.9	Allow for any Preliminary and General Items e.g. disbursements, set up costs travelling insurances etc	Item	1		
Carried To Collection Summary		PS 2		R	

Item	DESCRIPTION	UNIT	QTY	RATE/ UNIT	
				R	c
	<p>NOTE:</p> <p>1). All rates for items contained in this Schedule of Rates must be computed excluding the applicable Value Added Tax.</p> <p>2). The Municipality reserves the right to Negotiate rates in the Bill of Quantities.</p> <p>3). All rubble shall be removed from site and suitably disposed of.</p>				
	<p><u>INSTITUTION: MSINGA</u></p> <p>NEW BOREHOLE DRILLING INCLUDING GROUNDWATER INVESTIGATION, EQUIPPING AND TEST PUMPING AT MSINGA</p> <p>All rates quoted shall be inclusive of transport, labour and profit. All relevant mark-ups for specialist shall be included.</p> <p>The Bidder is advised that the institution is fully functional and Occupied and disruptions to services are to be kept to the bare minimum.</p>				
	<p><u>EQUIPMENT AND MATERIALS</u></p> <p>NEW BOREHOLE</p>				
3	HydroGeologist/GeoHydrologist's Investigation and design: Allow for a registered hydrogeologist /geohydrologist /water engineer to undertake all work listed in 4.2 below.	Item	1		
3.1	Water User License Application (WULA)	Item	1		
3.2	Allow for any Preliminary and General Items e.g. disbursements, stationery , copying, travelling etc.	Item	1		

SUPPLY AND INSTALLATION OF A NEW BOREHOLE MOTOR AND PUMP DRILLING INCLUDING PUMP TESTING

3.3	Commissioning and setting to work	Item	1		
Carried To Collection Summary		PS 3		R	

COLLECTION SUMMARY

INSTITUTION: uMsinga Municipality: _____

PROJECT: NEW BOREHOLE DRILLING INCLUDING GROUNDWATER INVESTIGATION, EQUIPPING AND TEST PUMPING AT MSINGA

New Borehole, Groundwater Investigation, Equipping and Test Pumping at Msinga.

NOTE:

THIS COLLECTION SUMMARY MUST BE COMPLETED IN FULL BY THE CONTRACTOR AND RETURNED TOGETHER WITH THE TENDER/QUOTATION FORM.

Collection Summary	PS 1	R		
Collection Summary	PS 2	R		
Collection Summary	PS 3	R		
SUB-TOTAL "A"		R		

**SUPPLY AND INSTALLATION OF A NEW BOREHOLE MOTOR AND PUMP DRILLING INCLUDING
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ADD Provision for Value Added Tax Allow 14% of SUB-TOTAL "A"	R		
<u>TOTAL</u>: CARRIED TO TENDER FORM	R		