BILL OF QUANTITIES/ PRICING SCHEDULE

RLM/DCD/0019/2024/25-RE: ADVERT- APPOINTMENT OF A CONTRACTOR FOR DRILLING, INSTALLATION OF BOREHOLES, INSTALLATION OF WATER PUMPS AND STORAGE TANKS AT VARIOUS FACILITIES OF THE RUSTENBURG LOCAL MUNICIPALITY FOR A PERIOD OF 36 MONTHS AS AND WHEN REQUIRED.

SPECIFICATION

No	Description	Unit	Qty
1	PRELIMINARIES & GENERALS		
1.1	HEALTH & SAFETY Allowance for all health and safety requirements as deemed necessary for the successful execution of the project	Item	1
1.2	TEMPORARY WORKS & PLANT Plant, equipment, sheds, offices and main notice board (Contractor will need single bay independent/free standing scaffold exceeding 2.5m high and not exceeding 7m high)	Item	1
1.3	HOUSEKEEPING AND COMPLIANCE WITH PRINCIPAL AGENT SITE RULES The contractor will be responsible for a high standard of housekeeping in his site establishment, delivery of materials and goods and removal of rubble, debris, etc, storage areas and construction working areas to the approval of the Principal Agent	Item	1
2	SUM STATED PROVISSIONALLY		
2.1	Additional tests required by the Engineer (per site, as and when required)	Prov. Sum	1
2.2	Remuneration of Community Liaison Officer (CLO) for the duration of the contract/project (per site, per month)	Prov. Sum	1
2.3	Allowance for a Sighting Hydrologist	Prov. Sum	1
3	SUPPLY AND INSTALLATION OF BACKUP WATER TANKS		
3.1	Prepare surface and compact to receive 100mm thick concrete slab	m^2	1
3.2	Cast 100mm 25MPA reinforced concrete slab to receive water tanks	m^3	1
3.3	10,000L (Jojo Tank or similar)	no	1
3.4	5,000L (Jojo Tank or similar)	no	1
3.5	2,000L (Jojo Tank or similar)	no	1
3.6	Supply and install 1.6m high galvanized steel stand for 10000L tank (concrete and labour covered)	no	1
3.7	Supply and install 1.6m high galvanized steel stand for 5000L tank (concrete and labour covered)	no	1
3.8	Supply and install 1.6m high galvanized steel stand for 2000L tank (concrete and labour covered)	no	1
3.9	Excavate to locate main water supply	m^3	1
3.10	Marlie or equally approved PVC Glue Tube	no	1
3.11	11kV Centrifugal Pump Nm200-500 (Booster Pump) including automatic flow censor and anti-theft motor cage	no	1
3.12	CENTRIFUGAL PUMP 0.75KW including automatic flow censor and anti-theft motor cage	no	1
3.13	3.5mm Surfix Cable buried underground in conduit	m	1
3.14	Supply, deliver and install PVC Pipe, 6m long x 40mm OD, 3.0mm Wall Thickness including all fittings	no	1
3.15	Supply, deliver and install 40mm PVC fittings	no	1
3.16	40mm brass ball valve with 150mm ball	no	1

3.17	Supply and install 60 mm Copper/galvanized supply pipe including all fittings	m	1
3.18	Supply and install 60 mm Copper/galvanized fittings	no	1
3.19	Supply and install 22 mm Copper/galvanized supply pipe including all fittings	m	1
3.20	Supply and install 22 mm Copper/galvanized fittings	no	1
3.21	PVC stop valves 40mm	no	1
3.22	Brass stop valves 75mm	no	1
3.23	Supply and install new 2.4m high Welded razor wire mesh standard density, diamond shape aperture size 150mm x 300mm, sheet height 1.8m including 4 rows of straining wires and all fittings and fixtures.	m	1
3.24	Supply and install 100mm x 100mm x 2.4m concrete support poles planted 2 meters apart in 400mm x 400mm x 600mm deep 25MPA concrete bases	No	1
3.25	Supply and install supporting beams on every corner pole and poles supporting gates planted at an angle of 45 degrees in 400mm x 400mm x 600mm deep 25MPA concrete bases	No	1
3.26	Install a 2.4m x 1m wide steel gate to service the area	no	1
3.27	Allowance for a thread cutting machine to re-thread galvanized pipes	sum	1
4	EXTERNAL CONSTRUCTION WORKS		
	EXTERNAL CIVIL WORKS		
	Site clearance		
4.1	Clear and grub the site area and removal and disposal of vegetation	m^2	1
4.2	Levelling of site including spreading of excess material	m^2	1
4.3	Clear and grub by hand on site areas indicated by the Project Manager/Engineer	m^2	1
	Earthworks		
4.4	Excavation in all material for trenches, backfill, compact and disposing of surplus material	m^3	1
4.5	Trenches up to and not exceeding 1 m	m^3	1
4.6	Provision of selected granular material for bedding of flexible pipework	m^3	1
	Extra over item 3,2 above		
4.7	Hand excavation and backfill where ordered by the Project Manager/Engineer	m^3	1
	Medium Pressure pipelines		
4.8	Supply, lay, bed and test the following HDPE pressure pipes including all trenches to connect the new water tanks to the existing equipped borehole		
4.9	Pipe		
4.10	50mm Dia class PN8 HDPE	m	1
	Water Tank		
4.11	Supply, install and commission 10 000L water tanks (Auto fill) with float valve	No	1
4.12	(Rate to include all fittings to connect new 32mm water pipe to the tank)		
	Concrete Slabs	-	
4.13	Construct a 3m x 4m wide x 0,2m thick 25 Mpa concrete slab casted on top of a compacted surface compacted to 93% Mod AASHTO with 1 layers of Mesh ref. 245 centrally placed (50mm cover) (Rate to include test results for compaction and concrete strength)	No	1
4.14	Supply and install crushed grey gravel stone aggregate	m^3	1

	Booster Pump Configuration Protection		
4.15	Construct a 1.6m x 1,0m x 1,8m protection structure for the booster pump and installation using a 50 x 50 x 8mm angle mild steel iron bolted in the concrete base, with 5mm x welded diamond mesh, covered with 0,5mm IBR sheeting riveted on the angle iron, complete with lockable door (All steel to be fully galvanized and 50mm Water-proof padlock to be included in the rate).	No	1
	Electricity Supply		
4.16	Supply, install and commission 220V electricity reticulation connecting the new booster pump with the existing electricity connection. (Rate to include all fittings, circuit breakers and surge protectors etc. required to connect the new booster pump to the existing electric connection with a C.O.C certificate)		
4.17	Supply, installation and testing of 10 mm^2 copper cable, including 10mm bare copper earthwire (From the main supply to the tank)	M	1
4.18	Supply, installation and testing of 16 mm^2 copper cable, including 10mm bare copper earthwire (Main to Borehole)	M	1
4.19	Supply, installation and testing of 35 mm^2 copper cable, including 16mm bare copper earthwire	M	1
4.20	Supply and install 32 Amps breakers for powering the pump.	No	1
4.21	Supply and installation of electrical danger tape	No	1
5	<u>BOREHOLE DRILLING</u>		
5.1	Borehole drilling in all materials by ODEX method including supply, delivery & installation of at least 5 mm side wall Odex casing including shoe		
5.1.1	194 mm OD (including casing)	m	1
5.1.2	219 mm OD (including casing)	m	1
5.1.3	273 mm OD (including casing)	m	1
5.1.4	194 mm OD (Normal Air percussion drilling)	m	1
5.2	Test pumping to ascertain borehole yield for at least 24 hours including installation and withdrawal of pumping units and recovery measurements.	No.	1
5.3	Collection of water samples, carrying out their chemicals & biological tests in an approved laboratory and submitting the test report to the Engineer/Project Manager	No.	1
5.4	Supply and Installation of Mechanical Equipment		
5.4.1	Supply and install centrifugal borehole pump, continuously rated and capable of pumping 12m^3/hr of water against a total of head of 144m (Rate to include all wiring, connections, including all circuit breakers and equipment).	No.	1
5.5	Allow for testing and commissioning and registration of the bore holes with the *National Department of Water and Sanitation* (DWS)	No.	1
5.6	CONCRETE COLLAR (complete per borehole)	No	1
5.7	SANITARY SEAL (complete per borehole) – Maximum five metres		
5.7.1	For the 194mm OD - Outside Diameter casing	No	1
5.8	BOREHOLE DISINFECTION (complete per borehole)	No	1
5.9	Capping of unsuccessful borehole	No	1
5.10	Galvanized Steel Cage (Lockable) to protect Borehole	No	1
5.11	Supply and install 50mm Water-filter including all connections and adapters	No	1
5.12	Allow for sighting by Hydrologist before any drilling	No	1

BILL OF QUANTITIES

No	Description	Unit	Qty	RATE (Rands and Cents)
1	PRELIMINARIES & GENERALS			
1.1	HEALTH & SAFETY Allowance for all health and safety requirements as deemed necessary for the successful execution of the project	item	1	
1.2	TEMPORARY WORKS & PLANT Plant, equipment, sheds, offices and main notice board (Contractor will need single bay independent/free standing scaffold exceeding 2.5m high and not exceeding 7m high)	item	1	
1.3	HOUSEKEEPING AND COMPLIANCE WITH PRINCIPAL AGENT SITE RULES The contractor will be responsible for a high standard of housekeeping in his site establishment, delivery of materials and goods and removal of rubble, debris, etc, storage areas and construction working areas to the approval of the Principal Agent	item	1	
2	SUM STATED PROVISSIONALLY			
2.1	Additional tests required by the Engineer (per site, as and when required)	Prov. Sum	1	R17,100.00
2.2	Remuneration of Community Liaison Officer (CLO) for the duration of the contract/project (per site, per month)	Prov. Sum	1	R7,100.00
2.3	Allowance for a Sighting Hydrologist	Prov. Sum	1	R35,000.00
3	SUPPLY AND INSTALLATION OF BACKUP WATER TANKS			
3.1	Prepare surface and compact to receive 100mm thick concrete slab	m^2	1	
3.2	Cast 100mm 25MPA reinforced concrete slab to receive water tanks	m^3	1	
3.3	10,000L (Jojo Tank or similar)	no	1	
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3.11	11kV Centrifugal Pump Nm200-500 (Booster Pump) including automatic flow censor and anti-theft motor cage	no	1	
3.12	CENTRIFUGAL PUMP 0.75KW including automatic flow censor and anti-theft motor cage	no	1	
3.13	3.5mm Surfix Cable buried underground in conduit	m	1	

3.14	Supply, deliver and install PVC Pipe, 6m long x 40mm OD, 3.0mm Wall Thickness including all fittings	no	1	
3.15	Supply, deliver and install 40mm PVC fittings	no	1	
3.16	40mm brass ball valve with 150mm ball	no	1	
3.17	Supply and install 60 mm Copper/galvanized supply pipe including all fittings	m	1	
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3.21	PVC stop valves 40mm	no	1	
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3.23	Supply and install new 2.4m high Welded razor wire mesh standard density, diamond shape aperture size 150mm x 300mm, sheet height 1.8m including 4 rows of straining wires and all fittings and fixtures.	m	1	
3.24	Supply and install 100mm x 100mm x 2.4m concrete support poles planted 2 meters apart in 400mm x 400mm x 600mm deep 25MPA concrete bases	no	1	
3.25	Supply and install supporting beams on every corner pole and poles supporting gates planted at an angle of 45 degrees in 400mm x 400mm x 600mm deep 25MPA concrete bases	no	1	
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3.27	Allowance for a thread cutting machine to re-thread galvanized pipes	sum	1	
4	EXTERNAL CONSTRUCTION WORKS			
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5.2	Test pumping to ascertain borehole yield for at least 24 hours including installation and withdrawal of pumping units and recovery measurements.	No.	1	

5.3	Collection of water samples, carrying out their chemicals & biological tests in an approved laboratory and submitting the test report to the Engineer/Project Manager	No.	1	
5.4	Supply and Installation of Mechanical Equipment			
5.4.1	Supply and install centrifugal borehole pump, continuously rated and capable of pumping 12m³/hr of water against a total of head of 144m (Rate to include all wiring, connections, including all circuit breakers and equipment).	No.	1	
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5.11	Supply and install 50mm Water-filter including all connections and adapters	No	1	
5.12	Allow for sighting by Hydrologist before any drilling	No	1	
	SUB TOTAL			
	CONTINGENCY 10%			
	VAT 15%			
	TOTAL			

- Contingency an amount of money set aside to cover any unexpected costs that can arise throughout a construction project.

"As this is a three-year project, the contract price shall be subject to annual price adjustments in accordance with the Consumer Price Index (CPI) as published by Statistics South Africa."