PRELIMINARY AND GENERAL

Item No	Description	Unit	Qty	Rate	Amount (Rand)
1	PRELIMINARY & GENERAL				
1.1	**FIXED-CHARGES AND VALUE RELATED ITEMS**				
1.1.1	Contractual Requirements	Sum	1.00		
1.2	ESTABLISHMENT OF FACILITIES ON SITE				
	Facilities for the Engineer				
1.2.1	Name Board/s	Sum	1.00		
1.2.2	Offices	Sum	1.00		
1.2.3	Carports	Sum	1.00		
1.2.4	Computer	Sum	1.00		
1.2.5	Cellphone	Sum	1.00		
1.2.6	Printer	Sum	1.00		
	Facilities for the Contractor				
1.2.7	Offices, storage sheds and fencing	Sum	1.00		
1.2.8	Portable Latrines	Sum	1.00		
1.2.9	Tools and Equipment	Sum	1.00		
1.2.10	Water Supply, Electric Power and Communications	Sum	1.00		
1.2.11	Access	Sum	1.00		
1.2.12	Other Fixed-charge Obligations	Sum	1.00		
1.2.13	Removal of Site Establishment	Sum	1.00		
1.3	**TIME-RELATED ITEMS**				
1.3.1	Contractual Requirements	Month	8.00		
	Operation and Maintain of Facilities on site for the Duration of the Construction				
	Facilities for the Engineer				
1.3.2	Name Board/s	Month	8.00		
1.3.3	Offices	Month	8.00		
1.3.4	Carports	Month	8.00		
1.3.5	Computer	Month	8.00		
1.3.6	Cellphone	Month	8.00		
1.3.7	Printer	Month	8.00		
1.3.8	Survey assistant/s	hours	100.00		
Total Carried Forward					

PRELIMINARY AND GENERAL

Item No	Description	Unit	Qty	Rate	Amount (Rand)
Brought Forward					
	Facilities for the Contractor				
1.3.9	Offices and storage sheds	Month	8.00		
1.3.10	Portable latrines	Month	8.00		
1.3.11	Tools and equipment	Month	8.00		
1.3.12	Water supplies, electric power and communications	Month	8.00		
1.3.13	Access	Month	8.00		
1.3.14	Supervision for Duration of Construction	Month	8.00		
1.3.15	Company and Head Office Overhead Costs for the Duration of the Construction	Month	8.00		
1.3.16	Other Time-related Obligations	Month	8.00		
1.4	**PROVISIONAL AMOUNTS BY ENGINEER**				
1.4.1	Independent testing specified by the Engineer	Prov Sum	1.00	50,000.00	50,000.00
1.4.2	Overheads, Charges and Profit on item above	%	50,000.00		
1.4.3	Survey and prepare '"As- built"' drawings	Prov Sum	1.00	25,000.00	25,000.00
1.4.4	Overheads, Charges and Profit on item above	%	25,000.00		
1.4.5	Provision for specialist testing, detection and repair of services	Prov Sum	1.00	25,000.00	25,000.00
1.4.6	Overheads, Charges and Profit on item above	%	25,000.00		
1.4.7	Locating existing services, only where ordered by the Engineer	Prov Sum	1.00		
1.5	**D**AYWORKS				
1.5.1	**Materials**	Prov Sum	1.00	35,000.00	35,000.00
1.5.2	Overheads, Charges and Profit on item above	%	35,000.00		
	Labour				
1.5.3	Skilled	hr			Rate Only
1.5.4	Semi-skilled	hr			Rate Only
1.5.5	General Labour	hr			Rate Only
	Plant and Equipment				
1.5.6	Crawler excavator (70 - 80 kW)	hr			Rate Only
1.5.7	Backhoe loader (50 - 60 kW)	hr			Rate Only
1.5.8	Walk-behind vibrating roller	hr			Rate Only
Total Carried Forward					

Item No	Description	Unit	Qty	Rate	Amount (Rand)
Brought Forward					
1.5.9	Compressor (175 cfm), including hoses and breakers	hr			Rate Only
1.5.10	Concrete Mixer (150 - 250 litre)	hr			Rate Only
1.5.11	Water Pump (75mm), including suction and delivery hoses	hr			Rate Only
1.5.12	Tipper trucks (6 m3)	hr			Rate Only
1.5.13	1-ton bakkie	hr			Rate Only
1.5.14	Plate compactor	hr			Rate Only
1.5.15	220 Volt generator	hr			Rate Only
1.6	**TEMPORARY WORKS**				
1.6.1	Deal with traffic and maintain road (or accommodation of traffic)	Sum	1.00		
1.7	**HEALTH AND SAFETY:**				
	Compliance with the Occupational Health and Safety Act (Act 85 of 1993) and applicable regulations (Construction Regulations, 2014), and the Employers Health and safety Specification bound into this document				
1.7.1	Preparation of a Health and Safety Plan	Lump Sum	1.00		
1.7.2	Provision of a Health and Safety file	Lump Sum	1.00		
1.7.3	Provision of construction supervisors	Lump Sum	1.00		
1.7.4	Provision of a Safety Officer (full-time)	Lump Sum	1.00		
1.7.5	Provision of Safety Representatives	Lump Sum	1.00		
1.7.6	Health and Safety training	Lump Sum	1.00		
1.7.7	Provision of personnel protective clothing and equipment **(PPE)**	Lump Sum	1.00		
1.7.8	Provision of safety fences, signs and barricades	Lump Sum	1.00		
1.7.9	Safety Audit (once a month during construction period)	Prov Sum	1.00		
1.8	**COMMUNITY LIAISON OFFICER (CLO)**				
1.8.1	Community Liaison Officer	Month	8.00		
Total Carried Forward To Summary					

PRIME COST ITEMS

Item No	Description	Unit	Qty	Rate	Amount (Rand)
2	**PRIME COST ITEMS**				
2.1	NOMINATED SUB-CONTRACTOR BY THE CLIENT				
2.1.1	Supply and Delivery of Non-Revenue Water Specialist Technical Services to be provided by the Sub-Contractor nominated by the Client	PC Sum	1.00	561,300.00	561,300.00
2.1.2	Company and Head Office Overhead Costs	%	561,300.00		
2.2	PRESSURE & FLOW LOGGING				
2.2.1	Pressure & Flow Logging (Specialist works to be carried by the Nominated Specialist Professional Sub-Contactor nominated by the Client)	PC Sum	1.00	225,375.00	225,375.00
2.2.2	Monthly Safety Audits by nominated OHS Consultant.	PC Sum	1.00	120, 000.00	120, 000. 00
2.2.3	Monthly ECO Audits by nominated ECO Consultant. construction period) Nomited by Client	PC Sum	1.00	120, 000.00	120, 000.00
2.2.4	Company and Head Office Overhead Costs	%	46,537.50		
Total Carried Forward To Summary					

CONSUMER METER AUDIT & REPLACEMENT

Item No	Description	Unit	Qty	Rate	Amount (Rand)
3	**CONSUMER METER AUDIT & REPLACEMENT**				
3.1	CONSUMER METER AUDIT				
3.1.1	Training of locals on data capture	PC Sum	1.00	28,000.00	28,000.00
3.1.2	Identify consumer meter requiring replacement	Sum	1.00		
3.1.3	Identify consumer meter requiring calibration	Sum	1.00		
3.1.4	Identify new consumer meters	Sum	1.00		
3.2	CONSUMER METER REPLACEMENT				
3.2.1	Supply, Deliver & Installation of new consumer meters (15mm - 40mm), inclusive of pipe specials and fittings, labour, etc	No	150.00		
3.2.2	Replace existing consumer meters	No	320.00		
Total Carried Forward To Summary					

DMA - CONCOR RESERVOIR

Item No	Description	Unit	Qty	Rate	Amount (Rand)
4	**DMA - CONCOR: ESTABLISHMENT OF DMA's**				
	DMA - CONCOR: ESTABLISHMENT OF DMA's				
4.1	**ESTABLISHMENT OF DISTRICT METERED AREAS**				
4.1.1	Excavate and/or Expose existing services and determine the size of existing pipes as indicated on the Layout Plans (Engineer/Main Contractor to indicate, verify and confirm together with the Special Worksman areas to be worked on)	No	7.00		
4.1.2	Supply and deliver **110mm** Boundary (Isolating) Valves, with Captop	No	1.00		
4.1.3	Supply and deliver **200mm** Boundary (Isolating) Valves, with Captop	No	2.00		
4.1.4	Supply and deliver **250mm** Boundary (Isolating) Valves, with Captop	No	1.00		
4.1.5	Supply and deliver **300mm** Boundary (Isolating) Valves, with Captop	No	1.00		
4.1.6	Supply and deliver reducers/couplings for 110mm Boundary (Isolating) Valves, with Captop as indicated on the drawing	No	2.00		
4.1.7	Supply and deliver reducers/couplings for 200mm Boundary (Isolating) Valves, with Captop as indicated on the drawing	No	4.00		
4.1.8	Supply and deliver reducers/couplings for 250mm Boundary (Isolating) Valves, with Captop as indicated on the drawing	No	2.00		
4.1.9	Supply and deliver reducers/couplings for 350mm Boundary (Isolating) Valves, with Captop as indicated on the drawing	No	2.00		
4.2	**CAST IRON VALVE BOX / PLASTIC VALVE BOX (DWG NO. P21386-500-005)**				
4.2.1	Supply and deliver 160mm diameter uPVC pipeline as indicated on the drawing	m	12.00		
4.2.2	Supply and deliver 175mm x 115mm Cast Iron Valve Box / Plastic Valve Box as indicated on the drawing	No	5.00		
4.2.3	Install flanged, anti-clockwise closing "RSV" Valves to fit existing pipes, as indicate on Drawing, complete with Cast Iron Valve Box / Plastic Valve Box, 200mm uPVC pipe, 160mm uPVC pipe, bricks, concrete collar, etc	No	5.00		
4.3	**100MM MAGFLOW WATER METER CHAMBER**				
	Cost of Survey				
4.3.1	Survey and setting out the works	Sum	1.00		
	Water Control				
4.3.2	Special water control, including pump hire	Sum	1.00		
4.4	EARTHWORKS (SMALL WORKS)				
	Excavation:				
Total Carried Forward					

DMA - CONCOR RESERVOIR

Item No	Description	Unit	Qty	Rate	Amount (Rand)
Brought Forward					
4.4.1	Excavation in all material and dispose	m³	28.90		
4.5	CONCRETE (STRUCTURAL)				
4.6	SCHEDULED FORMWORK				
	Rough:				
4.6.1	Rough vertical planes to walls and footings of chamber and sumps below ground	m²	23.92		
	Smooth:				
4.6.2	Vertical plane internal walls	m²	16.00		
4.6.3	Horizontal plane to roof slab soffit of chambers	m²	4.00		
	Box Out Holes / Form Voids				
	a) Small circular of diameter up to and including 0,65m (boxing of roof vents)				
	Over and up to and including				
4.6.4	1) - 0,5 m deep	Sum	1.00		
	b) Large, other than circular, of area over 0,1 m2 and up and including to 1,5 m2 (boxing of roof manhole cover & sump in sump				
	Over and up to and including				
4.6.5	1) - 0,5 m deep	Sum	1.00		
4.7	SCHEDULED REINFORCEMENT ITEMS				
	Steel bars:				
4.7.1	High tensile steel bars	t	0.93		
4.7.2	Mild steel bars	t			Rate Only
4.7.3	High-tensile welded mesh	t			Rate Only
4.8	SCHEDULED CONCRETE ITEMS				
4.8.1	Blinding layer in class 15/19 concrete (50mm thick)	m³	0.43		
	Strength Concrete:				
4.8.2	Grade 25/19 concrete for floor slabs, walls and roof slabs of chambers	m³	7.30		
	Unformed surface finishes				
4.8.3	To top of chamber floor slabs	m²			Rate Only
4.8.4	To top of chamber roof	m²			Rate Only
4.8.5	Grouting of pipes / specials through walls	No	2.00		
Total Carried Forward					

DMA - CONCOR RESERVOIR

Item No	Description	Unit	Qty	Rate	Amount (Rand)
Brought Forward					
	Miscellaneous Supply and install as detailed on drawings				
4.8.6	screed to fall or (water proofing) on roof slab	m^2			Rate Only
4.8.7	plinths and thrust blocks of various sizes	m^3			Rate Only
4.9	**CHAMBER ACCESS AND VENTILATION - SUPPLY, DELIVERY AND INSTALLATION:**				
4.9.1	Manhole Concrete Cover (900 x 900) and Steel frame for chamber access complete with locking mechanism	No	1.00		
4.9.2	Hot dipped galvanised roof ventilators to the chamber roof as detailed on the drawings	No	1.00		
4.9.3	Step Irons installed complete as indicated on the drawings	No	1.00		
4.9.4	Hot dip galvanised internal sump cover frame and grating	No	1.00		
4.10	**100MM MAGFLOW - PIPE FITTINGS AND SPECIALS** Supply & Delivery of Pipe Specials and Fittings as indicated on the drawings				
4.10.1	Item 1 - 100mm diameter step coupling/reducer	No	2.00		
4.10.2	Item 2 - 100mm diameter MS Pipe with puddle flange, plain one and flanged the other	No	1.00		
4.10.3	Item 3 - 100mm diameter MS Tee-piece	No	1.00		
4.10.4	Item 4 - 100mm diameter RSV Gate Valve (PN16) with handwheel	No	2.00		
4.10.5	Item 5 - 100mm diameter MS Pipe, both ends flanged	No	2.00		
4.10.6	Item 6 - 100mm diameter MAGFLOW Water Meter, Battery Operated (Comprising of Flow Sensor and Converter, Remote Mount, Capacity for 1 pressure input, On Board Data Logger and GPRS Module, Grounding Rings, Mating Flanges, bolts and Gaskets, etc. & Commissioning by the Specialist), both ends flanged	No	1.00		
4.10.7	Item A - 50mm diameter Air Release and Vacuum Breaker Valve, flanged, as per Specification	No	1.00		
4.10.8	Item B - 50mm diameter RSV gate valve (PN16) with handwheel and anti-clockwise closing to SABS 664, both ends flanged to SABS 1123 1600/3.	No	1.00		
4.10.9	Item C - 100mm x 50mm Steel reducer, both ends flanged to SABS 1123 1600/3.	No	1.00		
4.10.10	Assembly and Installation of Items above	Sum	1.00		
4.11	**300MM MAGFLOW WATER METER CHAMBER** Cost of Survey				
Total Carried Forward					

DMA - CONCOR RESERVOIR

Item No	Description	Unit	Qty	Rate	Amount (Rand)
Brought Forward					
4.11.1	Survey and setting out the works	Sum	1.00		
	Water Control				
4.11.2	Special water control, including pump hire	Sum	1.00		
4.12	EARTHWORKS (SMALL WORKS)				
	Excavation:				
4.12.1	Excavation in all material and dispose	m³	37.40		
4.13	CONCRETE (STRUCTURAL)				
4.14	SCHEDULED FORMWORK				
	Rough:				
4.14.1	Rough vertical planes to walls and footings of chamber and sumps below ground	m²	28.82		
	Smooth:				
4.14.2	Vertical plane internal walls	m²	20.00		
4.14.3	Horizontal plane to roof slab soffit of chambers	m²	6.00		
	Box Out Holes / Form Voids				
	a) Small circular of diameter up to and including 0,65m (boxing of roof vents)				
	Over and up to and including				
4.14.4	1) - 0,5 m deep	Sum	1.00		
	b) Large, other than circular, of area over 0,1 m2 and up and including to 1,5 m2 (boxing of roof manhole cover & sump in sump				
	Over and up to and including				
4.14.5	1) - 0,5 m deep	Sum	1.00		
4.15	SCHEDULED REINFORCEMENT ITEMS				
	Steel bars:				
4.15.1	High tensile steel bars	t	1.15		
4.15.2	Mild steel bars	t			Rate Only
4.15.3	High-tensile welded mesh	t			Rate Only
4.16	SCHEDULED CONCRETE ITEMS				
4.16.1	Blinding layer in class 15/19 concrete (50mm thick)	m³	0.58		
	Strength Concrete:				
Total Carried Forward					

DMA - CONCOR RESERVOIR

Item No	Description	Unit	Qty	Rate	Amount (Rand)
Brought Forward					
4.16.2	Grade 25/19 concrete for floor slabs, walls and roof slabs of chambers Unformed surface finishes	m³	9.50		
4.16.3	To top of chamber floor slabs	m²			Rate Only
4.16.4	To top of chamber roof	m²			Rate Only
4.16.5	Grouting of pipes / specials through walls Miscellaneous Supply and install as detailed on drawings	No	2.00		
4.16.6	screed to fall or (water proofing) on roof slab	m²			Rate Only
4.16.7	plinths and thrust blocks of various sizes	m³			Rate Only
4.17	**CHAMBER ACCESS AND VENTILATION - SUPPLY, DELIVERY AND INSTALLATION:**				
4.17.1	Manhole Concrete Cover (900 x 900) and Steel frame for chamber access complete with locking mechanism	No	2.00		
4.17.2	Hot dipped galvanised roof ventilators to the chamber roof as detailed on the drawings	No	1.00		
4.17.3	Step Irons installed complete as indicated on the drawings	No	1.00		
4.17.4	Hot dip galvanised internal sump cover frame and grating	No	1.00		
4.18	**300MM MAGFLOW WATER METER - RESERVOIR OUTLET 2 PIPE FITTINGS AND SPECIALS** Supply & Delivery of Pipe Specials and Fittings as indicated on the drawings				
4.18.1	Item 1 - 300mm diameter step coupling/reducer	No	2.00		
4.18.2	Item 2 - 300mm diameter MS Pipe with puddle flange, plain one and flanged the other	No	1.00		
4.18.3	Item 3 - 300mm diameter MS Tee-piece	No	1.00		
4.18.4	Item 4 - 300mm diameter BUTTERFLY Valve (PN16)	No	2.00		
4.18.5	Item 5 - 300mm diameter MS Pipe, both ends flanged	No	2.00		
4.18.6	Item 6 - 300mm diameter MAGFLOW Water Meter, Battery Operated (Comprising of Flow Sensor and Converter, Remote Mount, Capacity for 1 pressure input, On Board Data Logger and GPRS Module, Grounding Rings, Mating Flanges, bolts and Gaskets, etc. & Commissioning by the Specialist), both ends flanged	No	1.00		
4.18.7	Item A - 50mm diameter Air Release and Vacuum Breaker Valve, flanged, as per Specification	No	1.00		
Total Carried Forward					

DMA - CONCOR RESERVOIR

Item No	Description	Unit	Qty	Rate	Amount (Rand)
Brought Forward					
4.18.8	Item B - 50mm diameter RSV gate valve (PN16) with handwheel and anti-clockwise closing to SABS 664, both ends flanged to SABS 1123 1600/3.	No	1.00		
4.18.9	Item C - 300mm x 50mm Steel reducer, both ends flanged	No	1.00		
4.18.10	Assembly and Installation of Items above	Sum	1.00		
Total Carried Forward To Summary					

ACTIVE LEAK MANAGEMENT

Item No	Description	Unit	Qty	Rate	Amount (Rand)
5	ACTIVE LEAK MANAGEMENT				
5.1	LEAK REPAIRS - MATERIALS				
5.1.1	Supply and delivery of material for leak repairs	Prov Sum	1.00	50,000.00	50,000.00
5.1.2	Overheads, Charges and Profit on item above	%	50,000.00		
5.2	LEAK REPAIRS - IDENTIFICATION OF LEAK				
5.2.1	Identify leaks per established DMA and quantify	Prov Sum	1.00	35,000.00	35,000.00
5.2.2	Overheads, Charges and Profit on item above	%	35,000.00		
5.2.3	Repair of Leaks on pipes	Prov Sum	1.00	20,000.00	20,000.00
5.2.4	Overheads, Charges and Profit on item above	%	20,000.00		
Total Carried Forward To Summary					

TESTING OF DISCREETNESS OF DISTRICT METERED AREAS

Item No	Description	Unit	Qty	Rate	Amount (Rand)
6	**TESTING OF DISCREETNESS OF DISTRICT METERED AREAS: CONCOR**				
6.1	DMA - CONCOR RESERVOIR	Sum	1.00		
Total Carried Forward To Summary					

SUMMARY OF SECTIONS

Section	Description	Amount (Rand)
1	PRELIMINARY AND GENERAL	.....
2	PRIME COST ITEMS	.....
3	CONSUMER METER AUDIT & REPLACEMENT	.....
4	DMA - CONCOR RESERVOIR	.....
5	ACTIVE LEAK MANAGEMENT	.....
6	TESTING OF DISCREETNESS OF DISTRICT METERED AREAS	.....
	Subtotal A	.....
(a)	Add 10% Contingencies	.....
	Subtotal B	.....
(b)	Add 5% Contract Price Adjustment	.....
	Subtotal C	.....
(c)	Add 15% Value Added Tax (VAT)	.....
Total Carried Forward To Summary Of Schedules		