REFURBISHMENT OF PRESSURE REDUCING VALVES & ANCILLIARY WORK IN THE ROODEPORT, SOWETO & ENNERDALE DEPOTS OPERATIONAL AREA OF THE JOHANNESBURG WATER SUPPLY NETWORK
RFP 189/2026
SUMMARY OF BILL OF QUANTITIES

	DESCRIPTION	AMOUNT
1	Section A : Preliminary & General	
2	Section B: 100mm Strubens Valley/ Makro PRV Site	
3	Section C: 100mm Gelana & Amfiteater PRV Site	
4	Section D: 100mm Crous PRV Site	
5	Section E: 100mm Radiokop/ John Voster PRV Site	
6	Section F: 100mm and 200mm Theunis, Wektevreden Park PRVs Site	
7	Section G: 150mm Portview Mainreef PRV Site	
8	Section H: 150mm Florida Boundary Mainreef PRV Site	
9	Section I: 150mm Dutoit PRV Site	
10	Section J: 150mm Braam & Ridge Road PRV Site	
11	Section K: 200mm Brigatyn & Johan PRV Site	
12	Section L: 200mm Bellair & Blandford PRV Site	
13	Section M: 100mm Vesting & Sugarbush, Naturena PRV Site	
14	Section N: 100mm Hamilton & Hefer, Naturena PRV Site	
15	Section O: 150mm Chris Hani & Nicholas PRV Site	
16	Section P: 100mm & 150mm Mofolo South Nancefield Moroka Rd PRV Site	
17	Section Q: 200mm Bara Emergency Supply from Rand Water PRV Site	
18	Section R: 200mm Sagewood & Unity PRV Site	
19	Section S: 200mm Lufhureng Cnr Lekwa & Crocodile PRV Site	
20	Section T: 200mm Impala & N12 Industrial Site	
21	Section U: 150mm Van Onselen & Forbes PRV Site	
22	Section V: 400mm Usuthu & Mbetswa Chiawelo PRV Site	
23	Section W: 450mm Diepkloof Reservoir Supply PRV Site	
24	Section X: 150MM & 250mm Sofasonke Valves Site	
25	Section Y: 100mm Drieziek Ext 1 PRV Site	
26	Section Z: 150mm Orange Farm Ext 2 Link Rd PRV Site	
27	Section AA: 150mm Drieziek Ext 9 Limpopo Str PRV Site	
28	Section AB: 150mm Zakariyya Park cnr Clove & Tumeric PRV Site	
29	Section AC: 200mm Poortjie 1 PRV Site	
30	Section AD: 250mm Poortjie 2 PRV Site	
31	Section AE: 250mm Weillie's Farm PRV Site	
32	Section AF: Miscellaneous	
	SUB TOTAL A	
	Allow for Skills Development Goal @ 0.25%	
	Allow Contingencies @10%	
	DIRECT COSTS (SUB TOTAL B)	
	Add VAT @ 15%	
	TOTAL PROJECT COST	

Ref	Description	Unit	Quantity	Amount (Incl. VAT)
1	P& Gs	Sites	1	
2	Roodepoort Depot	Sites	12	
3	Soweto Depot	Sites	12	
4	Ennerdale Depot	Sites	7	
4	Miscellaneous	Sites	1	
Totals				
Add Contingencies @ 10%				
Direct Costs (Sub-Total A)				
Add VAT @15%				
Total Direct Project Costs				

Risk	Likelihood	Impact	Mitigation
Site conditions at individual PRV installations (chamber condition, actual pipe sizes, structural stability) differ materially from JW's Action Lists once verified on site	Medium	Medium	Undertake a site visit to every installation during Stage 2 before finalising the BoQ; maintain the 10% contingency allowance; document any scope deviation in a scoping memorandum for JW approval.
Long lead times for i2O/advanced pressure-modulating controllers and PMZ critical-point GSM loggers constrain the programme	High	High	Confirm technical specifications and quantities during bid specification; procure long-lead telemetry items in parallel with tender/contractual processes rather than sequentially; monitor as the principal critical-path item.
Newly refurbished PRV installations are re-vandalised or bypassed after handover, eroding the benefit of the intervention	Medium	High	Install tamper-resistant Smartlock security fittings as standard scope at every site; hand over promptly to JW's WCWDM/technical metering team for ongoing monitoring; coordinate with JW security on repeat-offender locations.
Insufficient coordination between the three depot-level contractors and JW's WCWDM/technical metering function on SCADA/telemetry integration	Medium	Medium	Confirm communication protocols and data integration requirements with JW's WCWDM function early in Stage 2, before depot-level tender documentation is finalised; hold a dedicated integration workshop prior to installation.
Compressed delivery programme (~26 weeks to completion) creates pressure to shorten site verification, BoQ preparation or procurement steps	Medium	Medium	Communicate the realistic programme to JW at inception; monitor progress against the critical path monthly and escalate slippage to the Project Steering Committee early.
Depot-level shut-downs (2 per week per depot) disrupt water supply continuity or generate community complaints if poorly communicated	Medium	Medium	Appoint a Community Liaison Officer per depot region to coordinate advance notification of shut-downs with affected communities and ward councillors.

#	PRV Type t	Proposed S	PRV Size	PRV Location	Expected W	Y-Cord	X-Cord	Ward	Area	Installation
1	Grove	150	100mm	Portview Mainreef	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.18887	27.912739	70	Roodepoort	Night
2	Grove	150	100mm	Florida Boundary Mainreef	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.191425	27.919729	70	Roodepoort	Night
3	Grove	150	150mm	Dutoit street	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.16394	27.883501	84	Roodepoort	Day
4	Rollseal	200	150mm	Theusns, Wektevreden park	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.134089	27.91665	89	Roodepoort	Day
5	Clayton	100	100mm	Theusns, Wektevreden park	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.134089	27.91665	89	Roodepoort	Day
6	Baker	100	150mm	Strubens Valley, Makro PRV	Complete installation, Extend chamber, Cast Slab, Install Ladder & Smartlock	-26.124189	27.905922	85	Roodepoort	Night
7	Grove	100	100mm	Crous Drive	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.12582	27.866272	85	Roodepoort	Day
8	Grove	100	100mm	Radiokop, John Voster	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.101269	27.918692	97	Roodepoort	Day
9	Grove	150	200mm	Braam & Ridge Road, Honeydew	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.078589	27.921743	97	Roodepoort	Night
10	Baker + Clayton	200	200mm	Bellair & Blandford	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.055277	27.963692	101	Roodepoort	Day
11	Singer	200	200mm	Brigatyn & Johan	Complete installation, Construct Chamber, Cast Slab, Install Ladder & Smartlock	-26.07507	27.911287	97	Roodepoort	Day
12	Clayton	100	100mm	Gelana & Amfiteater	Complete installation, Construct Chamber, Cast Slab, Install Ladder & Smartlock	-26.127253	27.880547	85	Roodepoort	Day
13	Clayton	200	200mm	Bara Emergency Supply from Rand Water	Complete installation, Construct Chamber, Cast Slab, Install Ladder & Smartlock	-26.259811	27.943359	24	Soweto	Day
14	Clayton	450	450MM	Diepkloof Reservoir Supply Chris Hani Rd	Install i2O, Installation of Smartlock and Ladder	-26.260756	27.951565	24	Soweto	Day
15	Premier	100	100 MM	Vesting & Sugarbush Naturena	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.294069	27.95956	119	Soweto	Day
16	Premier	100	100 MM	Hamilton & Hefer Naturena	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.290717	27.952064	119	Soweto	Day
17	Clayton	N/A	150MM	Van Onselen & Forbes	Install Smartlock, cast new slab	-26.215668	27.885561	42	Soweto	Day
18	Clayton	100	150 & 100 MM	Mofolo South Nancefield Moroka Rd	Replace 100mm by-pass, install 100mm & 150mm Meistream meter inserts	-26.250795	27.887457	37	Soweto	Day
19	Clayton	150	150MM	Chris Hani & Nicolas	U/S=13bar; D/S=3.5bar; Install 2x150mm PRVs back to back and full installation, build chamber above ground and extend to fit full installation, Install ladder and smartlock	-26.258778	27.929822	25	Soweto	Day
20	Phoenix	200	200MM	Sagewood & Unity	Full 200mm installation, 2x Smatlocks and 2x ladders	-26.19475	27.8685	44	Soweto	Day
21	Clayton	400	400MM	Usuthu & Mbetswa Chiawelo	Install 2x 400mm RSVs, Replace 2x 400mm butterfly valves, Install 2x Smartlocks and Ladders, Install I2O controllers to service the reservoir	-26.279494	27.861748	12	Soweto	Day
22	Clayton	N/A	2 X 200MM	Impala & N12 Protea Inductrial	Brace PRVs for stability, Install 2x Smart Locks, Install 2x Ladders	-26.298657	27.81662	13	Soweto	Day
23	Clayton	N/A	200 MM	Lufhureng Cnr Lekwa & Crocodile	Replace 2x200mm RSVs, Install Smartlock and Ladder	-26.255006	27.789774	53	Soweto	Day
24	RSVs	250 + 150	250 + 150	Orlando East Sofasonke Valves	Replace critical system valves	-26.232311	27.932009	29	Soweto	Night
25	Hay-day	150	50mm (Bypass)	Zakariyya Park c/o Clove & Tumeric	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.366694	27.898506	122	Ennerdale	Day
26	Hay-day	150	50mm (Relief)	Orange Farm Ext 2 Link Rd Next to Creche	Complete installation, Construct Chamber, Cast Slab, Install Ladder & Smartlock	-26.4571	27.86553	4	Ennerdale	Day
27	Bakers	80	80 + 80	Drieziek Ext 1	Complete installation, Cast Slab, Install Ladder & Smartlock	-26.463579	27.853872	4	Ennerdale	Day
28	Clayton	250	250	Weiller's Farm	Install RSVs and Meter inside existing chamber	-26.428881	27.922163	6	Ennerdale	Night
29	Premier	200	80	Poortjie_A	Upgrade to 200mm dia complete installation, extend existing chamber, Cast Slab, Install Ladder and Smartlock (U/S=9bar; D/S=5bar)	-26.445718	27.837661	5	Ennerdale	Day
30	Baker	200	250	Poortjie_B	Install PRV and RSVs only (secondary PRV to PMZ), Construct Chamber, Cast Slab, Install Ladder & Smartlock (U/S=6bar; D/S=4bar)	-26.448227	27.835224	5	Ennerdale	Day
31	Seal	150	100mm (Main)	Drieziek Ext 9 Limpopo Street	Complete installation, Construct Chamber, Cast Slab, Install Ladder & Smartlock	-26.448641	27.856693	4	Ennerdale	Day

Descriptic The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport

Operational Area of the Johannesburg Water Supply Network
Contract I RFP 189/2026

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200 A	**BILL 1 : PRELIMINARY & GENERAL**				
A1	PSAA 8.2.1	**FIXED-CHARGE ITEMS**				
A2	8.3.1	Contractual Requirements; The sum should cover the contractors initial cost for providing the sureties and insurances (for entire project).	Sum	1		
A3	PAM	The preparation of risk assessments, safe work procedures, the Health and Safety file, the Health and Safety plan, provision of Personal Protective Equipment and Clothing and any other Health and Safety matters that the contractor deems necessary (Work is spread across 6 Wards and each ward will constitute its own unskilled labour personnell)	Sum	1		
A4	PAM	The completion and checking of the project Health and Safety file upon completion of the works and handing it over to the Client	Sum	1		
A5	8.3.2	**Establish Facilities On Site:**				
A6	8.3.2.a)	Facilities for the Engineer:				
A7		Office, communication	Sum	1		
A8	8.3.2b)	Facilities for the Contractor:				
A9		Offices, boardroom, storage sheds, workshops, living accommodation, ablution and latrine facilities, tools and equipment, water supplies, electric power, communications, access and plant	Sum	1		
A10	PSAA 5.3	Dealing with water:				
A11		Generally on site	Sum	1		
A12	8.3.3	General responsibilities and other fixed charge obligations	Sum	1		
A13	8.3.4	Remove Contractor's site establishment on completion.	Sum	1		
A14	PSDA 5.18	Accommodation of traffic and road crossings	Sum	1		
A15		Construction, maintenance and reinstatement to original condition of temporary access for pedestrains and vehicles	Sum	1		
A16		Erection of sign boards for interruption of water supply during cut-ins	Sum	1		
A17		HIV/AIDS awareness as per SANS 1921-6	Sum	1		
TOTAL CARRIED FORWARD						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
A18		Work to be carried out at night time (rates to include for all fixed related costs to carry out work during off peak periods e.g. security, overtime, lighting, etc) where instructed by Engineer in writing (prov)	No.	1		
	PSAA 8.2.2	**TIME RELATED ITEMS**				
A19	8.4.1	Contractual requirements	Months	9		
A20	8.4.2	Operate and maintain facilities on the site for the duration of construction:	Months	9		
A21	8.4.2b)	Facilities for the Contractor -				
A22		Contractor's establishment as per Item A.5.1	Months	9		
A23	PSAA 5.3	Dealing with water:				
A24		Generally on the site	Months	9		
A25	8.4.3	Supervision for duration of construction	Months	9		
A26	8.4.3	Company and head office overhead costs for the duration of the contract	Months	9		
A27	PSA 8.13	Provision and maintenance Temporary Security Fencing for the duration of the project per site	Sites	31		
A28	PAM	Updating and amending risk assessments, safe working procedures, the project Health and Safety file, the Health and Safety plan, the provision and maintenance of Personal Protective Equipment and Clothing and any other Health and Safety matters the Contractor deems necessary	Months	9		
A29	PAM	Full compliance with Health and Safety matters for the duration of the works	Months	9		
A30		Full-time Construction Health and Safety Officer (one per depot)	Months	9		
A31		Traffic Accommodation: Preparation and obtain approval of of site specific detailed Traffic Management Plan, accommodation of traffic and road crossings	Sites	31		
A32	PSDA 5.1.8	Accommodation and maintenance (including flagmen, delineators, traffic cones, temporary barricades and all signage) of traffic and pedestrian facilities for the duration of the contract.	Sites	31		
A33		Maintenance of temporary access for pedestrains and vehicles	Sites	31		
TOTAL CARRIED FORWARD						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
A34		Maintenance and removal of sign boards	No.	31		
A35		Work to be carried out at night time (rates to include for all time related costs to carry out work during off peak periods e.g. security, overtime, lighting, etc) where instructed by Engineer in writing (prov)	Sites	6		
A36		HIV/AIDS awareness as per SANS 1921-6	Months	9		
A37		Allow for observing the requirements of the Environmental Management Plan	Months	9		
A38		Removal and disposal of existing works complete and make good as directed by engineer	Sites	31		
A39	8.5	**PROVISIONAL SUMS**				
A40		Allowance for Payment of Project Cordinator per ward with duration determined per number of sites as per below schedule, at a arte of R13000/month and R500 cellphone allowance	Prov. Sum	1		
		All Wards		50	R 13,500.00	R 675,000.00
A40.1		Contractors markup on item A40	%	R 675,000.00		
A43		Relocation of existing services and fences where ordered	Prov Sum	1	R 60,000.00	R 60,000.00
A44	PSDA 5.1.3	Locating existing services, only where ordered by the Engineer	Prov Sum	1	R 48,000.00	R 48,000.00
A45		Proving of unknown services	Prov Sum	1	R 48,000.00	R 48,000.00
A46		Inspection of Materials by Inspectors appointed by the Engineer and allowance for compaction and cube tests as directed by the engineer	Prov Sum	1	R 90,000.00	R 90,000.00
A47		Contractor's Commission on Item A.43 to A46	%	R 246,000.00		
TOTAL CARRIED FORWARD						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
A48		**DAYWORKS:**				
A49		**Labour**				
A50		Unskilled workers	days	31		
A50.1		Working @ Non-Working Hours	days	6		
A51		Skilled workers (Artisans - Plumbers)	days	31		
A51.1		Working @ Non-Working Hours	days	6		
A52		Foremen	days	31		
A52.1		Working @ Non-Working Hours	days	6		
A53		Carpenter	days	31		
A53.1		Working @ Non-Working Hours	days	6		
A54		Bricklayer & Plasterer	days	31		
A54.1		Working @ Non-Working Hours	days	6		
A55		Welder	days	31		
A55.1		Working @ Non-Working Hours	days	6		
		Plant				
A56		T L B	hr	20		
		Working @ Non-Working Hours	hr	6		
A57		Light Delivery Vehicle (1t or equialent)	hr	20		
		Working @ Non-Working Hours	hr	6		
A58		10 Ton crane truck	days	10		
		Working @ Non-Working Hours	days	2		
A59		Generator set	hr	20		
		Working @ Non-Working Hours	hr	6		
A60		Plate compactor	hr	20		
		Working @ Non-Working Hours	hr	6		
A61		Concrete vibrator	hr	20		
		Working @ Non-Working Hours	hr	6		
A62		Welding set	hr	20		
		Working @ Non-Working Hours	hr	6		
A63		Dewatering Pump	hr	20		
		Working @ Non-Working Hours	hr	6		
TOTAL - PRELIMINARY & GENERAL CARRIED TO SUMMARY						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/001				
B1	SABS 1200C	**Site Clearance**				
B1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
B1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
B1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
B1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
B2	SABS 1200DA	**Restricted Excavation:**				
B2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
B2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
B2.2.1		0 - 2.5m deep	m³	25		
B2.2.2		2.5m - 3.5m deep	m³	5		
B3	SABS 1200LB	**Bedding:**				
B3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
B4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
B4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
B4.1.1		100mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
B4.1.2		100mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
B4.1.3		100mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
B4.1.4		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
B4.1.5		100mm x 150mm dia concentric reducer flanged both ends	No	2		
B5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
B5.1		100mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
B5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
B5.3		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
B5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
B6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
B6.1		100mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
B7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
B7.1		100mm diameter Y-Strainer (AVK or equivalent)	No	1		
B8		**PipeSpecials**				
B8.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
B9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
B10		**Civil Works: Chamber Refurbishment**				
B10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
B10.2		330mm thick brick wall to depth of between 1.5m and 2.75m including brickforce every second layer	m^2	25		
B10.3		Supply and install brixseal	m^2	55		
B10.4		Plastering of chamber walls (to include all materials)	m^2	55		
B10.5		Backwashing of chamber walls (to include all materials)	m^2	55		
B10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
B11	SABS 8.1.1.4	**Chamber Formwork**				
B11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
B11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
B11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
B11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
B12	8.4.4	**Unformed Surface Finishes:**				
B12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
B12.2		Steel Float finish	m^2	55		
B12.3		Shoring Shoring of Excavation using timber	m^2	55		
B13	SABS 1200G 8.3	**Chamber Reinforcements**				
B13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
B13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
B13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
B13.2	8.3.2	High-tensile welded mesh in the following:				
B13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
B14	SABS 1200 GA	**CONCRETE**				
B14.1	8.4.3	Grade 15/19 MPa concrete to:				
B14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
B14.2	8.4.3	Grade 25/19 MPa concrete to:				
B14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
B14.2.2		Roof slab and manhole.	m^3	5		
B14.2.3		Floor	m^3	5		
B14.2.4		Pedestal	m^3	0.5		
B14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
B15		**Cat Ladder**				
B15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
B16		**Manhole and Manhole Cover**				
B16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
B16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
B17		**Waterproofing:**				
B17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
B17.2		b) Floors	m^2	21		
B17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
B18	SABS 1200GA	**Precast Concrete Marker Posts**				
B18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
B19		**Removal and Reinstatement**				
B19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
B20		**Puddle Pipe & Bolts Protection**				
B20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
B20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/001				
C1	SABS 1200C	**Site Clearance**				
C1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
C1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
C1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
C1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
C2	SABS 1200DA	**Restricted Excavation:**				
C2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
C2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
C2.2.1		0 - 2.5m deep	m³	25		
C2.2.2		2.5m - 3.5m deep	m³	5		
C3	SABS 1200LB	**Bedding:**				
C3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
C4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
C4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
C4.1.1		100mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
C4.1.2		100mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
C4.1.3		100mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
C4.1.4		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
C4.1.5		100mm x 150mm dia concentric reducer flanged both ends	No	2		
C5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
C5.1		100mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
C5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
C5.3		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
C5.3		50mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
C6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
C6.1		100mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
C7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
C7.1		100mm diameter Y-Strainer (AVK or equivalent)	No	1		
C8		**PipeSpecials**				
C8.1		100mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
C8.2		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
C9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
C10		**Civil Works: Chamber Refurbishment**				
C10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
C10.2		330mm thick brick wall to depth of between 1.5m and 2.75m including brickforce every second layer	m^2	25		
C10.3		Supply and install brixseal	m^2	55		
C10.4		Plastering of chamber walls (to include all materials)	m^2	55		
C10.5		Backwashing of chamber walls (to include all materials)	m^2	55		
C10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
C11	SABS 8.1.1.4	**Chamber Formwork**				
C11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
C11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
C11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
C11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
C12	8.4.4	**Unformed Surface Finishes:**				
C12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
C12.2		Steel Float finish	m^2	55		
C12.3		Shoring Shoring of Excavation using timber	m^2	55		
C13	SABS 1200G 8.3	**Chamber Reinforcements**				
C13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
C13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
C13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
C13.2	8.3.2	High-tensile welded mesh in the following:				
C13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
C14	SABS 1200 GA	**CONCRETE**				
C14.1	8.4.3	Grade 15/19 MPa concrete to:				
C14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
C14.2	8.4.3	Grade 25/19 MPa concrete to:				
C14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
C14.2.2		Roof slab and manhole.	m^3	5		
C14.2.3		Floor	m^3	5		
C14.2.4		Pedestal	m^3	0.5		
C14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
C15		**Cat Ladder**				
C15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
C16		**Manhole and Manhole Cover**				
C16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
C16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
C17		**Waterproofing:**				
C17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
C17.2		b) Floors	m^2	21		
C17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
C18	SABS 1200GA	**Precast Concrete Marker Posts**				
C18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
C19		**Removal and Reinstatement**				
C19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
C20		**Puddle Pipe & Bolts Protection**				
C20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
C20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/001				
D1	SABS 1200C	**Site Clearance**				
D1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
D1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
D1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
D1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
D2	SABS 1200DA	**Restricted Excavation:**				
D2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
D2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
D2.2.1		0 - 2.5m deep	m³	25		
D2.2.2		2.5m - 3.5m deep	m³	5		
D3	SABS 1200LB	**Bedding:**				
D3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
D4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
D4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
D4.1.1		100mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
D4.1.2		100mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
D4.1.3		100mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
D4.1.4		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
D4.1.5		100mm x 150mm dia concentric reducer flanged both ends	No	2		
D5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
D5.1		100mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
D5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
D5.3		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
D5.3		50mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
D6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
D6.1		100mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
D7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
D7.1		100mm diameter Y-Strainer (AVK or equivalent)	No	1		
D8		**PipeSpecials**				
D8.1		100mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
D8.2		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
D9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
D10		**Civil Works: Chamber Refurbishment**				
D10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	10		
D10.2		Supply and install brixseal	m^2	55		
D10.3		Plastering of chamber walls (to include all materials)	m^2	55		
D10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
D10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
D11	SABS 8.1.1.4	**Chamber Formwork**				
D11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
D11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
D11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
D12	8.4.4	**Unformed Surface Finishes:**				
D12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
D12.2		Steel Float finish	m^2	55		
D12.3		Shoring Shoring of Excavation using timber	m^2	55		
D13	SABS 1200G 8.3	**Chamber Reinforcements**				
D13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
D13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
D13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
D14	SABS 1200 GA	**CONCRETE**				
D14.1	8.4.3	Grade 15/19 MPa concrete to:				
D14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
D14.2	8.4.3	Grade 25/19 MPa concrete to:				
D14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
D14.2.2		Roof slab and manhole.	m^3	5		
D14.2.3		Pedestal	m^3	0.5		
D14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
D15		**Cat Ladder**				
D15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
D16		**Manhole and Manhole Cover**				
D16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
D16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
D17		**Waterproofing:**				
D17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
D17.2		b) Floors	m^2	21		
D17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
D18	SABS 1200GA	**Precast Concrete Marker Posts**				
D18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
D19		**Removal and Reinstatement**				
D19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
D20		**Puddle Pipe & Bolts Protection**				
D20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
D20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/001				
E1	SABS 1200C	**Site Clearance**				
E1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
E1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
E1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
E1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
E2	SABS 1200DA	**Restricted Excavation:**				
E2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
E2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
E2.2.1		0 - 2.5m deep	m³	25		
E2.2.2		2.5m - 3.5m deep	m³	5		
E3	SABS 1200LB	**Bedding:**				
E3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
E4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
E4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
E4.1.1		100mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
E4.1.2		100mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
E4.1.3		100mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
E4.1.4		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
E4.1.5		100mm x 150mm dia concentric reducer flanged both ends	No	2		
E5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
E5.1		100mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
E5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
E5.3		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
E5.3		50mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
E6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
E6.1		100mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
E7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
E7.1		100mm diameter Y-Strainer (AVK or equivalent)	No	1		
E8		**PipeSpecials**				
E8.1		100mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
E8.2		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
E9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
E10		**Civil Works: Chamber Refurbishment**				
E10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	10		
E10.2		Supply and install brixseal	m^2	55		
E10.3		Plastering of chamber walls (to include all materials)	m^2	55		
E10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
E10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
E11	SABS 8.1.1.4	**Chamber Formwork**				
E11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
E11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
E11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
E12	8.4.4	**Unformed Surface Finishes:**				
E12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
E12.2		Steel Float finish	m^2	55		
E12.3		Shoring Shoring of Excavation using timber	m^2	55		
E13	SABS 1200G 8.3	**Chamber Reinforcements**				
E13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
E13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
E13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
E14	SABS 1200 GA	**CONCRETE**				
E14.1	8.4.3	Grade 15/19 MPa concrete to:				
E14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
E14.2	8.4.3	Grade 25/19 MPa concrete to:				
E14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
E14.2.2		Roof slab and manhole.	m^3	5		
E14.2.3		Pedestal	m^3	0.5		
E14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
E15		**Cat Ladder**				
E15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
E16		**Manhole and Manhole Cover**				
E16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
E16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
E17		**Waterproofing:**				
E17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
E17.2		b) Floors	m^2	21		
E17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
E18	SABS 1200GA	**Precast Concrete Marker Posts**				
E18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
E19		**Removal and Reinstatement**				
E19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
E20		**Puddle Pipe & Bolts Protection**				
E20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
E20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/002				
F1	SABS 1200C	**Site Clearance**				
F1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	40		
F1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
F1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
F1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
F2	SABS 1200DA	**Restricted Excavation:**				
F2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
F2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
F2.2.1		0 - 2.5m deep	m³	25		
F2.2.2		2.5m - 3.5m deep	m³	5		
F3	SABS 1200LB	**Bedding:**				
F3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
F4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
F4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
F4.1.1		100mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	1		
F4,1,2		100mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
F4.1.3		100mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
F4.1.4		100mm nominal dia x 500mm long spool piece (F.B.E)	No	1		
F4.1.5		100mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
F4.1.6		100mm x 150mm dia concentric reducer flanged both ends	No	2		
F4.1.7		200mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	1		
F4.1.8		200mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
F4.1.9		200mm nominal dia x 600mm long spool piece (F.O.E)	No	1		
F4.1.10		200mm nominal dia x 1000mm long spool piece (F.B.E)	No	1		
F4.1.11		600mm long x 200mm nominal dia x 80mm nominal dia unequal Tee (F.B.E) air accumulator flanges (Tee centred at 400mm from one end)	No	1		
F4.1.12		200mm x 250mm dia concentric reducer flanged both ends	No	2		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Valves:				
F5		Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.):				
		Pressure Reducing Valve: The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
F5.1		100mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
F5.2		200mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
		Isolation Valves				
F5.3		50mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
F5.4		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
F5.5		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
F5.6		200mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing		2		
		Air Valve				
F5.7		50mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
F5.8		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
F6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
F6.1		100mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
F6.2		200mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
F7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
F7.1		100mm diameter Y-Strainer (AVK or equivalent)	No	1		
F7.2		200mm diameter Y-Strainer (AVK or equivalent)	No	1		
F8		**PipeSpecials**				
F8.1		100mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
F8.2		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	1		
F8.3		250mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	1		
F9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
F10		**Civil Works: Chamber Refurbishment**				
F10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
F10.2		Supply and install brixseal	m^2	55		
F10.3		Plastering of chamber walls (to include all materials)	m^2	55		
F10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
F10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
F11	SABS 8.1.1.4	**Chamber Formwork**				
F11.1		Smooth vertical 150mm wide to roof of chamber	m	30		
F11.2		Smooth horizontal to soffit of suspended roof slab	m^2	36		
F11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	30		
F12	8.4.4	**Unformed Surface Finishes:**				
F12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
F12.2		Steel Float finish	m^2	55		
F12.3		Shoring Shoring of Excavation using timber	m^2	55		
F13	SABS 1200G 8.3	**Chamber Reinforcements**				
F13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
F13.1.1		Chamber roof (Y16 @ 150 B1)	kg	55		
F13.1.2		Chamber roof (Y12 @ 150 B2)	kg	55		
F14	SABS 1200 GA	**CONCRETE**				
F14.1	8.4.3	Grade 15/19 MPa concrete to:				
F14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	0		
F14.2	8.4.3	Grade 25/19 MPa concrete to:				
F14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	0		
F14.2.2		Roof slab and manhole.	m^3	5		
F14.2.3		Pedestal	m^3	0.5		
F14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
F15 F15.1		**Cat Ladder** Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	2		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
F16		**Manhole and Manhole Cover**				
F16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	3		
F16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	2		
F17		**Waterproofing:**				
F17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber:				
		a) Walls	m^2	55		
F17.2		b) Floors	m^2	21		
F17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following:				
		a) Walls	m^2	55		
F18	SABS 1200GA	**Precast Concrete Marker Posts**				
F18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
F19		**Removal and Reinstatement**				
F19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	40		
F20		**Puddle Pipe & Bolts Protection**				
F20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
F20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/003				
G1	SAGS 1200C	**Site Clearance**				
G1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
G1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
G1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
G1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
G2	SAGS 1200DA	**Restricted Excavation:**				
G2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
G2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
G2.2.1		0 - 2.5m deep	m³	25		
G2.2.2		2.5m - 3.5m deep	m³	5		
G3	SAGS 1200LG	**Bedding:**				
G3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
G4	SAGS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
Grought forward						
G4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
G4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
G4.1.2		150mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
G4.1.3		150mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
G4.1.4		150mm nominal dia x 450mm long spool piece (F.B.E)	No	1		
G4.1.5		150mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
G4.1.6		150mm x 200mm dia concentric reducer flanged both ends	No	2		
G4.1.7		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
G5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet				
G5.1		150mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
Grought forward						
		Isolation Valves				
G5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
G5.3		150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
G5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
G6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360° have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
G6.1		150mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
G7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
G7.1		150mm diameter Y-Strainer (AVK or equivalent)	No	1		
G8		**PipeSpecials**				
G8.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
G8.2		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
G9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
Grought forward						
G10		**Civil Works: ChamGer RefurGishment**				
G10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	10		
G10.2		Supply and install brixseal	m^2	55		
G10.3		Plastering of chamber walls (to include all materials)	m^2	55		
G10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
G10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
G11	SAGS 8.1.1.4	**Chamber Formwork**				
G11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
G11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
G11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
G12	8.4.4	**Unformed Surface Finishes:**				
G12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
G12.2		Steel Float finish	m^2	55		
G12.3		Shoring Shoring of Excavation using timber	m^2	55		
G13	SAGS 1200G 8.3	**Chamber Reinforcements**				
G13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
G13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
G13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
G14	SAGS 1200 GA	**CONCRETE**				
G14.1	8.4.3	Grade 15/19 MPa concrete to:				
G14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	0		
G14.2	8.4.3	Grade 25/19 MPa concrete to:				
G14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	0		
G14.2.2		Roof slab and manhole.	m^3	5		
G14.2.3		Pedestal	m^3	0.5		
G14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
G15		**Cat Ladder**				
G15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
G16		**Manhole and Manhole Cover**				
G16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
G16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
G17		**Waterproofing:**				
G17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
G17.2		b) Floors	m^2	21		
G17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
G18	SAGS 1200GA	**Precast Concrete Marker Posts**				
G18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
G19		**Removal and Reinstatement**				
G19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
G20		**Puddle Pipe & Bolts Protection**				
G20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
G20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/003				
H1	SABS 1200C	**Site Clearance**				
H1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
H1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
H1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
H1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
H2	SABS 1200DA	**Restricted Excavation:**				
H2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
H2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
H2.2.1		0 - 2.5m deep	m³	25		
H2.2.2		2.5m - 3.5m deep	m³	5		
H3	SABS 1200LB	**Bedding:**				
H3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
H4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
H4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
H4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
H4.1.2		150mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
H4.1.3		150mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
H4.1.4		150mm nominal dia x 450mm long spool piece (F.B.E)	No	1		
H4.1.5		150mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
H4.1.6		150mm x 200mm dia concentric reducer flanged both ends	No	2		
H4.1.7		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
H5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
H5.1		150mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
H5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
H5.3		150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
H5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
H6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
H6.1		150mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
H7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
H7.1		150mm diameter Y-Strainer (AVK or equivalent)	No	1		
H8		**PipeSpecials**				
H8.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
H8.2		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
H9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
H10		**Civil Works: Chamber Refurbishment**				
H10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	10		
H10.2		Supply and install brixseal	m^2	55		
H10.3		Plastering of chamber walls (to include all materials)	m^2	55		
H10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
H10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
H11	SABS 8.1.1.4	**Chamber Formwork**				
H11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
H11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
H11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
H12	8.4.4	**Unformed Surface Finishes:**				
H12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
H12.2		Steel Float finish	m^2	55		
H12.3		Shoring Shoring of Excavation using timber	m^2	55		
H13	SABS 1200G 8.3	**Chamber Reinforcements**				
H13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
H13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
H13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
H14	SABS 1200 GA	**CONCRETE**				
H14.1	8.4.3	Grade 15/19 MPa concrete to:				
H14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	0		
H14.2	8.4.3	Grade 25/19 MPa concrete to:				
H14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	0		
H14.2.2		Roof slab and manhole.	m^3	5		
H14.2.3		Pedestal	m^3	0.5		
H14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
H15		**Cat Ladder**				
H15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
H16		**Manhole and Manhole Cover**				
H16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
H16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
H17		**Waterproofing:**				
H17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
H17.2		b) Floors	m^2	21		
H17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
H18	SABS 1200GA	**Precast Concrete Marker Posts**				
H18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
H19		**Removal and Reinstatement**				
H19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
H20		**Puddle Pipe & Bolts Protection**				
H20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
H20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/003				
I1	SABS 1200C	**Site Clearance**				
I1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
I1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
I1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
I1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
I2	SABS 1200DA	**Restricted Excavation:**				
I2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
I2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
I2.2.1		0 - 2.5m deep	m³	25		
I2.2.2		2.5m - 3.5m deep	m³	5		
I3	SABS 1200LB	**Bedding:**				
I3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
I4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
I4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
I4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
I4.1.2		150mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
I4.1.3		150mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
I4.1.4		150mm nominal dia x 450mm long spool piece (F.B.E)	No	1		
I4.1.5		150mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
I4.1.6		150mm x 200mm dia concentric reducer flanged both ends	No	2		
I4.1.7		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
I5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
I5.1		150mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
I5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
I5.3		150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
I5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
I6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
I6.1		150mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
I7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
I7.1		150mm diameter Y-Strainer (AVK or equivalent)	No	1		
I8		**PipeSpecials**				
I8.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
I8.2		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
I9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
I10		**Civil Works: Chamber Refurbishment**				
I10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	10		
I10.2		Supply and install brixseal	m^2	55		
I10.3		Plastering of chamber walls (to include all materials)	m^2	55		
I10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
I10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
I11	SABS 8.1.1.4	**Chamber Formwork**				
I11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
I11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
I11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
I12	8.4.4	**Unformed Surface Finishes:**				
I12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
I12.2		Steel Float finish	m^2	55		
I12.3		Shoring Shoring of Excavation using timber	m^2	55		
I13	SABS 1200G 8.3	**Chamber Reinforcements**				
I13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
I13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
I13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
I14	SABS 1200 GA	**CONCRETE**				
I14.1	8.4.3	Grade 15/19 MPa concrete to:				
I14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	0		
I14.2	8.4.3	Grade 25/19 MPa concrete to:				
I14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	0		
I14.2.2		Roof slab and manhole.	m^3	5		
I14.2.3		Pedestal	m^3	0.5		
I14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
I15		**Cat Ladder**				
I15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
I16		**Manhole and Manhole Cover**				
I16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
I16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
I17		**Waterproofing:**				
I17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
I17.2		b) Floors	m^2	21		
I17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
I18	SABS 1200GA	**Precast Concrete Marker Posts**				
I18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
I19		**Removal and Reinstatement**				
I19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
I20		**Puddle Pipe & Bolts Protection**				
I20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
I20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/003				
J1	SABS 1200C	**Site Clearance**				
J1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
J1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
J1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
J1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
J2	SABS 1200DA	**Restricted Excavation:**				
J2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
J2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
J2.2.1		0 - 2.5m deep	m³	25		
J2.2.2		2.5m - 3.5m deep	m³	5		
J3	SABS 1200LB	**Bedding:**				
J3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
J4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
J4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
J4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
J4.1.2		150mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
J4.1.3		150mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
J4.1.4		150mm nominal dia x 450mm long spool piece (F.B.E)	No	1		
J4.1.5		150mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
J4.1.6		150mm x 200mm dia concentric reducer flanged both ends	No	2		
J4.1.7		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
J5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
J5.1		150mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
J5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
J5.3		150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
J5.4		350mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
		Air Valve				
J5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
J6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
J6.1		150mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
J7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
J7.1		150mm diameter Y-Strainer (AVK or equivalent)	No	1		
J8		**PipeSpecials**				
J8.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
J8.2		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
J9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
J10		**Civil Works: Chamber Refurbishment**				
J10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	10		
J10.2		Supply and install brixseal	m^2	55		
J10.3		Plastering of chamber walls (to include all materials)	m^2	55		
J10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
J10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
J11	SABS 8.1.1.4	**Chamber Formwork**				
J11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
J11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
J11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
J12	8.4.4	**Unformed Surface Finishes:**				
J12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
J12.2		Steel Float finish	m^2	55		
J12.3		Shoring Shoring of Excavation using timber	m^2	55		
J13	SABS 1200G 8.3	**Chamber Reinforcements**				
J13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
J13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
J13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
J14	SABS 1200 GA	**CONCRETE**				
J14.1	8.4.3	Grade 15/19 MPa concrete to:				
J14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	0		
J14.2	8.4.3	Grade 25/19 MPa concrete to:				
J14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	0		
J14.2.2		Roof slab and manhole.	m^3	5		
J14.2.3		Pedestal	m^3	0.5		
J14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
J15		**Cat Ladder**				
J15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
J16		**Manhole and Manhole Cover**				
J16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	2		
J16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	2		
J17		**Waterproofing:**				
J17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
J17.2		b) Floors	m^2	21		
J17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
J18	SABS 1200GA	**Precast Concrete Marker Posts**				
J18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
J19		**Removal and Reinstatement**				
J19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
J20		**Puddle Pipe & Bolts Protection**				
J20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
J20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
K1	SABS 1200C	**Site Clearance**				
K1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
K1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
K1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
K1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
K2	SABS 1200DA	**Restricted Excavation:**				
K2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
K2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
K2.2.1		0 - 2.5m deep	m³	25		
K2.2.2		2.5m - 3.5m deep	m³	5		
K3	SABS 1200LB	**Bedding:**				
K3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
K4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
K4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
K4.1.1		200mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
K4.1.2		200mm nominal dia x 300mm long spool piece (F.B.E)	No	1		
K4.1.3		200mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
K4.1.4		200mm nominal dia x 600mm long spool piece (F.B.E)	No	2		
K4.1.5		200mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
K4.1.6		200mm x 250mm dia concentric reducer flanged both ends	No	2		
K5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
K5.1		200mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
K5.2		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
K5.3		200mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
K5.3		100mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
K6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
K6.1		200mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
K7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
K7.1		200mm diameter Y-Strainer (AVK or equivalent)	No	1		
K8		**PipeSpecials**				
K8.1		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
K8.2		250mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
K9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
K10		**Civil Works: Chamber Refurbishment**				
K10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
K10.2		330mm thick brick wall to depth of between 1.5m and 2.75m including brickforce every second layer	m^2	25		
K10.3		Supply and install brixseal	m^2	55		
K10.4		Plastering of chamber walls (to include all materials)	m^2	55		
K10.5		Backwashing of chamber walls (to include all materials)	m^2	55		
K10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
K11	SABS 8.1.1.4	**Chamber Formwork**				
K11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
K11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
K11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
K11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
K12	8.4.4	**Unformed Surface Finishes:**				
K12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
K12.2		Steel Float finish	m^2	55		
K12.3		Shoring Shoring of Excavation using timber	m^2	55		
K13	SABS 1200G 8.3	**Chamber Reinforcements**				
K13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
K13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
K13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
K13.2	8.3.2	High-tensile welded mesh in the following:				
K13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
K14	SABS 1200 GA	**CONCRETE**				
K14.1	8.4.3	Grade 15/19 MPa concrete to:				
K14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
K14.2	8.4.3	Grade 25/19 MPa concrete to:				
K14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
K14.2.2		Roof slab and manhole.	m^3	5		
K14.2.3		Floor	m^3	5		
K14.2.4		Pedestal	m^3	0.5		
K14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
K15		**Cat Ladder**				
K15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
K16		**Manhole and Manhole Cover**				
K16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
K16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
K17		**Waterproofing:**				
K17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
K17.2		b) Floors	m^2	21		
K17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
K18	SABS 1200GA	**Precast Concrete Marker Posts**				
K18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
K19		**Removal and Reinstatement**				
K19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
K20		**Puddle Pipe & Bolts Protection**				
K20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
K20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004A				
L1	SABS 1200C	**Site Clearance**				
L1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	10		
L1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	8		
L1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
L1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
L2	SABS 1200DA	**Restricted Excavation:**				
L2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
L2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
L2.2.1		0 - 2.5m deep	m³	25		
L2.2.2		2.5m - 3.5m deep	m³	5		
L3	SABS 1200LB	**Bedding:**				
L3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
L4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
L4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
L4.1.1		200mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
L4.1.2		200mm nominal dia x 300mm long spool piece (F.B.E)	No	1		
L4.1.3		200mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
L4.1.4		200mm nominal dia x 600mm long spool piece (F.B.E)	No	2		
L4.1.5		200mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
L4.1.6		200mm x 250mm dia concentric reducer flanged both ends	No	2		
L5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
L5.1		200mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
		Isolation Valves				
L5.2		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
L5.3		200mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
L5.3		100mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
L6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
L6.1		200mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
L7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
L7.1		200mm diameter Y-Strainer (AVK or equivalent)	No	1		
L8		**PipeSpecials**				
L8.1		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
L8.2		250mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
L9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
L10		**Civil Works: Chamber Refurbishment**				
L10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	10		
L10.2		Supply and install brixseal	m^2	55		
L10.3		Plastering of chamber walls (to include all materials)	m^2	55		
L10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
L10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
L11	SABS 8.1.1.4	**Chamber Formwork**				
L11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
L11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
L11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
L12	8.4.4	**Unformed Surface Finishes:**				
L12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
L12.2		Steel Float finish	m^2	55		
L12.3		Shoring Shoring of Excavation using timber	m^2	55		
L13	SABS 1200G 8.3	**Chamber Reinforcements**				
L13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
L13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
L13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
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Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
L14	SABS 1200 GA	**CONCRETE**				
L14.1	8.4.3	Grade 15/19 MPa concrete to:				
L14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	0		
L14.2	8.4.3	Grade 25/19 MPa concrete to:				
L14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	0		
L14.2.2		Roof slab and manhole.	m^3	5		
L14.2.3		Pedestal	m^3	0.5		
L14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
L15		**Cat Ladder**				
L15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	2		
L16		**Manhole and Manhole Cover**				
L16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	2		
L16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
L17		**Waterproofing:**				
L17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
L17.2		b) Floors	m^2	21		
Carried forward						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
Brought forward						
L18	SABS 1200GA	**Precast Concrete Marker Posts**				
L18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
L19		**Removal and Reinstatement**				
L19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	10		
L19.2		Paving on pedestrian walkway	m^2	8		
L20		**Puddle Pipe & Bolts Protection**				
L20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
L20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Depot Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section M: 100mm Vesting & Sugarbush, Naturena PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/001				
M1	SABS 1200C	**Site Clearance**				
M1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
M1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
M1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
M1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
M2	SABS 1200DA	**Restricted Excavation:**				
M2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
M2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
M2.2.1		0 - 2.5m deep	m³	25		
M2.2.2		2.5m - 3.5m deep	m³	5		
M3	SABS 1200LB	**Bedding:**				
M3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
M4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
M4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
M4.1.1		100mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
M4.1.2		100mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
M4.1.3		100mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
M4.1.4		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
M4.1.5		100mm x 150mm dia concentric reducer flanged both ends	No	2		
M5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
M5.1		100mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Brought forward						
		Isolation Valves				
M5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
M5.3		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
M5.3		50mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
M6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
M6.1		100mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
M7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
M7.1		100mm diameter Y-Strainer (AVK or equivalent)	No	1		
M8		**PipeSpecials**				
M8.1		100mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
M8.2		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
M9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
M10		**Civil Works: Chamber Refurbishment**				
M10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
M10.2		Supply and install brixseal	m^2	55		
M10.3		Plastering of chamber walls (to include all materials)	m^2	55		
M10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
M10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
M11	SABS 8.1.1.4	**Chamber Formwork**				
M11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
M11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
M11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
M12	8.4.4	**Unformed Surface Finishes:**				
M12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
M12.2		Steel Float finish	m^2	55		
M12.3		Shoring Shoring of Excavation using timber	m^2	55		
M13	SABS 1200G 8.3	**Chamber Reinforcements**				
M13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
M13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
M13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
M13.2	8.3.2	High-tensile welded mesh in the following:				
Carried forward						

Brought forward						
M14	SABS 1200 GA	**CONCRETE**				
M14.1	8.4.3	Grade 15/19 MPa concrete to:				
M14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
M14.2	8.4.3	Grade 25/19 MPa concrete to:				
M14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
M14.2.2		Roof slab and manhole.	m^3	5		
M14.2.3		Pedestal	m^3	0.5		
M14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
M15		**Cat Ladder**				
M15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
M16		**Manhole and Manhole Cover**				
M16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
M16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
M17		**Waterproofing:**				
M17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
M17.2		b) Floors	m^2	21		
M17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Brought forward						
M18	SABS 1200GA	**Precast Concrete Marker Posts**				
M18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
M19		**Removal and Reinstatement**				
M19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
M20		**Puddle Pipe & Bolts Protection**				
M20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
M20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section N: 100mm Hamilton & Hefer, Naturena PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/001				
N1	SABS 1200C	**Site Clearance**				
N1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
N1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
N1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
N1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
N2	SABS 1200DA	**Restricted Excavation:**				
N2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
N2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
N2.2.1		0 - 2.5m deep	m³	25		
N2.2.2		2.5m - 3.5m deep	m³	5		
N3	SABS 1200LB	**Bedding:**				
N3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
N4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
N4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
N4.1.1		100mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
N4.1.2		100mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
N4.1.3		100mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
N4.1.4		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
N4.1.5		100mm x 150mm dia concentric reducer flanged both ends	No	2		
N5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
N5.1		100mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Brought forward						
		Isolation Valves				
N5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
N5.3		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
N5.3		50mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
N6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
N6.1		100mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
N7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
N7.1		100mm diameter Y-Strainer (AVK or equivalent)	No	1		
N8		**PipeSpecials**				
N8.1		100mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
N8.2		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
N9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
N10		**Civil Works: Chamber Refurbishment**				
N10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
N10.2		Supply and install brixseal	m^2	55		
N10.3		Plastering of chamber walls (to include all materials)	m^2	55		
N10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
N10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
N11	SABS 8.1.1.4	**Chamber Formwork**				
N11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
N11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
N11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
N12	8.4.4	**Unformed Surface Finishes:**				
N12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
N12.2		Steel Float finish	m^2	55		
N12.3		Shoring Shoring of Excavation using timber	m^2	55		
N13	SABS 1200G 8.3	**Chamber Reinforcements**				
N13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
N13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
N13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
N13.2	8.3.2	High-tensile welded mesh in the following:				
Carried forward						

Brought forward						
N14	SABS 1200 GA	**CONCRETE**				
N14.1	8.4.3	Grade 15/19 MPa concrete to:				
N14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
N14.2	8.4.3	Grade 25/19 MPa concrete to:				
N14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
N14.2.2		Roof slab and manhole.	m^3	5		
N14.2.3		Pedestal	m^3	0.5		
N14.2.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
N15		**Cat Ladder**				
N15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
N16		**Manhole and Manhole Cover**				
N16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
N16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
N17		**Waterproofing:**				
N17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
N17.2		b) Floors	m^2	21		
N17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Brought forward						
N18	SABS 1200GA	**Precast Concrete Marker Posts**				
N18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
N19		**Removal and Reinstatement**				
N19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
N20		**Puddle Pipe & Bolts Protection**				
N20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
N20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section O: 150mm Chris Hani & Nicholas PRV Site

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/003				
O1	SAGS 1200C	**Site Clearance**				
O1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	50		
O1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
O1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
O1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
O2	SAGS 1200DA	**Restricted Excavation:**				
O2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
O2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
O2.2.1		0 - 2.5m deep	m³	54		
O2.2.2		2.5m - 3.5m deep	m³	9		
O3	SAGS 1200LG	**Bedding:**				
O3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	32		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	32		
O4	SAGS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All Golts, nuts and washers to Ge Grade 8.8 CarGon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
O4.1		Supply SAGS 62 medium class steel pipe, manufacture, handle, lay, Ged, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicaGle, all cutting, flanges, jointing material, wastage and Grade 8.8 CarGon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards Golts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to Ge coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
O4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
O4.1.2		150mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
O4.1.3		150mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
O4.1.4		150mm nominal dia x 450mm long spool piece (F.B.E)	No	1		
O4.1.5		150mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
O4.1.6		150mm x 200mm dia concentric reducer flanged both ends	No	2		
O4.1.7		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
O5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
O5.1		150mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	2		
Carried forward						

Brought forward						
		Isolation Valves				
O5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
O5.3		150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
O5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
O6		Flow Meter: The flow meter should Ge a TurGine cast iron water meter for cold water up to 50oC/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically Galanced plastic rotor (<=300), symmetrical caliGration adjustment (<=300), the register may Ge rotated through 360o, have a high overload capaGility, Ge powder coated for corrossion protection and should not Ge affected Gy external magnetic fields.				
O6.1		150mm diameter meter (Sensus MeiStream or equivalent) Data logger compatiGle and PN16	No	1		
O7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full Gore Gall valve for flushing, coated Gy fusion-Gondede Epoxy (FGE) coating applied electrostatically inside and outside, and flanged Goth ends. Screen must Ge heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
O7.1		150mm diameter Y-Strainer (AVK or equivalent)	No	1		
O8		**PipeSpecials**				
O8.1		150mm ductile iron with fusion Gonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
O8.2		200mm ductile iron with fusion Gonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
O9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to Ge synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
O10		**Civil Works: ChamGer RefurGishment**				
O10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	10		
O10.2		Supply and install brixseal	m^2	55		
O10.3		Plastering of chamber walls (to include all materials)	m^2	55		
O10.4		Backwashing of chamber walls (to include all materials)	m^2	55		
O10.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
O11	SAGS 8.1.1.4	**Chamber Formwork**				
O11.1		Smooth vertical 150mm wide to roof of chamber	m	21		
O11.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
O11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
O12	8.4.4	**Unformed Surface Finishes:**				
O12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
O12.2		Steel Float finish	m^2	55		
O12.3		Shoring Shoring of Excavation using timber	m^2	55		
O13	SAGS 1200G 8.3	**Chamber Reinforcements**				
O13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
O13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
O13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
O13.2.1	8.3.2	High-tensile welded mesh in the following:				
O13.2.2		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Brought forward						
O14	SAGS 1200 GA	**CONCRETE**				
O14.1	8.4.3	Grade 15/19 MPa concrete to:				
O14.1.1	8.4.2	Grade 15/19 MPa concrete to: Glinding 50mm thick	m^2	24		
O14.2	8.4.3	Grade 25/19 MPa concrete to:				
O14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
O14.2.2		Roof slaG and manhole.	m^3	5		
O14.2.3		Pedestal	m^3	0.5		
O14.2.4		Thrust Walls/ Plinths/ Anchor Glocks	m^3	0.5		
O15		**Cat Ladder**				
O15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	2		
O16		**Manhole and Manhole Cover**				
O16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	2		
O16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
O17		**Waterproofing:**				
O17.1		Sika Cemflex Slurry and Cemflex faGric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamGer: a) Walls	m^2	55		
O17.2		G) Floors	m^2	21		
O17.2		Sika GlackSeal T-140SG torch on waterproofing memGrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Brought forward						
O18	SAGS 1200GA	**Precast Concrete Marker Posts**				
O18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and Glack stenciling of numGers/letters 100mm high as directed Gy Engineer	No.	2		
O19		**Removal and Reinstatement**				
O19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	50		
O20		**Puddle Pipe & Bolts Protection**				
O20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
O20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Depot Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section P: 100mm & 150mm Mofolo South Nancefield Moroka Rd PRV Site

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/003				
		Valves:				
P1		Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.):				
P1.1		**Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
P1.2		100mm norminal dia, flanged (D/FL) full Gore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
		Air Valve				
P1.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
P2		**Flow Meter:** The flow meter should Ge a Turbine cast iron water meter for cold water up to 50° C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically Galanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may Ge rotated through 360o, have a high overload capaGility, Ge powder coated for corrossion protection and should not Ge affected Gy external magnetic fields.				
P2.1		100mm diameter meter Sensus MeiStream insert in existing meter bodies, Data logger compatiGle and PN16	No	1		
P2.2		150mm diameter meter Sensus MeiStream insert in existing meter bodies, Data logger compatiGle and PN16	No	1		
P3		**Site Works:**				
P3.1		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to Ge synchorised and conducted in a single shut-down	No.	1		
P4		**Civil Works: Chamber Refurbishment**				
P4.1		Supply and install brixseal	m^2	55		
P4.2		Plastering of chamber walls (to include all materials)	m^2	55		
P4.3		Backwashing of chamber walls (to include all materials)	m^2	55		
Carried forward						

Brought forward						
P4.4		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
P5	8.4.4	**Unformed Surface Finishes:**				
P5.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
P5.2		Steel Float finish	m^2	55		
P6	SAGS 1200G 8.3	**Chamber Reinforcements**				
P6.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
P6.2		Chamber roof (Y16 @ 150 B1)	kg	10		
P6.3		Chamber roof (Y12 @ 150 B2)	kg	10		
P7	SAGS 1200 GA	**CONCRETE**				
P7.1	8.4.3	Grade 25/19 MPa concrete to:				
P7.2		Roof slab and manhole.	m^3	2		
P8		**Cat Ladder**				
P8.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
P9		**Manhole and Manhole Cover**				
P9.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
P9.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
P10		**Waterproofing:**				
P10.2		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
P10.2		b) Floors	m^2	21		
P11	SAGS 1200GA	**Precast Concrete Marker Posts**				
P11.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section Q: 200mm Bara Emergency Supply from Rand Water PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
Q1	SABS 1200C	**Site Clearance**				
Q1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
Q1.2		Remove existing road pavement layers/ walkway to stockpile, backfill and compact on completion (Prov.)	m³	50		
Q1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
Q1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
Q2	SABS 1200DA	**Restricted Excavation:**				
Q2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
Q2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
Q2.2.1		0 - 2.5m deep	m³	25		
Q2.2.2		2.5m - 3.5m deep	m³	5		
Q3	SABS 1200LB	**Bedding:**				
Q3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	20		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	20		
Q4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
Q4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
Q4.1.1		200mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
Q4.1.2		200mm nominal dia x 300mm long spool piece (F.B.E)	No	1		
Q4.1.3		200mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
Q4.1.4		200mm nominal dia x 600mm long spool piece (F.B.E)	No	2		
Q4.1.5		200mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
Q4.1.6		200mm x 250mm dia concentric reducer flanged both ends	No	2		
Q5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
Q5.1		200mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Brought forward						
		Isolation Valves				
Q5.2		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
Q5.3		200mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
Q5.3		100mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
Q6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
Q6.1		200mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
Q7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
Q7.1		200mm diameter Y-Strainer (AVK or equivalent)	No	1		
Q8		**PipeSpecials**				
Q8.1		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
Q8.2		250mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
Q9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
Q10		**Civil Works: Chamber Refurbishment**				
Q10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
Q10.2		330mm thick brick wall to depth of between 1.5m and 2.75m including brickforce every second layer	m^2	25		
Q10.3		Supply and install brixseal	m^2	55		
Q10.4		Plastering of chamber walls (to include all materials)	m^2	55		
Q10.5		Backwashing of chamber walls (to include all materials)	m^2	55		
Q10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
Q11	SABS 8.1.1.4	**Chamber Formwork**				
Q11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
Q11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
Q11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
Q11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
Q12	8.4.4	**Unformed Surface Finishes:**				
Q12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
Q12.2		Steel Float finish	m^2	55		
Q12.3		Shoring Shoring of Excavation using timber	m^2	55		
Q13	SABS 1200G 8.3	**Chamber Reinforcements**				
Q13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
Q13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
Q13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Q13.2	8.3.2	High-tensile welded mesh in the following:				
Q13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Brought forward						
Q14	SABS 1200 GA	**CONCRETE**				
Q14.1	8.4.3	Grade 15/19 MPa concrete to:				
Q14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
Q14.2	8.4.3	Grade 25/19 MPa concrete to:				
Q14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
Q14.2.2		Roof slab and manhole.	m^3	5		
Q14.2.3		Floor	m^3	5		
Q14.2.4		Pedestal	m^3	0.5		
Q14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
Q15		**Cat Ladder**				
Q15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
Q16		**Manhole and Manhole Cover**				
Q16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
Q16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
Q17		**Waterproofing:**				
Q17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
Q17.2		b) Floors	m^2	21		
Q17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Brought forward						
Q18	SABS 1200GA	**Precast Concrete Marker Posts**				
Q18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
Q19		**Removal and Reinstatement**				
Q19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
Q19.2		Reinstatement of pavment	m^2	50		
Q20		**Puddle Pipe & Bolts Protection**				
Q20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
Q20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Depot Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section R: 200mm Sagewood & Unity PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
R1	SABS 1200C	**Site Clearance**				
R1.10	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
R1.20		Remove existing road pavement layers/ walkway to stockpile, backfill and compact on completion (Prov.)	m³	5		
R1.30		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
R1.40		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
R2	SABS 1200DA	**Restricted Excavation:**				
R2.10	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
R2.20	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
R2.2.1		0 - 2.5m deep	m³	25		
R2.2.2		2.5m - 3.5m deep	m³	5		
R3	SABS 1200LB	**Bedding:**				
R3.10	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
R3.20		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
R4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
R4.10		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
R4.1.1		200mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
R4.1.2		200mm nominal dia x 300mm long spool piece (F.B.E)	No	1		
R4.1.3		200mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
R4.1.4		200mm nominal dia x 600mm long spool piece (F.B.E)	No	2		
R4.1.5		200mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
R4.1.5		200mm x 250mm dia concentric reducer flanged both ends	No	2		
R5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
R5.10		200mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Brought forward						
		Isolation Valves				
R5.20		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
R5.30		200mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
R5.40		100mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
R6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
R6.10		200mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
R7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
R7.10		200mm diameter Y-Strainer (AVK or equivalent)	No	1		
R8		**PipeSpecials**				
R8.10		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
R8.20		250mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
R9		**Site Works:**				
R9.10		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
R10		**Civil Works: Chamber Refurbishment**				
R10.10		Shoring Shoring of Excavation using timber	m^2	40		
Carried forward						

Brought forward						
R10.20	SABS 1200G 8.3	**Chamber Reinforcements**				
R10.30	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
R10.40		Chamber roof (Y16 @ 150 B1)	kg	10		
R10.50		Chamber roof (Y12 @ 150 B2)	kg	10		
R11	SABS 1200 GA	**CONCRETE**				
R11.10	8.4.3	Grade 25/19 MPa concrete to:				
R11.20		Roof slab and manhole.	m^3	5		
R11.30		Pedestal	m^3	0.5		
R11.40		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
R12		**Cat Ladder**				
R12.10		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2.5m length)	No.	2		
R13		**Manhole and Manhole Cover**				
R13.10		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	2		
R13.20		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
R14		**Waterproofing:**				
R14.10		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber:				
		a) Walls	m^2	144		
R14.20		b) Floors	m^2	36		
Carried forward						

Brought forward						
R15	SABS 1200GA	**Precast Concrete Marker Posts**				
R15.10	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
R16		**Removal and Reinstatement**				
R16.10		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
R16.20		Reinstatement of pavment	m^2	5		
R17		**Puddle Pipe & Bolts Protection**				
R17.10		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
R17.20		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section S: 200mm Lufhureng Cnr Lekwa & Crocodile PRV Site

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
S1		**Site Works:**				
S1.1		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to Ge synchorised and conducted in a single shut-down	No.	1		
S2		**Civil Works: Chamber Refurbishment**				
S2.1		Supply and install brixseal	m^2	55		
S2.2		Plastering of chamber walls (to include all materials)	m^2	55		
S2.3		Backwashing of chamber walls (to include all materials)	m^2	55		
S2.4		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on Gagged internal Grickwork and concrete	m^2	55		
S3	SAGS 1200G 8.3	**Chamber Reinforcements**				
S3.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel Gars in the following:				
S3.2		Chamber roof (Y16 @ 150 B1)	kg	10		
S3.3		Chamber roof (Y12 @ 150 B2)	kg	10		
S4	SAGS 1200 GA	**CONCRETE**				
S4.1	8.4.3	Grade 25/19 MPa concrete to:				
S4.2		Roof slab and manhole.	m^3	2		
S5		**Cat Ladder**				
S5.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
S6		**Manhole and Manhole Cover**				
S6.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
Carried forward						

Brought forward						
S7		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
S7.1		**Waterproofing:**				
S7.1		Sika Cemflex Slurry and Cemflex faGric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamGer:				
		a) Walls	m^2	55		
S7.2		B) Floors	m^2	21		
S8	SAGS 1200GA	**Precast Concrete Marker Posts**				
S8.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and Glack stenciling of numGers/letters 100mm high as directed Gy Engineer	No.	2		
		Isolation Valves				
S9		20mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
Total carried to Summary						

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
T1		**Site Works:**				
T1.1		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to Ge synchorised and conducted in a single shut-down	No.	1		
T2		**Civil Works: Chamber RefurGishment**				
T2.1		Backwashing of chamber walls (to include all materials)	m^2	55		
T2.2		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on Gagged internal Grickwork and concrete	m^2	55		
T3	SAGS 1200G 8.3	**Chamber Reinforcements & Concrete Thrust Blocks**				
T3.1	8.3.1	Supply and bind using Ginding wire and 25mm spacers, High-tensile steel Gars in the following:				
T3.2		Chamber roof (Y16 @ 150 B1)	kg	15		
T3.3		Chamber roof (Y12 @ 150 B2)	kg	15		
T4	SAGS 1200 GA	**CONCRETE**				
T4.1	8.4.3	Grade 25/19 MPa concrete to:				
T4.2		Roof slab and manhole.	m^3	8		
T5		**Cat Ladder**				
T5.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2.5m length)	No.	1		
T6		**Manhole and Manhole Cover**				
T6.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
Carried forward						

Brought forward						
T7		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
T7.1		**Waterproofing:**				
T7.1		Sika Cemflex Slurry and Cemflex faGric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamGer:				
		a) Walls	m^2	55		
T7.2		B) Floors	m^2	21		
T8	SAGS 1200GA	**Precast Concrete Marker Posts**				
T8.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and Glack stenciling of numGers/letters 100mm high as directed Gy Engineer	No.	2		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Depot Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section U: 150mm Van Onselen & Forbes PRV Site

Item NumGer	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/003				
U1		**Civil Works: Chamber Refurbishment**				
	SAGS 8.1.1.4	**Chamber Formwork**				
U1.1		Smooth vertical 150mm wide to roof of chamber	m	21		
U1.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
U1.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamGer	m	21		
U2	8.4.4	**Unformed Surface Finishes:**				
U2.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
U2.2		Steel Float finish	m^2	55		
U3	SAGS 1200G 8.3	**Chamber Reinforcements**				
U3.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel Gars in the following:				
U3.1.1		Chamber roof (Y16 @ 150 G1)	kg	45		
U3.1.2		Chamber roof (Y12 @ 150 G2)	kg	45		
U4	SAGS 1200 GA	**CONCRETE**				
U4.1	8.4.3	Grade 25/19 MPa concrete to:				
U4.2		Roof slab and manhole.	m^3	8		
U5		**Manhole and Manhole Cover**				
U5.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
U5.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
U6		**Waterproofing:**				
U6.1		Sika Cemflex Slurry and Cemflex faGric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	63		
U6.2		G) Floors	m^2	21		
U7	SAGS 1200GA	**Precast Concrete Marker Posts**				
U7.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and Glack stenciling of numGers/letters 100mm high as directed Gy Engineer	No.	2		
U8		**Removal and Reinstatement**				
U8.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section V: 400mm Usuthu & Mbetswa Chiawelo PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/006				
V1	SABS 1200L	**Pipework:**				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
		Valves: Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.):				
V1.1		**Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
V1.1.1		400mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN25	No	1		
V1.1.2		**Isolation Valves** 400mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN25, anti-clockwise closing	No	2		
V1.1.3		400mm nominal diameter flanged double eccentric gearbox operated, handwheel driven butterfly valve (AVK or equivalent) , anti-clockwise closing. PN25	No	2		
V2		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
V3		**Civil Works: Chamber Refurbishment**				
V3.1		Supply and install brixseal	m^2	96		
V3.2		Plastering of chamber walls (to include all materials)	m^2	96		
V3.3		Backwashing of chamber walls (to include all materials)	m^2	96		
Carried forward						

Brought forward						
V3.4		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	96		
V4	SABS 8.1.1.4	**Chamber Formwork**				
V4.1		Smooth vertical 150mm wide to roof of chamber	m	21		
V4.2		Smooth horizontal to soffit of suspended roof slab	m^2	20		
V4.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
V5	8.4.4	**Unformed Surface Finishes:**				
V5.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	96		
V5.2		Steel Float finish	m^2	96		
V6	SABS 1200G 8.3	**Chamber Reinforcements**				
V6.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
V6.2		Chamber roof (Y16 @ 150 B1)	kg	45		
V6.3		Chamber roof (Y12 @ 150 B2)	kg	45		
V7	SABS 1200 GA	**CONCRETE**				
V7.1	8.4.3	Grade 25/19 MPa concrete to:				
V7.2		Roof slab and manhole.	m^3	7		
V7.3		Pedestal	m^3	2		
V7.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	2		
V8		**Cat Ladder**				
V8.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2.5m length)	No.	2		
V9		**Manhole and Manhole Cover**				
Carried forward						

Brought forward						
V9.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	2		
V9.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
V10		**Waterproofing:**				
V10.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	96		
V10.2		b) Floors	m^2	21		
V11	SABS 1200GA	**Precast Concrete Marker Posts**				
V11.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
V12		**Removal and Reinstatement**				
V12.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	64		
V13		**Puddle Pipe & Bolts Protection**				
V13.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
V13.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section W: 450mm Diepkloof Reservoir Supply PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/005				
W1	SABS 1200L	**Pipework:**				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
		Valves: Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.):				
		Isolation Valves				
W1.1		450mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN25, anti-clockwise closing	No	2		
W2		**Site Works:**				
W2.1		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
W3		**Civil Works: Chamber Refurbishment**				
W3.1		Supply and install brixseal	m^2	96		
W3.2		Plastering of chamber walls (to include all materials)	m^2	96		
W3.3		Backwashing of chamber walls (to include all materials)	m^2	96		
W3.4		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	96		
W4	SABS 1200G 8.3	**Chamber Reinforcements**				
W4.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
W4.2		Chamber roof (Y16 @ 150 B1)	kg	10		
W4.3		Chamber roof (Y12 @ 150 B2)	kg	10		
W5	SABS 1200 GA	**CONCRETE**				
W5.1	8.4.3	Grade 25/19 MPa concrete to:				
W5.2		Roof slab and manhole.	m^3	5		
W5.3		Pedestal	m^3	1		
W5.4		Thrust Walls/ Plinths/ Anchor Blocks	m^3	1		
Carried forward						

Brought forward						
W6		**Cat Ladder**				
W6.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2.5m length)	No.	1		
W7		**Manhole and Manhole Cover**				
W7.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
W7.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
W8		**Waterproofing:**				
W8.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber:				
		a) Walls	m^2	96		
W8.2		b) Floors	m^2	21		
W9	SABS 1200GA	**Precast Concrete Marker Posts**				
W9.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
W10		**Removal and Reinstatement**				
W10.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	64		
W11		**Puddle Pipe & Bolts Protection**				
W11.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
W11.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Section X: 150MM & 250mm Sofasonke Valves Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/001				
X1	SABS 1200C	**Site Clearance**				
X1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
X1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
X1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
X1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
X2	SABS 1200DA	**Restricted Excavation:**				
X2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
X2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
X2.3		0 - 2.5m deep	m³	25		
X3	SABS 1200LB	**Bedding:**				
X3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	20		
X3.2		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	20		
X4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
X4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
X4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	1		
X4.1.2		250mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	1		
X4.1.3		250mm x 150mm unequal Tee	No	1		
X4.1.4		150mm norminal dia 90° bend flanged both ends	No	1		
X4.1.5		150mm x 200mm dia concentric reducer flanged both ends	No	1		
X4.1.6		250mm x 300mm dia concentric reducer flanged both ends	No	1		
X5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.):				
X5.1		**Isolation Valves** 150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
X5.2		250mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
X6		**PipeSpecials**				
X6.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
X6.2		250mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	1		
X6.3		300mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	1		
X7		**Site Works:**				
X7.1		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
X8		**Civil Works: Chamber Refurbishment**				
X8.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	24		
X8.2		Supply and install brixseal	m^2	24		
X8.3		Plastering of chamber walls (to include all materials)	m^2	24		
X8.4		Backwashing of chamber walls (to include all materials)	m^2	24		
X8.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	24		
X9	SABS 8.1.1.4	**Chamber Formwork**				
X9.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	16		
X9.2		Smooth vertical 150mm wide to roof of chamber	m	15		
X9.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
X9.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	15		
X10	8.4.4	**Unformed Surface Finishes:**				
X10.2		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	24		
X10.2		Steel Float finish	m^2	24		
X10.3		Shoring Shoring of Excavation using timber	m^2	24		
X11	SABS 1200G 8.3	**Chamber Reinforcements**				
X11.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
X11.2		Chamber roof (Y16 @ 150 B1)	kg	45		
X11.3		Chamber roof (Y12 @ 150 B2)	kg	45		
X11.4	8.3.2	High-tensile welded mesh in the following:				
X11.5		High-tensile welded mesh in the following: Mesh 617	m^2	18		
Carried forward						

Brought forward						
X12	SABS 1200 GA	**CONCRETE**				
X12.1	8.4.3	Grade 15/19 MPa concrete to:				
X12.2	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
X13	8.4.3	Grade 25/19 MPa concrete to:				
X13.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	4		
X13.2		Roof slab and manhole.	m^3	5		
X13.3		Floor	m^3	5		
X13.4		Pedestal	m^3	0.5		
X13.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
X14		**Cat Ladder**				
X14.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 1.5m length)	No.	1		
X15		**Manhole and Manhole Cover**				
X15.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the ket to a smart phone with the application downloaded from either android play ttore/iOS apple appstore from the phone	No.	1		
X16		**Waterproofing:**				
X16.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	24		
X16.2		b) Floors	m^2	21		
X16.3		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	24		
Carried forward						

Brought forward						
X17	SABS 1200GA	**Precast Concrete Marker Posts**				
X17.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
X18		**Removal and Reinstatement**				
X18.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
X19		**Puddle Pipe & Bolts Protection**				
X19.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
X19.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Ennerdale Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section Y: 100mm Drieziek Ext 1 PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/001A				
Y1	SABS 1200C	**Site Clearance**				
Y1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
Y1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
Y1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
Y1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
Y2	SABS 1200DA	**Restricted Excavation:**				
Y2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
Y2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
Y2.2.1		0 - 2.5m deep	m³	25		
Y2.2.2		2.5m - 3.5m deep	m³	5		
Y3	SABS 1200LB	**Bedding:**				
Y3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	5		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	5		
Y4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
Y4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
Y4.1.1		100mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
Y4.1.2		100mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
Y4.1.3		100mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
Y4.1.4		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
Y4.1.5		100mm x 150mm dia concentric reducer flanged both ends	No	2		
Y5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
Y5.1		100mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	2		
Carried forward						

Brought forward						
		Isolation Valves				
Y5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
Y5.3		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
Y5.3		50mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
Y6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
Y6.1		100mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
Y7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
Y7.1		100mm diameter Y-Strainer (AVK or equivalent)	No	1		
Y8		**PipeSpecials**				
Y8.1		100mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
Y8.2		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
Y9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
Y10		**Civil Works: Chamber Refurbishment**				
Y10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
Y10.2		330mm thick brick wall to depth of between 1.5m and 2.75m including brickforce every second layer	m^2	25		
Y10.3		Supply and install brixseal	m^2	55		
Y10.4		Plastering of chamber walls (to include all materials)	m^2	55		
Y10.5		Backwashing of chamber walls (to include all materials)	m^2	55		
Y10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
Y11	SABS 8.1.1.4	**Chamber Formwork**				
Y11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
Y11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
Y11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
Y11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
Y12	8.4.4	**Unformed Surface Finishes:**				
Y12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
Y12.2		Steel Float finish	m^2	55		
Y12.3		Shoring Shoring of Excavation using timber	m^2	55		
Y13	SABS 1200G 8.3	**Chamber Reinforcements**				
Y13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
Y13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
Y13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Y13.2	8.3.2	High-tensile welded mesh in the following:				
Y13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Brought forward						
Y14	SABS 1200 GA	**CONCRETE**				
Y14.1	8.4.3	Grade 15/19 MPa concrete to:				
Y14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	0		
Y14.2	8.4.3	Grade 25/19 MPa concrete to:				
Y14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	0		
Y14.2.2		Roof slab and manhole.	m^3	5		
Y14.2.3		Floor	m^3	5		
Y14.2.4		Pedestal	m^3	0.5		
Y14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
Y15		**Cat Ladder**				
Y15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
Y16		**Manhole and Manhole Cover**				
Y16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
Y16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
Y17		**Waterproofing:**				
Y17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
Y17.2		b) Floors	m^2	21		
Y17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Brought forward						
Y18	SABS 1200GA	**Precast Concrete Marker Posts**				
Y18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
Y19		**Removal and Reinstatement**				
Y19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
Y20		**Puddle Pipe & Bolts Protection**				
Y20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
Y20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Ennerdale Depot Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section Z: 150mm Orange Farm Ext 2 Link Rd PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
Z1	SABS 1200C	**Site Clearance**				
Z1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
Z1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
Z1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
Z1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
Z2	SABS 1200DA	**Restricted Excavation:**				
Z2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
Z2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
Z2.2.1		0 - 2.5m deep	m³	25		
Z2.2.2		2.5m - 3.5m deep	m³	5		
Z3	SABS 1200LB	**Bedding:**				
Z3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	20		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	20		
Z4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
Z4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
Z4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
Z4.1.2		150mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
Z4.1.3		150mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
Z4.1.4		150mm nominal dia x 450mm long spool piece (F.B.E)	No	1		
Z4.1.5		150mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
Z4.1.6		150mm x 200mm dia concentric reducer flanged both ends	No	2		
Z4.1.7		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
Z5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
Z5.1		150mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Brought forward						
		Isolation Valves				
Z5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
Z5.3		150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
Z5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
Z6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
Z6.1		150mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
Z7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
Z7.1		150mm diameter Y-Strainer (AVK or equivalent)	No	1		
Z8		**PipeSpecials**				
Z8.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
Z8.2		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
Z9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
Z10		**Civil Works: Chamber Refurbishment**				
Z10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
Z10.3		Supply and install brixseal	m^2	30		
Z10.4		Plastering of chamber walls (to include all materials)	m^2	30		
Z10.5		Backwashing of chamber walls (to include all materials)	m^2	30		
Z10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	30		
Z11	SABS 8.1.1.4	**Chamber Formwork**				
Z11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
Z11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
Z11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
Z11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
Z12	8.4.4	**Unformed Surface Finishes:**				
Z12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	30		
Z12.2		Steel Float finish	m^2	30		
Z12.3		Shoring Shoring of Excavation using timber	m^2	30		
Z13	SABS 1200G 8.3	**Chamber Reinforcements**				
Z13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
Z13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
Z13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
Z13.2	8.3.2	High-tensile welded mesh in the following:				
Z13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Brought forward						
Z14	SABS 1200 GA	**CONCRETE**				
Z14.1	8.4.3	Grade 15/19 MPa concrete to:				
Z14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
Z14.2	8.4.3	Grade 25/19 MPa concrete to:				
Z14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
Z14.2.2		Roof slab and manhole.	m^3	5		
Z14.2.3		Floor	m^3	5		
Z14.2.4		Pedestal	m^3	0.5		
Z14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
Z15		**Cat Ladder**				
Z15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
Z16		**Manhole and Manhole Cover**				
Z16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
Z16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
Z17		**Waterproofing:**				
Z17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	30		
Z17.2		b) Floors	m^2	21		
Z17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	30		
Carried forward						

Brought forward						
Z18	SABS 1200GA	**Precast Concrete Marker Posts**				
Z18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
Z19		**Removal and Reinstatement**				
Z19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
Z20		**Puddle Pipe & Bolts Protection**				
Z20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
Z20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Ennerdale Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section AA: 150mm Drieziek Ext 9 Limpopo Str PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
AA1	SABS 1200C	**Site Clearance**				
AA1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
AA1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
AA1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
AA1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
AA2	SABS 1200DA	**Restricted Excavation:**				
AA2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
AA2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
AA2.2.1		0 - 2.5m deep	m³	25		
AA2.2.2		2.5m - 3.5m deep	m³	5		
AA3	SABS 1200LB	**Bedding:**				
AA3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	20		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	20		
AA4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
AA4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
AA4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
AA4.1.2		150mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
AA4.1.3		150mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
AA4.1.4		150mm nominal dia x 450mm long spool piece (F.B.E)	No	1		
AA4.1.5		150mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
AA4.1.6		150mm x 200mm dia concentric reducer flanged both ends	No	2		
AA4.1.7		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
AA5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
AA5.1		150mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Brought forward						
		Isolation Valves				
AA5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
AA5.3		150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
AA5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
AA6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
AA6.1		150mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
AA7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
AA7.1		150mm diameter Y-Strainer (AVK or equivalent)	No	1		
AA8		**PipeSpecials**				
AA8.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
AA8.2		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
AA9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
AA10		**Civil Works: Chamber Refurbishment**				
AA10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
AA10.3		Supply and install brixseal	m^2	30		
AA10.4		Plastering of chamber walls (to include all materials)	m^2	30		
AA10.5		Backwashing of chamber walls (to include all materials)	m^2	30		
AA10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	30		
AA11	SABS 8.1.1.4	**Chamber Formwork**				
AA11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
AA11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
AA11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
AA11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
AA12	8.4.4	**Unformed Surface Finishes:**				
AA12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	30		
AA12.2		Steel Float finish	m^2	30		
AA12.3		Shoring Shoring of Excavation using timber	m^2	30		
AA13	SABS 1200G 8.3	**Chamber Reinforcements**				
AA13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
AA13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
AA13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
AA13.2	8.3.2	High-tensile welded mesh in the following:				
AA13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Brought forward						
AA14	SABS 1200 GA	**CONCRETE**				
AA14.1	8.4.3	Grade 15/19 MPa concrete to:				
AA14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
AA14.2	8.4.3	Grade 25/19 MPa concrete to:				
AA14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
AA14.2.2		Roof slab and manhole.	m^3	5		
AA14.2.3		Floor	m^3	5		
AA14.2.4		Pedestal	m^3	0.5		
AA14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
AA15		**Cat Ladder**				
AA15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
AA16		**Manhole and Manhole Cover**				
AA16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
AA16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
AA17		**Waterproofing:**				
AA17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	30		
AA17.2		b) Floors	m^2	21		
AA17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	30		
Carried forward						

Brought forward						
AA18	SABS 1200GA	**Precast Concrete Marker Posts**				
AA18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
AA19		**Removal and Reinstatement**				
AA19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
AA20		**Puddle Pipe & Bolts Protection**				
AA20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
AA20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Ennerdale Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section AB: 150mm Zakariyya Park cnr Clove & Tumeric PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
AB1	SABS 1200C	**Site Clearance**				
AB1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
AB1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
AB1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
AB1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
AB2	SABS 1200DA	**Restricted Excavation:**				
AB2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
AB2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
AB2.2.1		0 - 2.5m deep	m³	25		
AB2.2.2		2.5m - 3.5m deep	m³	5		
AB3	SABS 1200LB	**Bedding:**				
AB3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	20		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	20		
AB4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
AB4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
AB4.1.1		150mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
AB4.1.2		150mm nominal dia x 300mm long spool piece (F.B.E)	No	2		
AB4.1.3		150mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
AB4.1.4		150mm nominal dia x 450mm long spool piece (F.B.E)	No	1		
AB4.1.5		150mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
AB4.1.6		150mm x 200mm dia concentric reducer flanged both ends	No	2		
AB4.1.7		Flanged riser piece, one end flanged to fit air valve, other end flanded to suit 100mm NB, flange drilled to SANS 1123-1600/3	No	1		
AB5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
AB5.1		150mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Brought forward						
		Isolation Valves				
AB5.2		80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
AB5.3		150mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
AB5.3		80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
AB6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
AB6.1		150mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
AB7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
AB7.1		150mm diameter Y-Strainer (AVK or equivalent)	No	1		
AB8		**PipeSpecials**				
AB8.1		150mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
AB8.2		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
AB9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
AB10		**Civil Works: Chamber Refurbishment**				
AB10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
AB10.3		Supply and install brixseal	m^2	30		
AB10.4		Plastering of chamber walls (to include all materials)	m^2	30		
AB10.5		Backwashing of chamber walls (to include all materials)	m^2	30		
AB10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	30		
AB11	SABS 8.1.1.4	**Chamber Formwork**				
AB11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
AB11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
AB11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
AB11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
AB12	8.4.4	**Unformed Surface Finishes:**				
AB12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	30		
AB12.2		Steel Float finish	m^2	30		
AB12.3		Shoring Shoring of Excavation using timber	m^2	30		
AB13	SABS 1200G 8.3	**Chamber Reinforcements**				
AB13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
AB13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
AB13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
AB13.2	8.3.2	High-tensile welded mesh in the following:				
AB13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Brought forward						
AB14	SABS 1200 GA	**CONCRETE**				
AB14.1	8.4.3	Grade 15/19 MPa concrete to:				
AB14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
AB14.2	8.4.3	Grade 25/19 MPa concrete to:				
AB14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
AB14.2.2		Roof slab and manhole.	m^3	5		
AB14.2.3		Floor	m^3	5		
AB14.2.4		Pedestal	m^3	0.5		
AB14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
AB15		**Cat Ladder**				
AB15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
AB16		**Manhole and Manhole Cover**				
AB16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
AB16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
AB17		**Waterproofing:**				
AB17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	30		
AB17.2		b) Floors	m^2	21		
AB17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	30		
Carried forward						

Brought forward						
AB18	SABS 1200GA	**Precast Concrete Marker Posts**				
AB18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
AB19		**Removal and Reinstatement**				
AB19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
AB20		**Puddle Pipe & Bolts Protection**				
AB20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
AB20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Ennerdale Depot Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section AC: 200mm Poortjie 1 PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
AC1	SABS 1200C	**Site Clearance**				
AC1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
AC1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
AC1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
AC1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
AC2	SABS 1200DA	**Restricted Excavation:**				
AC2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
AC2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
AC2.2.1		0 - 2.5m deep	m³	25		
AC2.2.2		2.5m - 3.5m deep	m³	5		
AC3	SABS 1200LB	**Bedding:**				
AC3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	20		
		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	20		
AC4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
Carried forward						

Brought forward						
AC4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
AC4.1.1		200mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
AC4.1.2		200mm nominal dia x 300mm long spool piece (F.B.E)	No	1		
AC4.1.3		200mm nominal dia x 300mm long spool piece (F.O.E)	No	1		
AC4.1.4		200mm nominal dia x 600mm long spool piece (F.B.E)	No	2		
AC4.1.5		200mm nominal dia x 100mm nominal dia unequal Tee (F.B.E) air accumulator flanges drilled to SANS 1123-1600/3	No	1		
AC4.1.6		200mm x 250mm dia concentric reducer flanged both ends	No	2		
AC5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.): **Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
AC5.1		200mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
Carried forward						

Brought forward						
		Isolation Valves				
AC5.2		100mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
AC5.3		200mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
		Air Valve				
AC5.3		100mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
AC6		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
AC6.1		200mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
AC7		**Y-Strainer:**				
		Y-strainer with screen, 50mm drain plug with a 50mm full bore ball valve for flushing, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16				
AC7.1		200mm diameter Y-Strainer (AVK or equivalent)	No	1		
AC8		**PipeSpecials**				
AC8.1		200mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
AC8.2		250mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
AC9		**Site Works:**				
		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
AC10		**Civil Works: Chamber Refurbishment**				
AC10.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	30		
AC10.2		330mm thick brick wall to depth of between 1.5m and 2.75m including brickforce every second layer	m^2	25		
AC10.3		Supply and install brixseal	m^2	55		
AC10.4		Plastering of chamber walls (to include all materials)	m^2	55		
AC10.5		Backwashing of chamber walls (to include all materials)	m^2	55		
AC10.6		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	55		
AC11	SABS 8.1.1.4	**Chamber Formwork**				
AC11.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	20		
AC11.2		Smooth vertical 150mm wide to roof of chamber	m	21		
AC11.3		Smooth horizontal to soffit of suspended roof slab	m^2	20		
AC11.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	21		
AC12	8.4.4	**Unformed Surface Finishes:**				
AC12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	55		
AC12.2		Steel Float finish	m^2	55		
AC12.3		Shoring Shoring of Excavation using timber	m^2	55		
AC13	SABS 1200G 8.3	**Chamber Reinforcements**				
AC13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
AC13.1.1		Chamber roof (Y16 @ 150 B1)	kg	45		
AC13.1.2		Chamber roof (Y12 @ 150 B2)	kg	45		
AC13.2	8.3.2	High-tensile welded mesh in the following:				
AC13.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	21		
Carried forward						

Brought forward						
AC14	SABS 1200 GA	**CONCRETE**				
AC14.1	8.4.3	Grade 15/19 MPa concrete to:				
AC14.1.1	8.4.2	Grade 15/19 MPa concrete to: Blinding 50mm thick	m^2	24		
AC14.2	8.4.3	Grade 25/19 MPa concrete to:				
AC14.2.1		Grade 25/19 MPa concrete to: Strip Footing	m^3	5		
AC14.2.2		Roof slab and manhole.	m^3	5		
AC14.2.3		Floor	m^3	5		
AC14.2.4		Pedestal	m^3	0.5		
AC14.2.5		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
AC15		**Cat Ladder**				
AC15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
AC16		**Manhole and Manhole Cover**				
AC16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
AC16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
AC17		**Waterproofing:**				
AC17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber: a) Walls	m^2	55		
AC17.2		b) Floors	m^2	21		
AC17.2		Sika BlackSeal T-140SG torch on waterproofing membrane or similar approved, applied strictly according to the manufacturers specification for the following: a) Walls	m^2	55		
Carried forward						

Brought forward						
AC18	SABS 1200GA	**Precast Concrete Marker Posts**				
AC18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
AC19		**Removal and Reinstatement**				
AC19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
AC20		**Puddle Pipe & Bolts Protection**				
AC20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
AC20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Ennerdale Deport Operational Area of the Johannesburg Water Supply Network

Contract No.: RFP 189/2026

Section AD: 250mm Poortjie 2 PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/004				
AD1	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
		Valves:				
AD1.1		Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.):				
AD1.2		**Pressure Reducing Valve:** The valve shall control the downstream pressure, or pressure at valve outlet, to a preset maximum regardless of changing pipeline conditions. The valve shall be self acting, hydraulically operated, diaphram actuated valve. The pilot shall be a direct acting two - way/ three - way diaphram valve designed to throttle when the downstream pressure exceeds the adjustable spring setting. This pilot shall be designed specifically to be a direct acting pressure pilot. Each valve body shall have five ball-o-stop valves connected to it's pressure sensing ports and bonnet, via 50mm long copper spool pieces (threaded to fit). Four of the ball-o-stop valves, two on the upstream and two on the downstream shall have brass quick release couplings connected to them. The upsteeam ball-o-stops will have brass y-strainers attached to them. The other ball-o-stops will act as the sensing upstream and downstream ports serving the bonnet and the pilot.				
AD1.3		250mm norminal dia, flanged (D/FL) full bore pressure reducing valve (Cla-Val or equivalent) PN16	No	1		
		Isolation Valves				
AD1.4		250mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	2		
AD2		**Site Works:**				
AD2.1		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
Carried forward						

Brought forward						
AD3		**Civil Works: Chamber Refurbishment**				
AD3.1		BRICKWORK All brickwork to be hard burnt red face brick (Satin Red) 220mm thick brick wall to depth of 1.5m including brickforce every third layer	m^2	40		
AD3.2		Supply and install brixseal	m^2	66		
AD3.3		Plastering of chamber walls (to include all materials)	m^2	66		
AD3.4		Backwashing of chamber walls (to include all materials)	m^2	66		
AD3.5		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	66		
AD4	SABS 8.1.1.4	**Chamber Formwork**				
AD4.1		Rough vertical 600mm to 1000mm wide to strip footing of chamber	m^2	22		
AD4.2		Smooth vertical 150mm wide to roof of chamber	m	24		
AD4.3		Smooth horizontal to soffit of suspended roof slab	m^2	22		
AD4.4		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	24		
AD5	8.4.4	**Unformed Surface Finishes:**				
AD5.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	66		
AD5.2		Steel Float finish	m^2	66		
AD5.3		Shoring Shoring of Excavation using timber	m^2	66		
AD6	SABS 1200G 8.3	**Chamber Reinforcements**				
AD6.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
AD6.1.1		Chamber roof (Y16 @ 150 B1)	kg	55		
AD6.1.2		Chamber roof (Y12 @ 150 B2)	kg	55		
AD6.2	8.3.2	High-tensile welded mesh in the following:				
AD6.2.1		High-tensile welded mesh in the following: Mesh 617	m^2	24		
Carried forward						

Brought forward						
AD7	SABS 1200 GA	**CONCRETE**				
AD7.1	8.4.3	Grade 25/19 MPa concrete to:				
AD7.1.1		Roof slab and manhole.	m^3	7		
AD7.1.2		Pedestal	m^3	0.5		
AD7.1.3		Thrust Walls/ Plinths/ Anchor Blocks	m^3	0.5		
AD8		**Cat Ladder**				
AD8.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2m length)	No.	1		
AD9		**Manhole and Manhole Cover**				
AD9.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
AD9.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	0		
AD10		**Waterproofing:**				
AD10.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber:				
		a) Walls	m^2	66		
AD10.2		b) Floors	m^2	21		
Carried forward						

Brought forward						
AD11	SABS 1200GA	**Precast Concrete Marker Posts**				
AD11.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
AD12		**Removal and Reinstatement**				
AD12.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
AD13		**Puddle Pipe & Bolts Protection**				
AD13.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
AD13.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Ennerdale Depot Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Section AE: 250mm Weillie's Farm PRV Site

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		As per Drg No. JW/DBSA/005				
AE1	SABS 1200C	**Site Clearance**				
AE1.1	8.2.1	Clear site and strip topsoil 150mm deep, stockpile and reinstate on completion	m²	25		
AE1.2		Remove existing road pavement layers to stockpile, backfill and compact on completion (Prov.)	m³	1		
AE1.3		Remove rubble, debris and sludge from existing chambers and dispose of off site	m³	2		
AE1.4		Demolish, remove and dispose part of brick and concrete chamber structures as directed by the Engineer (for purposes of chamber extension/ raising 450mm above ground)	m³	3		
AE2	SABS 1200DA	**Restricted Excavation:**				
AE2.1	8.3.2 AA.D.7	**For proving of pipes within the water distribution network only:** Excavate by hand in all materials to **prove existing/unknown pipes only** (maximum slot trench width is 0.5m, 2.5m deep), backfill and compact and dispose of surplus materail as ordered by the Engineer	m³	10		
AE2.2	8.3.2 AA.D.7	**For PRV Installation Excavation Only:** Excavate by hand in all materials for **meter installation only**, backfill, compact and dispose of surplus material as instructed by the Engineer:- (Proving of pipes paid Item B2.1)				
AE2.3		0 - 2.5m deep	m³	50		
AE2.4		2.5m - 3.5m deep	m³	50		
AE3	SABS 1200LB	**Bedding:**				
AE3.1	8.2.1	Provision of bedding from commercial sources without the need for screening or treatment for both selected fill and granular material	m³	20		
AE3.2		Provision of backfill from selected excavation without the need for screening or treatment for both selected fill and granular material	m³	20		
AE4	SABS 1200L	**Pipework:**				
		Note: All flanges are to be PN16 drilled to for steel pipes and specials				
		Note: All bolts, nuts and washers to be Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards				
	8.2.5	**Steel Pipes and Specials**				
AE4.1		Supply SABS 62 medium class steel pipe, manufacture, handle, lay, bed, joint, test and disinfect the following (rates to include for supplying of all steel pipes, in-situ welding of joints and flanges where applicable, all cutting, flanges, jointing material, wastage and Grade 8.8 Carbon Steel , Hot-Dip Galvanized (HDG) in accordance with SANS 121 / ISO 1461 standards bolts, nuts and washers treated with nickel anti-seize compound. All pipes and specials to be coated and lined with Copon KSIR88 or equivalent to a minimum thickness of 300 microns. Including Denso Tape.				
Carried forward						

Brought forward						
AE4.2		250mm nominal dia x (1-1.6m will cover) spool piece with puddle flange in centre PN16 (F.B.E)	No	2		
AE4.3		250mm nominal dia x (0 - 600mm will cover) long spool piece (F.O.E)	No	1		
AE5		**Valves:** Supply, handle, lay, bed, joint, and disinfect the following (rates to include for jointing material and bolts, nuts and washers.):				
AE5.1		**Isolation Valves** 80mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
AE5.2		250mm nominal diameter, flanged (D/FL) valve with a hand wheel Resilient Seated Wedge valve (AVK or equivalent) PN16, anti-clockwise closing	No	1		
AE6		**Air Valve** 80mm Air Valve (VENT-O-MAT or equivalent) flanged	No	1		
AE6.1		**Flow Meter:** The flow meter should be a Turbine cast iron water meter for cold water up to 50°C/PN16, of a type that has a Hermetically sealed register (IP68), hydrodynamically balanced plastic rotor (<=300), symmetrical calibration adjustment (<=300), the register may be rotated through 360°, have a high overload capability, be powder coated for corrossion protection and should not be affected by external magnetic fields.				
AE6.2		250mm diameter meter (Sensus MeiStream or equivalent) Data logger compatible and PN16	No	1		
AE7		**Dirtbox:** 480mm long Dirtbox with screen, top cpover slab to have 80mm flanged long-neck socket, coated by fusion-bondede Epoxy (FBE) coating applied electrostatically inside and outside, and flanged both ends. Screen must be heavy-duty, reinforced stainless steel (SS304/SS316) to resist tearing under system pressure. PN16.				
AE7.1		250mm diameter Dirtbox (max 480mm long face-to-face)	No	1		
AE8		**PipeSpecials**				
AE8.1		250mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket	No.	1		
AE8.2		300mm ductile iron with fusion bonded epoxy coating flanged adaptor with a drinking water approved EPDM gasket to suite steel/uPVC/AC insitu pipe	No.	2		
AE9		**Site Works:**				
AE9.1		Removal of existing installation, preparation of existing flange, and connecting arrangement as per drawing, all to be synchorised and conducted in a single shut-down	No.	1		
AE10		**Civil Works: Chamber Refurbishment**				
AE10.1		Supply and install brixseal	m^2	28		
AE10.2		Plastering of chamber walls (to include all materials)	m^2	28		
Carried forward						

Brought forward						
AE10.3		Backwashing of chamber walls (to include all materials)	m^2	28		
AE10.4		Apply one undercoat and two coats of white exterior PVA paint (Dulex Weatherguard or similar approved) on bagged internal brickwork and concrete	m^2	28		
AE11	SABS 8.1.1.4	**Chamber Formwork**				
AE11.1		Smooth vertical 150mm wide to roof of chamber	m	8		
AE11.2		Smooth horizontal to soffit of suspended roof slab	m^2	9		
AE11.3		Construct 15mm x 15mm fillet chamfer accurately to line and level to all horizontal and vertical exposed corners of chamber	m	8		
AE12	8.4.4	**Unformed Surface Finishes:**				
AE12.1		Unformed Surface Finishes: Wood float finish to all horizontal surfaces	m^2	28		
AE12.2		Steel Float finish	m^2	28		
AE12.3		Shoring Shoring of Excavation using timber	m^2	28		
AE13	SABS 1200G 8.3	**Chamber Reinforcements**				
AE13.1	8.3.1	Supply and bind using binding wire and 25mm spacers, High-tensile steel bars in the following:				
AE13.1.1		Chamber roof (Y16 @ 150 B1)	kg	10		
AE13.1.2		Chamber roof (Y12 @ 150 B2)	kg	10		
AE14	SABS 1200 GA	**CONCRETE**				
AE14.1	8.4.3	Grade 25/19 MPa concrete to:				
AE14.1.1		Roof slab and manhole.	m^3	3		
AE14.1.2		Pedestal	m^3	2		
AE14.1.3		Thrust Walls/ Plinths/ Anchor Blocks	m^3	2		
AE15		**Cat Ladder**				
AE15.1		Supply, handle and install in chamber Hot Dipped Galvanised Mild Steel ladder that complies to General Safety Regulations (GSR 13A) and structural loading codes like SANS 10160, has a minimum of 450 mm to 600 mm between stringers, rungs equally spaced at 300mm apart, and with a wall clearance of 150mm (allow of 2.5m length)	No.	1		
AE16		**Manhole and Manhole Cover**				
AE16.1		Supply, handle and cast insitu while pouring concrete slab, HD 700 Lid and Frame (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone	No.	1		
AE16.2		Supply, handle and cast insitu while pouring concrete, RN 600 complete chamber (Smartlock or equivalent), equiped with a smartkey that be accessd by pairing the key to a smart phone with the application downloaded from either android play store/iOS apple appstore from the phone. Allow for upto 150mm dia universal saddle for tapping and connecting to a 25mm ball-o-stop, 2x25mm ball-o-stops, 2m x 25mm hDPE pipe, 1m x 25mm GI pipe, 3/8"x 25mm male/female nipple and a 3/8 quick release coupling for logger connection. (for critical point installation)	No.	1		
Carried forward						

Brought forward						
AE17		**Waterproofing:**				
AE17.1		Sika Cemflex Slurry and Cemflex fabric or similar approved, applied strictly according to the manufacturers specification for the following to the inside of the chamber:				
		a) Walls	m^2	28		
AE17.2		b) Floors	m^2	21		
AE18	SABS 1200GA	**Precast Concrete Marker Posts**				
AE18.1	8.6	Supply, transport and handle and install precast concrete marker posts. Rate to include for painting posts with 2 coats yellow road marking paint (Ivory Protectocote osa), and black stenciling of numbers/letters 100mm high as directed by Engineer	No.	2		
AE19		**Removal and Reinstatement**				
AE19.1		Grass Planting 50mm topsoil from excavated soil and plant grass sprigs	m^2	25		
AE20		**Puddle Pipe & Bolts Protection**				
AE20.1		Supply and install 6mm Malthoid wrapping around puddle pipe	Sum	1		
AE20.2		Supply and apply Denso Tape Wrapping on all external connections	Sum	1		
Total carried to Summary						

Description : The Refurbishment of Pressure Reducing Valves & Ancillary Works in the Soweto Deport Operational Area of the Johannesburg Water Supply Network
Contract No.: RFP 189/2026

Item Number	Payment Refers	Description	Unit	Qty	Rate	Amount
		Items to be specified and approved by the Engineer and the Client				
AF1		**Data Loggers**				
AF1.1		Supply of GSM Loggers, inclusive of 30 x pulse cables and 90 x pressure hoses and 4x programming cables	Prov Sum	Sum	R 1,650,000.00	1,650,000.00
AF1.2		Contractors markup on item M1.1	%	R 1,650,000.00		
AF2		**Advanced Controllers**				
AF2.1		Supply of Advanced controllers for reservoir feed control	Prov Sum	Sum	R 600,000.00	600,000.00
AF2.2		Contractors markup on item M2.1	%	R 600,000.00		
AF3		**Web-Based PMZ Monitoring**				
AF3.1		Creation of a web-based PMZ monitoring and water balance tool	Prov Sum	Sum	R 1,350,000.00	1,350,000.00
AF3.1		Contractors markup on item M3.1	%	R 1,350,000.00		
Total carried to Summary						