

**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW BHOSIKI POLICE STATION**

4	Double gate size 2502 x 2653mm high comprising of 50 x 50 x 4mm hollow section tubing and four horizontal rails with 16mm diameter mild steel rods at 90mm centres welded to steel frame of 54 x 65mm rectangular section fixed to walls with bolts and lugs including security gate lock to be provided in a cell type lock box welded onto gate frame - Type G03 on Steel Schedule (Refer to 5 Star Specifications- Type Pol 2012/D1)	No	1
5	Double swing gate size 4051 x 3553mm high comprising of 50 x 50 x 4mm hollow section tubing and four horizontal rails with 16mm diameter mild steel rods at 90mm centres welded to steel frame of 54 x 65mm rectangular section fixed to walls with bolts and lugs including security gate lock to be provided in a cell type lock box welded onto gate frame - Type G01 on Steel Schedule (Refer to 5 Star Specifications- Type Pol 2012/D1)	No	1
6	Holding cell gate overall size 3080 x 3037mm high with one single gate opening size 1210 x 1950mm formed comprising of 50 x 50 x 4mm hollow section tubing and four horizontal rails with 16mm diameter mild steel rods at 90mm centres welded to steel frame of 54 x 65mm rectangular section fixed to walls with bolts and lugs including security gate lock to be provided in a cell type lock box welded onto gate frame - Type G08 and G09 on Steel Schedule (Refer to 5 Star Specifications- Type Pol 2012/D1)	No	2

SECURITY MESH GRATING TO COURT YARDS

7	Galvanised security mesh grating fixed to 40 x 40 x 5mm galvanised mild steel angle fixed to truss tie beam	m2	129
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DOORS, WINDOWS, CURTAIN WALLING, SHOPFRONTS, ETC

GALVANISED PRESSED STEEL DOOR FRAMES

Note: Tenderer's are to refer to Architect's Door Schedule. Refer to drawing number 500 Rev 2 and drawing number 550 Rev 1.

1.2mm Rebated frames suitable for 115mm brick walls with two 100mm butt hinges per door leaf

8	Frame for Door Size 900 x 2400mm high (LI)	No	45
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9	Frame for Door Size 1400 x 2064mm high (LI) <u>1.2mm Rebated frames suitable for 230mm brick walls with two 100mm butt hinges per door leaf</u>	No	1
10	Frame for Door Size 900 x 2400mm high (LI) <u>1.2mm Rebated frames suitable for 270mm brick walls with two 100mm butt hinges per door leaf</u>	No	15
11	Frame for Door Size 900 x 2400mm high (LI) <u>Preparation of frames for fixing of ironmongery</u>	No	9
12	Arm of door closer <u>GALVANISED STEEL WINDOWS, DOORS, ETC</u> Note: Tenderer's are to refer to Architect's Window and Door Schedule. Refer to drawing number 510-05 Rev 2. <u>Purpose made heavy duty steel window with 6.4mm toughened safety glass (elsewhere measured) held in position with timber spacers to a standard galvanised mild steel PFX7 frame built into wall with M8 expansion bolts and 230 x 1.6mm mild steel lug to be impact resistant, vandal resistant and tamper proof, with heavy duty friction stays. Window to include 2mm thick steel sheet mesh profiled and welded to 100 x 50 x 2.5mm open channel frame on both sides of window with 8mm shaft diameter pop rivets to secure speech profile at 150mm centres</u>	No	13
13	Window type SW13, size 1200 x 1200mm high (LI)	No	1
14	Window type SW14, size 600 x 800mm high (LI)	No	3

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Purpose made heavy duty steel windows, impact, vandal resistant and tamper proof to opening sashes windows with 16mm diameter mild steel rods EN8, 230 x 1.6mm mild steel lug built into wall, 30 x 16mm manganese grade SS14/7 or Creusabro 8000 steel bar built horizontally with a minimum 6.4mm toughened safety glass (elsewhere measured), standard PFX7 window frames as supplied by manufacturer, including internal fixed screen with 40 x 40 x 5mm mild steel angle iron, and 40 x 5mm mild steel flat bar. Screen to be hot dipped "Flatex 345" or other equal and approved galvanized screening with opening in the grill, including 600 x 1200mm high external hinged screen 100 x 75 x 8mm MS angle and cover plate, heavy duty hinge, with heavy duty friction stays, 40 x 40 x 5mm mild steel angle iron, and 40 x 5mm mild steel flat bar. Screen to be hot dipped "Flatex 345" or other equal and approved galvanised screening including 50 x 50 x 3mm mild steel angle iron 3 No. bolted to wall with M6 expansion bolts.

15	Window type SW10, size 638 x 870mm high (LI)	No	22
16	Window type SW11, size 842 x 940mm high (LI)	No	18
17	Window type SW15, size 1000 x 1000mm high (LI)	No	1

Purpose made heavy duty impact resistant, vandal resistant, with heavy duty friction stays and tamper proof steel window size 703 x 1002mm with 230 x 1.6mm mild steel lug built into wall, including 6.4 toughened safety glass (elsewhere measured) including a fixed screen with mild steel angle iron, mild steel flat bar. Screen to be hot dipped "Flatex 345" or other equal and approved galvanized screening

18	Window type SW12, size 703 x 1002mm high (LI)	No	10
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GALVANIZED STEEL ROLLER SHUTTER DOORS

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"Serranda Series 200, Roll Up, Expanda" or other equal and approved galvanised mild steel roller shutter 76mm slats (18kg/m²), fixed to brickwork or concrete

19	Chain operated slatted roller shutter door for 1065 x 1240mm high opening (RSD02)	No	3
20	Chain operated slatted roller shutter door for 1800 x 3450mm high opening (RSD01)	No	1

GALVANISED PRESSED STEEL TRANSFORMER ROOM DOORS AND FRAMES

Galvanised mild steel transformer door etc. suitable for 270mm walls fixed to brickwork or concrete

21	Double door including frame size 2502 x 2653mm high	No	1
22	Double door including frame size 4051 x 3553mm high	No	1

SPECIALIST DOORS

Note: Tenderer's are to refer to Architect's Window and Door Schedule. Refer to drawing number 550 Rev 1.

"Mutual Austen Safes, Simpsons Safes" or other equal and approved DS100 SABS Category 3 right hand Strongroom with 2 x 7-lever security keylock and 3-wheel combination lock, overall size 1000mm x 2130mm high finished in rustproof undercoat

23	Single door type SR01, SR02, SR03, size 1000 x 2130mm high	No	3
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Purpose made solid steel cell door and purpose made to specifications, size and details as per SAPS 5-Star Specifications, refer to drawing POL2012/D1

24	Single door type SD01, size 1020 x 2027mm high	No	3
25	Single door type SD02, size 1210 x 2155mm high	No	1
26	Single door type SD03, size 1210 x 2155mm high	No	2
27	Single door type SD04, size 1020 x 2027mm high	No	3

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Purpose made Solid Steel door with V-Shaped engraved details and purpose made to specifications, size and details as per SAPS 5-Star Specifications, refer to drawing POL2012/D1

28	Double door type SD07, size 2464 x 2248mm high	No	3
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NOTE: The following items shall be deemed to fall into Work Group No 140 for JBCC CPAP purposes

ALUMINIUM WINDOWS

Note: Tenderers are to refer to Architect's Window and Door Schedule. Refer to drawing number 510-04 Rev 2 and drawing number 510-05 Rev 2.

Glazing shall be in accordance with SANS 10160, SANS 10137, SANS 10400 (Part N of section 3) and SANS 1263 with clear glass. All complying with AAAMSA performance criteria A0

"Mutual Austen Safes" or other equal and approved level G3 bullet resistant natural anodised aluminium pay window with transfer tray (Type 2) with 200mm deep stainless steel bank type transfer tray (Code: G3-PW-T) overall size 600 x 950mm glazed in 53mm thick Grey tinted glass with 32mm post formed Oak counter top and stainless steel exterior counter finish

29	Purpose made window type AW11, size 1000 x 1000mm	No	1
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Powder coated casement window units colour: Charcoal/Bronze coated aluminium windows glazed with 6.4mm toughened Low E safety glass, complete with subframe, ironmongery, glass, sealing, etc. and fixing to brickwork or concrete

30	Purpose made window type AW01, size 900 x 2125mm high	No	5
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31	Purpose made window type AW04, size 900 x 1200mm high	No	7
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32	Purpose made window type AW06, size 1950 x 1200mm high	No	1
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33	Purpose made window type AW10, size 1200 x 800mm high	No	3
34	Purpose made window type AW07, size 12125 x 900mm high	No	2
35	Purpose made window type AW08, size 13320 x 900mm high	No	2
<u>Powder coated casement window units colour: Charcoal/Bronze with vandal proof, high impact resistant one way reflective glazing, complete with subframe, ironmongery, glass, sealing, etc. and fixing to brickwork or concrete</u>			
36	Purpose made window type AW02, size 3420 x 1200mm high	No	5
37	Purpose made window type AW05, size 900 x 1800mm high	No	4
38	Purpose made window type AW03, size 2200 x 1200mm high	No	16
39	Purpose made window type AW09, size 600 x 1200mm high	No	18

ALUMINIUM DOORS

Note: Tenderer's are to refer to Architect's Window and Door Schedule. Refer to drawing number 510-04 Rev 2.

Powder coated door units colour: Charcoal as per SANS 10160, complete with subframes, ironmongery, glass, sealing, etc. and fixing to brickwork or concrete to be high impact resistant and vandal proof

40	Purpose made double door type AD01,AD05, size 1600 x 2400mm high	No	6
41	Purpose made double door type AD02, size 1800 x 2400mm high	No	5
42	Purpose made double door type AD04, size 1650 x 2400mm high	No	1
43	Purpose made double door type AD06, size 1380 x 2400mm high	No	1

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ALUMINIUM SLIDING DOOR

Powder coated sliding door units colour: Charcoal as per SANS 10160, complete with subframes, ironmongery, glass, sealing, etc. and fixing to brickwork or concrete to be high impact resistant and vandal proof

44 Purpose made double sliding door type AD03, size 1800 x 2400mm high

No

1

ALUMINIUM LOUVRE UNITS

Aluminium Fixed Louvre Panel with Z Profile Fins, external powder coated aluminium - Interpon D2525, SANS 1796 compliant glass 2 powder colour bronze. Panels to be positive fixed with anti theft screws at corners and evenly spaced as required, into concrete or brickwork to suite

45 Purpose made louvre unit for 300 x 300mm high opening

No

3

ALUMINIUM SHOPFRONTS

Note: Tenderer's are to refer to Architect's Aluminium Schedule.

Glazing shall be in accordance with SANS 10160, SANS 10137, SANS 10400 (Part N of section 3) and SANS 1263 with clear glass. All complying with AAAMSA performance criteria A0

Powder coated shopfront colour: Charcoal/Bronze with vandal proof and high impact resistant glazing, complete with subframe, ironmongery, glass, sealing, etc. and fixing to brickwork or concrete

46 Purpose made glazed shopfront type SF02 size 3450 x 4125mm high

No

1

47 Purpose made glazed shopfront type SF01, size 5825 x 4125mm high with one double door 2330 x 2400mm high

No

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NATURAL ANODISED ALUMINIUM SIGNAGE

Note: Tenderer's are to refer to Architect's Signage Schedule (Dwg No. 505 Rev 00)

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<u>800 x 600 x 3mm Aluminium panel with 100mm Arial font lettering etched and sprayed black, wall mounted with 25 x 25mm GMS Brackets and Stainless Steel Anti-Vandal Fixing Screws</u>		
48	Block A Administration	No 1
49	Block B Holding Cells	No 1
50	Block A Care Taker's Change Rooms	No 1
51	Block B Care Taker's Change Rooms	No 1
<u>600 x 800 x 3mm Aluminium panel with 35mm Arial font lettering etched and sprayed black, wall mounted with 25 x 25mm GMS Brackets and Stainless Steel Anti-Vandal Fixing Screws</u>		
52	Block A Directory Signage	No 3
53	Block B Directory Signage	No 1
<u>600 x 150 x 3mm Aluminium panel with 35mm Arial font lettering etched and sprayed black, fixed with aluminium clamps flush to suspended ceilings</u>		
54	Victim Friendly Area	No 1
55	Offices	No 1
56	Investigator's Room	No 2
57	Visitor's Booth	No 1
58	Holding Cells	No 2
59	Male Cell	No 1
60	Female Cell	No 1
61	Juvenile Cell	No 1
62	Guard's Office	No 1
63	Front Service Area	No 1
64	Sensitive Statement	No 1

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65	Admittance Area	No	1
	<u>300 x 100 x 3mm Natural Aluminium panel with 35mm Arial font lettering etched and sprayed black, wall mounted with 25 x 25mm GMS Brackets and Stainless Steel Anti-Vandal Fixing Screws</u>		
66	Stationary	No	1
67	Server Room	No	1
68	POD Room	No	1
69	Inverter Room	No	1
70	Tea Kitchen	No	1
71	Store Room	No	1
72	Victim Friendly Consultation	No	1
73	Victim Friendly Examination	No	1
74	Victim Friendly Bathroom	No	1
75	Toilets	No	1
76	Pantry	No	1
77	Garden Store	No	1
78	Prisoner's Property Store	No	1
79	Pump Room	No	1
80	Emergency Generator	No	1
81	Blanket & Linen Store	No	1
	<u>300 x 150 x 3mm Natural Aluminium panel with 35mm Arial font lettering etched and sprayed black, wall mounted with 25 x 25mm GMS Brackets and Stainless Steel Anti-Vandal Fixing Screws</u>		
82	Station	No	1
83	Reception	No	2

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84	Finger Print Area	No	1		
85	CSC Commander Office	No	1		
86	Radio Room	No	1		
87	CAS Terminal	No	1		
88	Statement Office	No	1		
89	Sensitive Statement	No	1		
90	CIAC Office	No	2		
91	ID and Statements	No	1		
92	Cell Block Kitchen	No	1		
93	Visitors Booth	No	1		
94	Office	No	5		
95	General Store	No	2		
96	Admin Office	No	1		
97	Finance	No	1		
98	SAP Store	No	2		
99	Member's Change Room	No	1		
100	Victim Friendly Area	No	1		
101	Kitchen	No	2		
	<u>200 x 200 x 3mm Natural Aluminium panel with 35mm Arial font lettering etched and sprayed black, wall mounted with 25 x 25mm GMS Brackets and Stainless Steel Anti-Vandal Fixing Screws</u>				
102	Toilets	No	5		
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	<u>1100 x 1100 x 3mm Natural Aluminium cut out Arial font lettering sprayed black, wall mounted with 25 x 25mm GMS Brackets and Stainless Steel Anti-Vandal Fixing Screws</u>		
103	Entrance Logo Signage	No	1
	<u>NOTE: The following items shall be deemed to fall into Work Group No 136 for JBCC CPAP purposes</u>		
	<u>CHROMADEK PYLON SIGNAGE</u>		
	<u>Chromadek Free Standing Pylon single sided purpose signage with Arial font of various sizes, including galvanised mild steel subframe with fixing plate bolted to concrete plinth</u>		
104	Entrance Signage size 1850 x 925mm	No	1
105	Entrance Signage size 1000 x 2100mm	No	1
106	Entrance Signage size 2450 x 1220mm	No	2
	<u>NOTE: The following items shall be deemed to fall into Work Group No 141 for JBCC CPAP purposes</u>		
	<u>FITTINGS</u>		
	<u>Stainless steel shelving and lockers as per manufacturers specifications</u>		
107	450 x 300 x 1800mm High single tier steel locker complete	No	5

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 12</u></p> <p><u>PLASTERING</u></p> <p><u>CPAP WORK GROUP NO. 142 UNLESS OTHERWISE STATED</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017 Edition).</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>GRANOLITHIC</u></p> <p><u>Method</u></p> <p>The method to be used shall be either the monolithic method or the bonded method.</p> <p><u>Preparation</u></p> <p>For granolithic applied monolithically, the concrete floor shall be swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after it has hardened, the slab surface shall be hacked (preferably by mechanical means) until all laitance, dirt, oil, etc is dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before applying the granolithic.</p> <p><u>Mix</u></p> <p>Granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic.</p>			
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	<p>Section No. 2 Bill No. 12 PLASTERING</p>			

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Panels

Granolithic shall be laid in panels not exceeding 14m² for monolithic finishes, not exceeding 9,5m² for bonded finishes and not exceeding 6m² for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width.

Where possible joints between panels shall be positioned over joints in the floor slab and shall be at least 3mm wide through the full thickness of the finish, separated by strips of wood or fibreboard and finished with V-joints.

Laying

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels.

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels.

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated.

Curing, seasoning and protection

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying.

SCREEDS

Screeds wood floated on concrete

1	40mm Thick on floors and landings (LI)	m2	786
2	Average 25mm thick on roofs with upper surface to falls (LI)	m2	74

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3	50 x 50mm Triangular fillets against walls, kerbs, etc. (LI)	m	57
<u>GRANOLITHIC</u>			
<u>Untinted granolithic, on concrete</u>			
4	25mm Thick on floors and landings (LI)	m2	390
<u>INTERNAL PLASTER</u>			
<u>One coat cement plaster steel trowelled, on brickwork</u>			
5	On walls (LI)	m2	4,661
6	On narrow widths (LI)	m2	932
<u>One coat cement plaster steel trowelled, on concrete</u>			
7	On walls (LI)	m2	342
8	On narrow widths (LI)	m2	68
<u>One coat cement plaster (1:4) rendering coat with 4mm thick gypsum skim plaster finishing smooth on concrete</u>			
9	On underside of concrete slabs (LI)	m2	419

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	<u>BILL NO. 13</u>			
	<u>TILING</u>			
	<u>CPAP WORK GROUP NO. 144 UNLESS OTHERWISE STATED</u>			
	The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017 Edition).			
	<u>Patterns</u>			
	Unless otherwise described, tiles shall be laid with continuous joints in both directions.			
	<u>Fixing</u>			
	Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding.			
	Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key-coat.			
	Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts as recommended by the manufacturer of the tiles.			
	<u>WALL TILING</u>			
	<u>300 x 300 x 4mm Porcelain "Granito Evo" or other equal and approved tiles (colour of the tile to be advised by the Architect) fixed with adhesive to plaster (plaster elsewhere) and flush pointed with tinted grout</u>			
1	On walls	m2	336	
2	On narrow widths not exceeding 300mm	m2	14	
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FLOOR TILING

600 x 600 x 7mm Porcelain "ZZ Series" or other equal and approved tiles (colour of the tile to be advised by the Architect) fixed with adhesive to screed (screed elsewhere) and flush pointed with grout

3	On floors and landings	m2	672
4	Skirting 120mm high of cut tiles	m	796

300 x 300 x 8mm Non-slip "Granito Evo" or other equal and approved tiles (colour of the tile to be advised by the Architect) fixed with adhesive to screed (screed elsewhere) and flush pointed with epoxy grout

5	On floors and landings	m2	114
6	Skirting 120mm high of cut tiles	m	175

SUNDRIES

"Kirk Marketing, Coba Africa" or other equal and approved Aluminium corner protectors, stair nosings, edge trims, division strips etc.

7	Interior aluminium edge trim (Code: CAS E120.N), size 2.5 x 12mm x 2,5m long on tile surfaces, securely bedded in adhesive	m	25
8	Interior aluminium formable transition strip (Code: PMJ120.14), size 44 x 12mm x 2,5m long on tile floor covering, fixed to substrate with tile adhesive	m	15

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BILL NO. 14

**PLUMBING AND DRAINAGE
(PROVISIONAL)**

**SUBJECT TO ESCALATION AS INDICATED
BELOW**

The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017 Edition).

SUPPLEMENTARY PREAMBLES

Wire gratings

Descriptions of gutter outlets etc. shall be deemed to include wire balloon gratings.

Stainless steel basins, sinks, wash troughs, urinals, etc

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0).

Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8).

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Sealing of edges

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone.

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PVC-U pipes and fittings

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings.

Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings.

PVC-U pressure pipes and fittings

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.

Copper pipes

Pipes shall be hard drawn and half hard "Maksal" pipes of the class described. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half hard), Class 2 (half hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" or other equally and approved type. Capillary solder fittings shall comply with ISO 2016.

Copper pipes are to be installed in accordance with the latest revision of the Code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc to be strictly in accordance with the manufacturer's requirements with special attention to copper flux composition.

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given.

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Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level.

Paper wrapping to pipes

Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings.

Disinfection of water pipework

Water pipework is to be disinfected at completion in accordance with SABS 1200L (provision for disinfection elsewhere).

"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with 55% overlaps.

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc.

Prices for wrapping of pipes shall include for all work as described to couplings in the length.

Laying, backfilling, bedding, etc of pipes

Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled.

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

- SABS 1200L : Medium-pressure pipelines
- SABS 1200LD: Sewers
- SABS 1200LE: Stormwater drainage

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General

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends.

Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc. are given separately).

Descriptions of WC pans, urinals, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured).

All cost rates for the items in the BOQ must be the fully installed, tested and commissioned cost, including all necessary fixings, supports, clamps, etc. Branded items shall be equal or similar and approved. Material sample approval by consultant and SAPS must be done prior to bulk purchasing.

As-built drawings

Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere).

Note: Tenderer's are to refer to Architect's Sanware Schedule.

CPAP WORK GROUP NO. 146 UNLESS OTHERWISE STATED

RAINWATER DISPOSAL

Seamless aluminium Ogee gutters and rainwater pipes

1	155 x 115mm Ogee roof gutters	m	520
2	75mm diameter rainwater pipes	m	248
3	Extra over gutter for angle	No	60
4	Extra over gutter for outlet for 75mm pipe	No	45

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5	Extra over rainwater pipe for bend	No	135
6	Extra over rainwater pipe for shoe	No	45
7	Extra over rainwater pipe for swan-neck	No	45
8	Spreader for 155 x 75mm pipe 800mm long	No	45
<u>"Fulbore" cast iron outlets</u>			
9	100mm Rain-flo 180 degree Dome Grate full bore	No	8
<u>Sundries</u>			
10	Expanded Aluminium diamond mesh gutter guard with diamond hole size of 6mm x 4mm and material thickness of 1mm supplied in 155mm width. To be provided with self-tapping screws. Mesh to be fixed to top of gutter and under sheeting, to the outside lip of the gutter every 350mm using the self-tapping screws	m	520
<u>CPAP WORK GROUP NO. 148 UNLESS OTHERWISE STATED</u>			
<u>SANITARY FITTINGS</u>			
<u>"Franke, Kwikot" stainless steel or other equal and approved</u>			
11	1,2mm Grade 304 18/10 stainless steel SAPX597 wall and floor mounted shrouded maximum security WC Pan (Code:2540164), size 395 x 550 x 445mm high with external flange and integral stainless steel 100 "P" trap and back entry 60mm flush pipe inlet, bolted to wall and floor with anchor bolts, compliant with SABS 1733:2002	No	3
12	1,2mm Grade 304 18/10 stainless steel HDTX594 heavy duty wall hung pan (Code:2540138-001), size 360mm x 700mm x 351mm high with 40mm waste outlet and stainless steel "P" trap to WC, pan to be manufactured with a shroud with corner mounting gussets bolted to wall	No	2
13	1,2mm Grade 304 18/10 stainless steel SAPSDF combination wash hand basin & drinking fountain (Code:2520011), size 370 x 125 x 490mm high with 40mm concealed waste outlet, unit recessed 125mm into wall	No	5

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14	1.2mm Grade 304 18/10 "Quinline QLX621" stainless steel double sink, size 1200 x 500mm, with 2no. bowl size 343 x 410 x 149mm deep	No	2
15	1.2mm Grade 304 18/10 "Quinline QLX611" stainless steel sink, size 900 x 500mm, with bowl size 343 x 410 x 166mm deep	No	1
16	1.2mm Grade 304 18/10 stainless steel "Oval A" wall mounted basin (Code: 2520052), size 420 x 340 x 185mm, 40mm waste outlet connected to bottle trap (Code: 345/40), including pressed bowl size 360 x 280 x 130mm deep, with 50mm splashback ant 100mm radiused apron, anchored to wall with 4no. 6mm bolts	No	2
17	1.2mm Grade 304 18/10 stainless steel Sirx double wash trough (Code: 2560015-002), size 1100 x 850 x 240mm deep with pressed bowl with radiused corners, slanted ribbed front side for scrubbing and 40mm waste outlet, bolted to wall.	No	2
18	1.2mm Grade 304 18/10 stainless steel "P2" pot sinks (Code: 2620482), overall size 1850 x 650mm with 600 x 500 x 300mm deep bowl, 150mm high integral splash back to rear, 50 x 10mm turn down and 40mm waste outlet, stainless steel solid under shelf, size 900 x 420mm wide, underside sprayed with vermin proof bitumastic sound deadening, fixed to wall with anchor bolts 900mm from finished floor level and supported on 4No. detachable Grade 304 (18/10) stainless steel square legs (Code: 354650), size 40 x 40 x 1,2mm thick, fitted with chrome plated adjustable flanged foot pieces	No	1
19	1,2mm Grade 304 18/10 stainless steel "Model T" table (Code: 2620103), overall size 1850 x 650mm with 50 x 10mm turn down all around, underside sprayed with vermin proof bitumastic sound deadening, and supported on 4No. detachable Grade 304 (18/10) stainless steel square legs (Code: 354650), size 40 x 40 x 1,2mm thick, fitted with chrome plated adjustable flanged foot pieces	No	1

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20	1,2mm Grade 304 18/10 stainless steel "S2" catering sink (Code: 2620022), overall size 1500 x 650 x 1050mm with ϕ No. 500 x 500 x 230mm deep pressed bowls, 150mm high integral splash back to rear, 50 x 10mm turn down and 40mm waste outlet, underside sprayed with vermin proof bitumastic sound deadening, fixed to wall with anchor bolts 900mm from finished floor level and supported on 4No. detachable Grade 304 (18/10) stainless steel square legs (Code: 354650), size 40 x 40 x 1,2mm thick, fitted with chrome plated adjustable flanged foot pieces	No	1
21	1,2mm Grade 304 18/10 stainless steel "P1" pot sinks (Code: 2620481), overall size 900 x 650 x 1050mm with 600 x 500 x 300mm deep bowl, 150mm high integral splash back to rear, 50 x 10mm turn down and 40mm waste outlet, stainless steel solid under shelf, size 900 x 420mm wide, underside sprayed with vermin proof bitumastic sound deadening, fixed to wall with anchor bolts 900mm from finished floor level and supported on 2No. detachable Grade 304 (18/10) stainless steel square legs (Code: 354650), size 40 x 40 x 1,2mm thick, fitted with chrome plated adjustable flanged foot pieces	No	1
<u>"Cobra Watertech, Walcro, Grohe" or other equal and approved</u>			
22	"Shelter Round" wall hung basin size 495 x 430 x 190mm with brackets colour White fixed with stainless steel screws and washers to plugs in wall with optional concealed wall brackets sealed with abe Dow Corning acetoxo silicone sealant where basin meets wall	No	5
<u>"Vaal, Duravit, Geberit" or other equal and approved</u>			
23	"Entice" size 670 x 360mm rimless close couple suite with rimless wash down pan and close coupled matching dual flush cistern, including soft close seat - White(Code: 772669WH)	No	13
24	"Entice" size 610 x 450 x 460mm high rimless wash down pan, including soft close seat - White(Code: 431300WH)	No	2
25	Anti-splash flushing design wall urinal with concealed trapway, p-trap, hanging bracket set - White(Code: 705600WH)	No	5
26	"Concorde" drop in basin size 580 x 510mm - White (Code: 702704WH)	No	14

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WASTE UNIONS ETC

"Cobra Watertech, Walcro, Grohe" or other equal and approved

27	32mm slotted waste (Code:301/N) with 62mm diameter flange, 80mm long shank and plug	No	14
28	32mm slotted waste (Code:303/N) with 62mm diameter flange, 77mm long shank and plug	No	5

TRAPS ETC

"Cobra Watertech, Walcro, Grohe" or other equal and approved

29	Brass stainless steel floor P trap with tamper proof square grating (Code:373SQ/N)	No	4
30	Chrome universal bottle trap with adjustable telescopic waste (Code:340/N)	No	26

TAPS, VALVES, ETC

"Franke, Kwikot" or other equal and approved

31	Franke chrome finish sink mixer tap (Code: 1150019)	No	3
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"Cobra Watertech, Walcro, Grohe" or other equal and approved

32	Chrome finish vandal proof anti ligature shower head, single function to include 1/2 BSP male inlet (Code: COB-KP2-6/N)	No	4
33	Chrome finish non hold open feature, flush valve with push rod captive linkage, integral vacuum breaker, and ball stop control inlet. 3/4 BSP female iron connection end. (Code:FJ4-001/N), including chrome plated push botton assembly with copper tube, push rod, and locking nut (Code:C-KM9-15/N), and with integral vacuum breaker with ball stop control inlet, including guide tube, push-rod and captive linkage, push-button assembly and rubber pan connector (Code:FJ4-203PR/N)	No	6

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34	Chrome finish non hold open feature, flush valve with wall flange, extended flush handle (Code:C-FM8-80/N), integral vacuum breaker, control stop with integral non return valve inlet. 1/4 BSP female iron connection end, and bent flush pipe and rubber pan connector (Code:FM1-100/N)	No	2
35	Chrome finish non hold open, self closing meter wall tap with stainless steel wall flange. 1/2" BSP male iron connection ends(Code:KM2-301/N)	No	4
36	Chrome finish non hold open feature, urinal flush valve with ball stop control inlet, and wall flange (Code: FJ6-000/N)	No	5
37	Chrome finish urinal flush pipe with inlet adaptor, size 215 x 15mm diameter (Code: FJT5-5/N)	No	5
38	15mm "Star Heavy Pattern" chrome plated wall mounted sink mixer with aerated swivel spout (Code: 166/041/NV)	No	3
39	15mm "Carina Original" chrome plated basin mixer with fixed spout (Code: 294CA/NV)	No	6
40	15mm "Nile" pillar type chrome plated basin mixer (Code: NL-951)	No	10
41	15mm Chrome plated medical elbow action square pillar type medical mixer (Code: 505-21B/HP)	No	2
42	15mm Chrome angle regulating valve (Code: 232-10/N)	No	48
43	15mm Chrome plated star heavy patterned stop tap (Code: 138-15/NV)	No	6
<u>"Grohe" or other equal and approved</u>			
44	Stainless steel thermostatic mixer 1 1/4 (Code-G-35087000)	No	1

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HOT WATER PLANT

45	HP-1 - "Thermowise TKRS-05", ITS Solar & Heat Pump", "Kwikot" or other equal and approved - 5.2kW air-to-water heat pump, heating reservoir water to a temperature of between 55 - 60°C, with minimum ambient temperature of -7°C, incl. automatic defrost cycle, all safety features, thermostats, controls, connection to main control panel, with maximum noise level of 52dB(A), electrical isolator, fittings, insulation, cladding, bends, tees, and necessary accessories (load control valve, dual draincock valve, etc.) as specified, PVC drains to nearest drainage point, mountings and anti-vibration dampers	No	4
46	Extra over for "Bluchem" treatment to HP-1 coils	No	4
47	G-1 - hot water geyser - 150ℓ incl. 3kW internal electrical heating elements, flanged ports, insulation, galvanised steel cladding, drain and drain piping, all safety features, supports, electrical isolator, and all necessary accessories (draincock valve, banjo valve, dual draincock valve, vacuum breaker valve, 600 kPa safety valve, 600 kPa pressure control valve, etc.) as specified	No	2
48	G-2 - hot water geyser - 200ℓ incl. 4kW internal electrical heating elements, flanged ports, insulation, galvanised steel cladding, drain and drain piping, all safety features, supports, electrical isolator, and all necessary accessories (draincock valve, banjo valve, dual draincock valve, vacuum breaker valve, 600 kPa safety valve, 600 kPa pressure control valve, etc.) as specified	No	2
49	HB-1 - supply and install hydroboil - 2.5ℓ	No	2
50	IV-1 - Isolation valve for copper - Ø22 mm	No	8
51	NRV-1 - Non-return valve - Ø22 mm	No	4
52	STR-1 - Y-strainer - Ø22 mm	No	4
<u>"Franke, Kwikot" or other equal and approved</u>			
53	431 x 250 x 150mm high 2.5 litre White epoxy HydroBoil mounted to wall, supplied and installed complete (Code: 2610006)	No	3

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PE-RT II / AI / PE-RT II (Geberit Mepla) or other equal and approved pipes with capillary couplings, brackets, etc. incl. colour coding and directional markings. (All underground pipework to be "Denso" or gaffer wrapped)

54	Straight pipe - Ø16 mm	m	183
55	Straight pipe - Ø20 mm	m	92
56	Straight pipe - Ø26 mm	m	77
57	Straight pipe - Ø32 mm	m	47
58	Straight pipe - Ø40 mm	m	28
59	Straight pipe - Ø50 mm	m	6
60	90° elbow - Ø16 mm	No	89
61	90° elbow - Ø20 mm	No	56
62	90° elbow - Ø26 mm	No	20
63	90° elbow - Ø32 mm	No	24
64	90° elbow - Ø40 mm	No	1
65	Equal tee - Ø16 mm	No	1
66	Equal tee - Ø20 mm	No	15
67	Equal tee - Ø26 mm	No	20
68	Equal tee - Ø32 mm	No	14
69	Equal tee - Ø40 mm	No	24
70	Equal tee - Ø50 mm	No	7
71	Reducer - Ø20/16 mm	No	75
72	Reducer - Ø26/16 mm	No	9
73	Reducer - Ø26/20 mm	No	28
74	Reducer - Ø32/16 mm	No	3

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