

SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MASHAYILANGA POLICE STATION

Brought Forward		R
<p><u>"Jansen Systems Arte" or other equal and approved 6.38mm laminated safety glass, Interpon Class 2 D2525T powder coated, bullet resistant high-tech security curtain walls and shop fronts, to Architects approval</u></p>		
40	2275 x 900mm High external grade curtain wall, consisting of three equal 758 x 900mm fixed panes and three equal 750 x 300mm fixed panes (Steel Curtain Wall type: CW-B)	No 1
41	1400 x 1200mm High external grade shopfront, consisting of two equal 700 x 900mm fixed panes and two equal 700 x 300mm top hung panes (Steel shopfront type: SF-B)	No 4
<p><u>STEEL STRONGROOM DOORS, VENTILATORS, ETC</u></p>		
<p><u>Strongroom doors etc suitable for 220mm walls fixed to brickwork</u></p>		
42	900 x 2032mm High steel louvred single door with 50mm frame, complete (Door type: SD-E)	No 1
43	1100 X 2020mm High galvanised mild steel door and grille manufactured from steel tubing and including frame, all in accordance with the SAPS 5 Star Specification (Door type: SD-B)	No 1
44	1000 x 2032mm High strong room door and frame complete with mechanism and fixing lugs (Door type: SD-A)	No 2
45	1510 x 2032mm High steel high security double louvred door, consisting of two equal leaves of size 755 x 2032mm high with minimum 100mm rebated meeting stiles and 50mm frame complete with mechanism and fixing lugs (Door type: SD-C, SD-D)	No 2
<p>Carried Forward to Summary of Section No. 2</p>		R
<p>Section No. 2 Bill No. 12 Metalwork</p>		

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 13</u>			
	<u>PLASTERING</u>			
	<u>(CPAP WORK GROUP NO. 142 UNLESS OTHERWISE STATED)</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).			
	<u>SCREEDS</u>			
	<u>5mm approved self levelling screed on concrete</u>			
1	On screeded floors and landings (LI)	m2	228	
	<u>Screeds steel trowelled, on concrete</u>			
2	25mm thick on floors (LI)	m2	438	
3	On flat roofs (LI)	m2	449	
	<u>GRANOLITHIC</u>			
	<u>"Stoncor Euclid Chemical" or other equal and approved fully bonded, untinted granolithic, rapid hardening mortar topping on concrete, including 6mm washed aggregate and sealed with "Euco Diamond hard" sealer</u>			
4	35mm Thick steel floated finish, laid in accordance to manufacturers recommendations (LI)	m2	499	
5	Average 35mm thick screed on treads and risers of staircases (LI)	m2	22	
6	Skirtings 75mm high (LI)	m	573	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster steel trowelled, on brickwork</u>			
7	On walls (LI)	m2	3,789	
	Carried Forward			R
	Section No. 2 Bill No. 13 Plastering			

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8	On narrow widths (LI)	m2	142
	<u>Cement plaster steel trowelled on concrete including necessary grinding of shutter marks and filling in imperfections to Architect's approval</u>		
9	On soffits of slabs (LI)	m2	356
10	On raking soffit of stairs (LI)	m2	16
11	On columns (LI)	m2	11
	<u>EXTERNAL PLASTER</u>		
	<u>Cement plaster wood floated on concrete surfaces</u>		
12	On soffits of slabs (LI)	m2	112
13	On beams (LI)	m2	144
14	On columns (LI)	m2	11
	<u>DIVIDING STRIPS, ETC</u>		
15	3 x 40mm Flat section brass dividing strips between different floor finishes (LI)	m	46
Carried Forward to Summary of Section No. 2			R
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Item
No

SECTION NO. 2

BILL NO. 14

TILING

(CPAP WORK GROUP NO. 144 UNLESS OTHERWISE STATED)

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

SUPPLEMENTARY PREAMBLES

Prime Cost amounts for tiles are NET

Rates for tiling, in addition to the PC amount, must include for fixing, adhesive, grout, wastage, profit, etc

NOTES

Prior to the laying of the floor tiles, the screeded substrate shall be thoroughly checked for levelness, imperfections, etc., as no claim will be entertained should the floor be deemed to be uneven in appearance by the Architect or Client

Fixing

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.

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Tiling

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Brought Forward			R
<u>PORCELAIN FLOOR TILING</u>			
<u>600 x 600 x 7.8mm Thick 'EcoTec' or other equal and approved glazed matt porcelain tiles (Code: GR1ISP810EA), colour - Spazio Charcoal, including adhesives and surface bed preparation to manufacturer recommendation with a white grout finish and approved sealer on all exposed surfaces, including expansion joints, as recommended by manufacturer</u>			
4	On floors (LI)	m2	382
5	Skirting 100mm high cut from full bodied tiles (LI)	m	378
<u>600 x 600 x 7.8mm Thick 'EcoBody' or other equal and approved glazed porcelain Slip-resistant tiles (Code: GR1IAV200SREA), colour - Avenue Grey, including adhesives and surface bed preparation to manufacturer recommendation with a white grout finish and approved sealer on all exposed surfaces, including expansion joints, as recommended by manufacturer</u>			
6	On floors (LI)	m2	18
7	Circular cutting (LI)	m	7
<u>SKIRTINGS, NOSINGS, ETC.</u>			
<u>Stainless steel square edge tile trim fixed simultaneously with tiling including mitres, ends, etc. sealed to tiled skirting with an approved sealant</u>			
8	12mm Edge trim to walls (LI)	m	247
9	25 x 25mm Angle intersection (LI)	m	55
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Tiling			

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Item
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SECTION NO. 2

BILL NO. 15

**PLUMBING AND DRAINAGE (CPAP WORK
GROUP NO. 148 UNLESS OTHERWISE
STATED) (PROVISIONAL)**

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

All materials and workmanship shall comply with the relevant SABS specifications

SUPPLEMENTARY PREAMBLES

Wire gratings

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

Stormwater channels

Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc. and disposal of surplus material on site.

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).

Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8).

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

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Bill No. 15
Plumbing and Drainage (Provisional)

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Sealing of edges

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

uPVC 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.

uPVC 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.

High density polyethylene (HDPE) pipes and fittings

Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings.

"Polycop" polypropylene pipes

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings.

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

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Plumbing and Drainage (Provisional)

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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.

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).

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"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.

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

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB : Earthworks (Pipe trenches).

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes).

Unless otherwise described bedding of rigid pipes shall be Class B bedding.

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Plumbing and Drainage (Provisional)

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Brought Forward			R
<u>RAINWATER DISPOSAL</u>			
<u>Pre-coated seamless aluminium gutters including matching rivet fixed mitres and end caps sealed using silicon mastic hung by screw fixed internal aluminium hangers at 600mm centres with accessories installed in accordance with manufactures instructions, colour to Architects approval (non-standard colours)</u>			
1	185 x 165mm Modern box gutter with support brackets at 600mm centres	m	138
<u>"HDPE" pipes</u>			
2	50mm Diameter rainwater downpipes built into brickwork (elsewhere measured)	m	56
3	Extra over 50mm diameter rainwater down for 88.5 degree equal junction pipe	No	7
4	Extra over eaves gutter for outlet for 75 x 50mm pipe	No	14
5	Extra over eaves gutter for drop box suitable for 185 x 165mm box gutter	No	14
6	Extra over gutter for stopped end	No	18
7	Extra over gutter for angle	No	28
8	Extra over for 50mm diameter rainwater downpipe for PVC stop end cap	No	7
<u>"Marley Vynadeep" or other equal and approved SABS grade uPVC pipes</u>			
9	70mm Diameter rain water down pipe	m	32
10	Extra over eaves gutter for outlet for 70mm pipe	No	8
11	Extra over eaves gutter for drop box suitable for 70mm diameter gutter	No	8
12	Extra over gutter for angle	No	16
13	Spreader for 70mm diameter rain water pipe	No	1
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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward					
<u>"ACO Self Euroline" or equal and approved stainless steel 304 parapit fullbore outlet, all in accordance with the Architects Drawing No. S4-601</u>					
14	Stainless steel 304 vertical fullbore outlet recessed into brickwalls (elsewhere measured)	No	7		
15	Linear drainage channel with triangular bar grating (Heelsafe), recessed into concrete	m	30		
<u>"ACO" or equal and approved</u>					
16	Oleopator separator consisting of top section light liquid and oil separators, sludge trap and sampling shafts, cast into concrete	No	1		
<u>The Tenderer is to refer to the Architects Saneware schedule S3-502 Rev 1 when pricing the following items</u>					
<u>SANITARY FITTINGS</u>					
<u>WASH HAND BASINS AND SINKS</u>					
<u>"Ceramic industries" or other equal and approved</u>					
17	485 x 375mm "Starna" Basinbox free standing wash hand basin (Code: YWBST08A), including 15 x 15mm angle valve (Code: TVAC1408/CH)	No	9		
18	365 x 480mm "Talia" Basinbox free standing wash hand basin (Code: WBTA0108A), including 15 x 15mm angle valve (Code: TVAC1408/CH)	No	12		
<u>"Franke" or other equal and approved</u>					
19	370 x 490 x 125mm Combination wash hand basin and drinking fountain with 40mm waste outlet, recessed 125mm into brickwork (Code: SAPSDF)	No	3		
20	800 x 460mm "Nouveau" Stainless steel single bowl sink, including 90mm waste and 15 x 15mm angle valves for hot and cold water	No	13		
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<u>"LG Green" or other equal and approved</u>			
21	Single precast concrete wash trough, 760mm x 570mm x 380mm deep fitted on two purpose made 580mm high precast concrete legs, including waste and ribbed wash board	No	10
<u>WATER CLOSETS</u>			
<u>"Euro" or other equal and approved</u>			
22	"Salina" Floor mounted suite with slim line seat (Code: YTEU016A)	No	8
23	"Sphinx" Floor mounted suite top flush water closet (Code: XTEU016A)	No	9
<u>"Lecico" or other equal and approved</u>			
24	"Laguna" Floor standing paraplegic water closet with back inlet (Code: LEC-PARPANLLF0000UE)	No	3
<u>"Geberit" or other equal and approved</u>			
25	"Sigma kombifix" Concealed cistern and element for wall-hung water closets (Code: 110.798.00.1), including stainless steel actuator plate (Code: 115.883.KH.1)	No	20
<u>"Franke" or other equal and approved</u>			
26	395 x 550 x 445mm Stainless steel heavy duty wall and floor mounted water closet, including necessary fixings (Code: SAPX597)	No	3
<u>"Walcro" or other equal and approved</u>			
27	Concealed toilet flush valve (Code: No104C), including integral vacuum breaker and modified push-rod connector	No	3
<u>URINALS</u>			
<u>"Ceramic industries" or other equal and approved</u>			
28	Box ben top entry ceramic urinal (Code: 030420), including all necessary fittings and concealed self close push tap with vandal proof cartridge, ball valve and concealed box (Code: TVIDITT08525/1)	No	4
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<u>"Lecico" or other equal and approved</u>		
29	630 x 320 x 150mm Wide ceramic urinal separator fixed to walls	No 2
<u>WASTE UNIONS, ETC.</u>		
<u>"International Tap Distributors" or other equal and approved</u>		
30	32mm Chrome plated anti-vandal waste (Code: TVAC1033/CH)	No 9
31	32mm Chrome plated pop-up basin waste (Code: TVAC1033/CH)	No 12
32	90mm Unslotted basin waste with backnut, plug and stirrup (code: 317-40)	No 13
<u>TRAPS, ETC.</u>		
<u>"Stylux" or other equal and approved</u>		
33	32 x 40mm Chrome bottle trap (Code: TVAC9016/CH)	No 21
34	50mm Square high flow shower waste (Code: WRSW001)	No 13
<u>"Geberit" or other equal and approved</u>		
35	50X50mm HDPE P trap	No 23
<u>TAPS, VALVES, ETC.</u>		
<u>TAPS</u>		
<u>"Grohe" or other equal and approved</u>		
36	"Euro-eco" Chrome cosmopolitan T-self closing bib tap (Code: G-36286000)	No 9
37	"Bauedge" 1/2" Single lever basin mixed (Code: G-32858001)	No 9
38	"BauEco" 1/2" Single lever sink mixer (Code: G-31680000)	No 13
Carried Forward		R
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<u>"Cobra" or other equal and approved</u>			
39	Chrome plated heavy pattern medical pillar tap (Code: 505-21B/HP)	No	3
40	1/2" Male iron standard brass wall tap (Code: 200-15/N)	No	10
41	"Ledimo" concealed compression stop tap with 15mm sliding wall flange (Code: L0-238-15/N)	No	26
42	Chrome plated heavy pattern medical pillar tap (Code: 505-21R/HP)	No	3
<u>Drinking Fountain</u>			
43	Drinking fountain consisting of 100mm thick wood float finished concrete slab size 2250 x 1000mm wide, 100 x 50 x 11mm mild steel channel overall size 1500mm wide x 600mm high above ground welded to 200 x 200 x 4mm thick mild steel base plates cast into 300 x 300 x 300mm Class D concrete bases, including coring of 3no. holes for and including pillar taps, fittings, galvanised pipe, etc. As per Architects approval	No	1
<u>SHOWER HEADS</u>			
<u>"Idral" or other equal and approved</u>			
44	Wall mounted anti-ligature shower head, including unscrewing control system (Code: 09033)	No	13
<u>"Grohe" or equal and approved</u>			
45	Chrome plated paraplegic hand shower (Code: G-27598001) with three way mounted diverter (Code: 54003) and 15mm round rainshower outlet	No	2
<u>DRAINAGE</u>			
<u>SUB-SOIL DRAINAGE</u>			
<u>UPVC pipes</u>			
46	75mm Pipe with laid in brickwork for weep hole	m	186
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Plumbing and Drainage (Provisional)			

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 16</u>			
	<u>PAINTWORK</u>			
	<u>(CPAP WORK GROUP NO. 152 UNLESS OTHERWISE STATED)</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).			
	<u>ON INTERNAL FLOATED PLASTER SURFACES</u>			
	<u>Prepare and brush surface to remove all loose contaminants and one coat Plascon Professional or other equal and approved plaster primer and two coats Plascon Professional Superior Low Sheen or other equal and approved.</u>			
1	On Walls (LI)	m2	2,080	
	<u>Prepare and brush surface to remove all loose contaminants and one coat Plascon Professional or other equal and approved plaster primer and two coats Plascon Velveqlo Satin or other equal and approved.</u>			
2	On Walls (LI)	m2	431	
	<u>Prepare and brush surface to remove all loose contaminants and one coat Plascon Professional or other equal and approved plaster primer and two coats Plascon Professional Superior Low Sheen or other equal and approved.</u>			
3	On Walls (LI)	m2	240	
	Carried Forward			R
	Section No. 2 Bill No. 16 Paintwork			

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SOUTH AFRICAN POLICE SERVICES
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<u>ON EXTERNAL FLOATED PLASTER SURFACES</u>			
<u>Prepare and brush surface to remove all loose contaminants and apply alkali resistant plaster primer, one undercoat and two coats exterior quality PVA as per manufacturer's specification</u>			
4	On beams (LI)	m2	155
<u>ON FIBRE-CEMENT SURFACES</u>			
<u>Prepare and apply, one coat alkali resistant primer, one undercoat and two coats approved exterior quality acrylic PVA emulsion paint to selected tints on</u>			
5	Barge boards (LI)	m2	112
<u>ON PLASTERBOARD SURFACES</u>			
<u>Prepare and brush surface to remove all loose contaminants and one coat 'Plascon Professional' or other equal and approved plaster primer and two coats 'Plascon Kitchens & Bathroom' matt paint for interior use</u>			
6	On ceilings (LI)	m2	445
<u>Prepare and brush surface to remove all loose contaminants and one coat 'Plascon Professional' or other equal and approved plaster primer and two coats 'Plascon Professional Super' matt paint for interior use</u>			
7	On ceilings (LI)	m2	159
<u>ON PLASTERED CONCRETE SURFACES</u>			
<u>Prepare concrete surfaces by grinding off shutter-marks and repairing imperfections to Architects satisfaction and apply one coat 'Plascon Professional' or other equal and approved plaster primer and two coats 'Plascon Professional Super' matt paint for interior & exterior use</u>			
8	On concrete soffits (LI)	m2	468
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<u>ON WOOD SURFACES</u>			
<u>Prepare and sand down surface to remove all loose contaminants, stop with 'Plascon Polyfila Mendall' or other equal and approved wood filler where necessary and apply one coat 'Plascon' wood primer or other equal and approved and two coats 'Plascon Waterbased Velvagio' or other equal and approved</u>			
9	Doors (LI)	m2	455
<u>Prepare surfaces and remove all loose material, apply two coats 'ABE Provonite' carbolineum or other equal and approved anti-corrosive coal tar paint</u>			
10	Exposed roof timbers externally (LI)	m2	218
<u>ON POLYSTYRENE SURFACES</u>			
<u>Prepare and apply two coats 'Plascon Waterbased Velvagio' or other equal and approved</u>			
11	Skirtings, etc not exceeding 300mm girth (LI)	m	200
<u>ON METAL SURFACES</u>			
<u>Prepare and apply one coat 'Plascoquad 75 Zinc' phosphate epoxy primer or other equal approved and two coats 'Plascothane 9000' polyurethane or other equal and approved</u>			
12	Windows (LI)	m2	15
13	Strongroom doors and frames (LI)	m2	76
14	Balustrades, etc (both sides measured over the full flat area) (LI)	m2	38
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 1</u>			
	<u>ELECTRICAL INSTALLATION (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</u>			
	<u>Notes:</u>			
	The Model Preambles for Trades 2017 as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained			
	Tenderers to insure all cost related to specialist subcontractors preliminaries & general are price within the main contractors preliminaries & general section, as no additional cost for subcontractors preliminaries & general shall be entertained. Main contractors preliminaries & general shall be deemed to include subcontractors preliminaries & general cost.			
	<u>COMPLIANCE AND CERTIFICATION</u>			
1	Allow for engraved labels to all light switches, switch socket outlets and isolators indicating the DB name and circuit numbers			
		Item		
2	Earth cable trays and ladders with 10 mm ² Cu PVC cable jumpers across joints, splices, elbows, tees etc.			
		item		
	<u>SITE RETICULATION</u>			
3	Excavate not exceeding 800 mm deep in soft material for cabling and cable pipe trench including bedding, backfilling, compaction and disposal of surplus material	m3	320	
4	Excavate not exceeding 800 mm deep in intermediate rock material for cabling and cable pipe trench including bedding, backfilling, compaction and disposal of surplus material	m3	86	
	Carried Forward			R
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Brought Forward			R
5	Excavate not exceeding 800 mm deep in hard rock material for cabling and cable pipe trench including bedding, backfilling, compaction and disposal of surplus material	m3	42
6	Earthing and bonding of cable ladder and galvanised trunking 10 mm ² Cu PVC jumpers with lugs	Item	
<u>ELECTRICAL/ELECTRONIC MANHOLES</u>			
7	Supply and install 600x600x600mm manhole to specification complete with heavy duty manhole cover	No	8
8	Supply and install 800x800x800mm manhole to specification complete with heavy duty manhole cover	No	8
9	Supply and install 1000x1000x1000mm manhole to specification complete with heavy duty manhole cover	No	9
<u>SLEEVES</u>			
<u>Supply the following cable sleeves:</u>			
10	160mm uPVC sleeves.	m	360
11	110mm uPVC sleeves.	m	620
12	75mm uPVC sleeves.	m	722
13	50mm uPVC sleeves.	m	236
<u>Extra on last to install the following in trench (trenching measured elsewhere)</u>			
14	160mm uPVC sleeves.	m	360
15	110mm uPVC sleeves.	m	620
16	75mm uPVC sleeves.	m	722
17	50mm uPVC sleeves.	m	236
<u>Supply the following 600/1000 Volt Cu PVC SWA PVC ECC cables:</u>			
18	185 mm ² 4 core	m	20
19	150 mm ² 4 core	m	15
Carried Forward			R
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Brought Forward			R
20	120 mm ² 4 core	m	260
21	95 mm ² 4 core	m	180
22	70 mm ² 4 core	m	12
23	50 mm ² 4 core	m	4
24	35 mm ² 4 core	m	15
25	25 mm ² 4 core	m	26
26	16 mm ² 4 core	m	55
27	10 mm ² 4 core	m	12
28	6 mm ² 4 core	m	452
29	16 mm ² 2 core	m	38
30	10 mm ² 2 core	m	187
31	6 mm ² 2 core	m	45
	<u>Extra on last to install in cable sleeve, ladder, tray, basket</u>		
32	185 mm ² 4 core	m	20
33	150 mm ² 4 core	m	15
34	120 mm ² 4 core	m	260
35	95 mm ² 4 core	m	180
36	70 mm ² 4 core	m	12
37	50 mm ² 4 core	m	4
38	35 mm ² 4 core	m	15
39	25 mm ² 4 core	m	26
40	16 mm ² 4 core	m	55
	Carried Forward		
	Section No. 3 Bill No. 1 Electrical Installation		R

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

Brought Forward			R
<u>L.V CABLING</u>			
41	10 mm ² 4 core	m	12
42	6 mm ² 4 core	m	452
43	16 mm ² 2 core	m	38
44	10 mm ² 2 core	m	187
45	6 mm ² 2 core	m	45
<u>Termination inclusive of cable glands, lugs etc.</u>			
46	185 mm ² 4 core	m	2
47	150 mm ² 4 core	m	2
48	120 mm ² 4 core	m	6
49	95 mm ² 4 core	m	8
50	70 mm ² 4 core	m	2
51	50 mm ² 4 core	m	2
52	35 mm ² 4 core	m	4
53	25 mm ² 4 core	m	2
54	16 mm ² 4 core	m	6
55	10 mm ² 4 core	m	4
56	6 mm ² 4 core	m	4
57	16 mm ² 2 core	m	8
58	10 mm ² 2 core	m	20
59	6 mm ² 2 core	m	6
<u>Supply and install Scotchcast cable joint for the following PVC SWA PVC ECC cables:</u>			
60	95 mm ² 4 core	No	1
Carried Forward			R
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Brought Forward			R
61	50 mm ² 4 core	No	1
62	35 mm ² 4 core	No	1
63	16 mm ² 4 core	No	2
<u>DISTRIBUTION BOARDS</u>			
<u>Supply and delivery of the following distribution</u>			
64	Main Metering Kiosk As per single line diagram - Drawing No. 23037_400	No	1
65	Extra on last to install	No	1
66	Main LV Panel Distribution board - DB-G/GE/G-UPS As per single line diagram - Drawing No. 23037_401	No	1
67	Extra on last to install	No	1
68	Lower Floor Distribution board - DB-CR As per single line diagram - Drawing No. 23037_402	No	1
69	Extra on last to install	No	1
70	Lower Floor Distribution board - DB-LGF1 As per single line diagram - Drawing No. 23037_403	No	1
71	Extra on last to install	No	1
72	Main Residence Meter Frame - As per single line diagram - Drawing No. 23037_405	No	1
73	Extra on last to install	No	1
74	Typical Residence Distribution Board - As per single line diagram - Drawing No. 23037_404	No	10
75	Extra on last to install	No	1
76	Lighting Kiosk Distribution board As per single line diagram - Drawing No. 23037_406	No	2
77	Extra on last to install	No	1
78	PV Load Distribution board As per single line diagram - Drawing No. 23037_411	No	2
Carried Forward			R
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Brought Forward			R
79	Extra on last to install	No	1
80	PV Grid Tied Distribution board As per single line diagram - Drawing No. 23037_412	No	2
81	Extra on last to install	No	1
82	PV Change over Distribution board As per single line diagram - Drawing No. 23037_413	No	2
83	Extra on last to install	No	1
<u>LIGHTING AND SMALL POWER: GROUND FLOOR</u>			
<u>LIGHTING</u>			
<u>Supply and install the following:</u>			
84	25 mm PVC conduit surface mounted	m	579
85	25 mm PVC conduit cast-in to floor slab	m	120
86	25 mm PVC conduit in partition wall	m	202
<u>PVC insulated 1 000 V grade hard drawn copper wire drawn into trunking/conduit and coloured as per phase</u>			
87	2.5 mm ²	m	2,629
88	2,5 mm ² PVC insulated surfix cable	m	467
89	Extra on last to terminate inclusive of glands etc.	No	36
90	Single lever 1 way 16 amp Crabtree classic or equal and approved light switch in 100 x 50/50 galvanised box inclusive of cover	No	56
91	2 lever 1 way 16 amp Crabtree classic or equal approved light switch or other in 100 x 50/50 galvanised box inclusive of cover	No	8
92	Two lever 2 way 16 amp Crabtree classic or equal and approved light switch in 100 x 50/50 galvanised box inclusive of cover	No	2
Carried Forward			R
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**SOUTH AFRICAN POLICE SERVICES
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Brought Forward			R
93	6 amp unswitched socket outlet (yellow)	No	156
94	65mm PVC round box for 25mm conduit	No	197
95	65mm 3 way PVC round draw box	No	36
96	20A Photocell inclusive of bulkhead enclosure	No	12
97	Occupancy sensor - Province Lighting (PS-PIR3) or equal and approved flush mounted, white with 360 degree detection angle	No	36
98	Deman Alux Controller Alux M6 Master unit - AluxM6A10	No	30
99	Deman Alux Controller Alux M7 Master unit - AluxM7A10	No	15
100	Deman Alux Slave Alux S1 unit - AluxS1A11	No	90
101	Deman Alux Slave Alux S2 unit - AluxS2A10	No	15
<u>SMALL POWER</u>			
<u>Supply and install the following:</u>			
102	Deman Alux Slave Alux S3 unit - AluxS3A10	No	15
103	Deman Alux Slave cable - Alux12H10	No	15
104	Supply and install P9000 trunking complete with cover plate to soffit	m	43
105	Supply and install P9000 Tee-piece	No	6
106	Supply and install P9000 4-way piece	No	6
107	Supply and install P9000 end caps	No	8
108	20 mm PVC conduit surface mounted	m	456
109	20 mm PVC conduit cast-in slab	m	102
110	20 mm PVC conduit in partition wall	m	190
111	25 mm PVC conduit surface mounted	m	336
Carried Forward			R
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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MASHAYILANGA POLICE STATION**

Brought Forward				R
112	25 mm PVC conduit cast-in to floor slab	m	542	
113	25 mm PVC conduit in partition wall	m	616	
114	32 mm PVC conduit surface mounted	m	334	
115	32 mm PVC conduit cast-in to floor slab	m	655	
116	32 mm PVC conduit in partition wall	m	318	
<u>PVC insulated 1 000 V grade hard drawn copper wire drawn into trunking/conduit and coloured as per phase</u>				
117	2.5 mm ²	m	1,970	
118	4.0 mm ²	m	3,348	
119	6.0 mm ²	m	1,976	
120	2,5 mm ² PVC insulated surfix cable	m	744	
121	Extra on last to terminate inclusive of glands etc.	No	22	
122	Supply and install single switch socket outlet, with euro combo outlet in 100x100/50 PVC conduit box Crabtree classic or equal and approved	No	30	
123	Supply and Install 20A Three pin UPS switch socket outlet installed in power skirting / floor box	No	36	
124	Supply and Install 20A Three pin dedicated switch socket outlet installed in power skirting / floor box	No	36	
125	Supply and Install 20A Three pin normal switch socket outlet in installed in power skirting / floor box	No	36	
126	Supply and Install 20A Three pin euro switch socket outlet in installed in power skirting / floor box	No	38	
127	Blank cover plate	No	40	
128	65mm PVC round box for 25mm conduit	No	159	
129	100x100/50 PVC conduit boxes for AC controller	No	155	
Carried Forward				R
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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MASHAYILANGA POLICE STATION**

Brought Forward			R
130	Supply and install P9000 trunking complete with cover plate to soffit	m	366
131	Supply and install P9000 crossover	No	10
132	Supply and install P9000 elbow	No	10
133	Supply and install P9000 Tee-piece	No	8
134	Supply and install P9000 end caps	No	20
135	Supply and install P9000 4-way piece	No	4
136	Supply and install 10A single phase isolator for extraction	No	8
137	Supply and install 20A single phase isolators for aircon supply	No	28
138	Supply and install 20A single phase isolators for hydroboil / kitchen equipment	No	10
139	Supply and install 20A single phase isolators for hand drier power supplies	No	8
140	Supply and install 30A single phase isolators	No	45
141	Supply and install 30A single phase weather proof isolator for aircon supply	No	10
142	Supply and install 40A single phase weather proof isolator for aircon supply	No	15
143	Supply and install 30A three phase isolators for aircon supply	No	33
144	Supply and install 40A three phase isolators for aircon supply	No	20
145	Supply and install 40A three phase weather proof isolator for aircon supply	No	12
146	Supply and install 16A weather proof switch socket outlet	No	22
Carried Forward			R
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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MASHAYILANGA POLICE STATION**

Brought Forward		R
147	Supply and install Cabstrut or equal and approved Corporate connection system complete with: 2 x Normal S.S.O (SANS 164-1) (white / white toggle) 2 x Normal Euro S.S.O (SANS 164-2) (white / white toggle) 2 x Essential S.S.O (SANS 164-1) (white / red toggle) 4 x RJ45 outlets	No 12
<u>TELEPHONE AND DATA</u>		
<u>Supply and install the following:</u>		
148	Supply and Install Krone RJ 11 telephone outlets installed in power skirting	No 20
149	Supply and Install Krone RJ 45 data outlets installed in power skirting inclusive of cradle and cover plate	No 44
150	Two Compartment 2 cover, epoxy powder coated power skirting, surface mounted, inclusive of cover	m 145
151	Supply and install End caps	No 55
152	Supply and install 90° bends	No 20
<u>SOLAR PHOTOVOLTAIC INSTALLATION</u>		
<u>Supply and install the following:</u>		
153	Supply 550 Watt Solar Panel (Art Solar, Canadian Solar, Monocrystalline or equal and approved)	No 120
154	Extra on last to install on purpose made brackets	No 120
155	Supply and install aluminium purpose made brackets	No 16
156	Sundries for the complete installation of panels	Item
157	6mm ² Cu PVC 1800V DC UV stabilised cable	m 422
158	4mm ² black/Red Cu PVC 1800V DC UV stabilised cable	m 422
159	DC combiner boxes consisting of 2 No. 40 Amp 2P DC circuit breakers & 2No. 2P 40 Amp fuses for each string, 4 No. Class Type 2, 1500V DC 8/20µs 50 kA surge protection device	No 6
160	Supply and install on load 2 pole 40A DC isolators	No 12
Carried Forward		R
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CONSTRUCTION OF THE NEW MASHAYILANGA POLICE STATION

Brought Forward			R
161	Budgetary allowance for communication links		Item
162	Supply and install 60A 3 way break before make rotary switch	No	2
163	Supply and install AVD Lith Ex 9L Lithium fire extinguisher or equal and approved	No	12
	<p><u>Supply and install the following Canadian Solar, Sunsynk / Deye / Victron equal and approved hybrid / grid tied inverter complete with battery monitoring system, LCD screen, charge controller. Enclosure to be IP54 rated, 50Hz 230V Single phase with reverse polarity Protection, Insulation Resistor Detection Residual Current monitoring Unit, Output over current protection, Output Shorted protection, Surge protection. Inverter to have <3% THD and <0.5% input current - DC current injection. Complete with 5 year warantee.</u></p>		
164	25 kW hybrid inverter, SMA 3 phase or equal and approved complete with MPPT	No	2
	<p><u>RACK MOUNTED BATTERIES</u></p> <p><u>Supply and install the following Hubble, Solar MD, Freedom One, or equal and approved 51.2V, IP54 enclosure (excluding battery terminals), rack mounted complete with LiFe - Lithium-Ion cell technology, SOC status indicator, LED indicators, 80% Depth of discharge capable low self discharge, intergrated battery monitoring system with current limiting function, over charge protection, over discharge and over temperature battery protection and 2m canbus cable. Complete with 10 Year warrantee</u></p>		
165	5 kWh Battery	No	10
166	10 kWh Battery	No	2
167	12 way rack for rack mounted batteries	No	10
168	16 way Rack for rack mounted batteries	No	2
169	Battery interconnect jumpers	No	10
Carried Forward			R
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