

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

	Brought Forward		R
49	Window overall size 1500 x 1500mm high (Window type: W-E, W-S & W-Y)	No	36
50	Window overall size 1800 x 1500mm high (Window type: W-T)	No	4
51	Window overall size 2400 x 300mm high (Window type: W-U)	No	1
52	Window overall size 2400 x 1500mm high (Window type: W-V)	No	1
53	Window overall size 3440x 300mm high (Window type: W-P)	No	1
	<u>Interpon Class 2 D2525T powder coated aluminium window in colour: Matte Charcoal QL258P with 6.38mm laminated frosted safety glass and ironmongery, including 6 x 6mm thick solid aluminium burglar bars horizontally at 100mm centres to all opening and fixed sections fixed to brickwork complete with mullions, transomes, gasket seals and beading to Architect approval</u>		
54	Window overall size 600 x 1200mm high (Window type: W-C)	No	53
55	Window overall size 1200 x 1500mm high (Window type: W-DA)	No	3
56	Window overall size 1500 x 300mm high (Window type: W-K)	No	5
	<u>Interpon Class 2 D2525T powder coated aluminium window in colour: Matte Charcoal QL258P with 6.5mm laminated safety glass, including 6 x 6mm thick solid aluminium burglar bars horizontally at 100mm centres to all opening and fixed sections fixed to brickwork complete with mullions, transomes, gasket seals and beading to Architect approval</u>		
57	Window overall size 1200 x 300mm high (Window type: W-KA)	No	4
58	Window overall size 1500 x 1500mm high (Window type: W-SA)	No	1
	Carried Forward		R
Section No. 2 Bill No. 12 Metalwork			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward		R	
<u>ALUMINIUM LOUVRE UNITS</u>			
<u>The Tenderers are referred to the Architect's Window schedule S4-500C Rev 7 when pricing the following items</u>			
<u>Standard colour powder coated fixed louvre units (color: Matte Charcoal QL258P) fixed to brickwork or concrete</u>			
59	Purpose made louvre unit size 1500 x 900mm high with vermin mesh fixed to internal face of panel, 10mm diameter steel bars at 100mm centres fixed to frame, including sealing and necessary fins, etc., complete (Window type: W-N)	No	2
60	Purpose made louvre unit size 1800 x 900mm high with vermin mesh fixed to internal face of panel, including sealing and necessary fins, etc., complete (Window type: W-M)	No	1
<u>STEEL CURTAIN WALLS AND SHOPFRONTS</u>			
<u>The Tenderer is referred to the Architect's Door schedule S4-500A Rev 6 when pricing the following items</u>			
<u>CURTAIN WALLING</u>			
<u>Interpon Class 2 D2525T powder coated aluminium shop fronts in colour: Matte Charcoal QL258P with 6.38mm laminated safety glass and ironmongery (elsewhere measured) fixed to brickwork complete with mullions, transomes, gasket seals and beading to Architect approval</u>			
61	3275 x 2400mm High external grade curtain wall, consisting of three equal 790 x 2100mm fixed panes, three 790 x 300mm top hung fixed panes and 900 x 2400mm glazed door including 900 x 300mm opening fanlight (Curtain Wall type: CW-B)	No	1
62	11 675 x 3000mm High L-shaped external grade curtain wall, consisting of thirteen equal 700 x 2400mm fixed panes, thirteen 700 x 600 panes, 1800 x 2400mm glazed double door with 1800 x 600mm fixed fanlight and necessary steel corner posts and connections (Curtain Wall type: CW-A)	No	1
Carried Forward		R	
Section No. 2 Bill No. 12 Metalwork		202	

**SOUTH AFRICAN POLICE SERVICES
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Brought Forward				R
<u>STEEL STRONGROOM DOORS, VENTILATORS, ETC</u>				
<u>The Tenderer is referred to the Architect's Door schedule S4-500A Rev 6 when pricing the following items</u>				
<u>Strongroom doors etc suitable for 220mm walls fixed to brickwork</u>				
63	910 X 2020mm High galvanised mild steel door manufactured from steel tubing and including frame, all in accordance with the SAPS 5 Star Specifications, Type T2 (Door type: SD-F)	No	8	
64	1100 X 2032mm High galvanised mild steel door and grille manufactured from steel tubing and including frame, all in accordance with the SAPS 5 Star Specification, Type T1 (Door type: SD-B)	No	1	
65	1400 x 2400mm High folded steel door, including top hung size fanlight, size 900 x300mm high and sidelight, size 350 x 2150mm high, including powder coated frame, all in accordance with the Architects specifications (Door type: SD-E)	No	3	
<u>Strongroom doors etc suitable for 330mm walls fixed to brickwork</u>				
66	900 x 2032mm High strong room door and frame complete with mechanism and fixing lugs, suitable for 50mm Category 2 strongrooms (Door type: SD-A)	No	7	
<u>Louvred doors etc suitable for 220mm walls fixed to brickwork</u>				
67	1510 x 2032mm High steel high 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)	No	2	
Carried Forward				R
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Brought Forward

Roll-up "Serranda Series 200" or other equal and approved galvanised mild steel roller shutter 75 x 0.8mm thick slats including frame, manually operated to suit, complete with aluminium T-Bar, weather seal and lockable side bolts all in accordance with manufacturer's recommendation

No

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Section No. 2
Bill No. 12
Metalwork

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>NEW BUILDINGS</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>Self levelling skimcoat screed 6 - 8mm thick. The minimum requirement is that the sub-floor is compliant to a Grade 1-floor finish as set out in SANS 10070 Code of Practice: The installation of resilient thermoplastic and similar flexible floor covering materials, in terms of levelness. This optimum floor finish can be achieved using a high-quality, reliable, cementitious self-levelling compound, for levelling and smoothing work on interior surfaces</u>			
1	On screeded floors and landings (LI)	m2	490	
	<u>Screeds steel trowelled, on concrete</u>			
2	25mm thick on floors (LI)	m2	490	
3	Average 35mm thick to falls on concrete flat roofs (LI)	m2	964	
	<u>GRANOLITHIC</u>			
	<u>"Stoncor Euclid Chemical Versaspeed LS100" 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" or other equal and approved sealer all in accordance with the manufacturer's instructions</u>			
4	15mm Thick steel floated finish (LI)	m2	3	
	Carried Forward		R	
	Section No. 2			
	Bill No. 13			
	Plastering			

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5	35mm Thick steel floated finish (LI)	m2	1,178
6	35mm Thick wood floated finish (LI)	m2	181
7	Average 35mm thick screed on treads and risers of staircases (LI)	m2	19
8	Skirtings 75mm high (LI)	m	1,500
<u>INTERNAL PLASTER</u>			
<u>Cement plaster steel trowelled, on brickwork</u>			
9	On walls (LI)	m2	5,159
10	On narrow widths (LI)	m2	412
<u>5mm Cement and sand approved bagwash on brickwork in continuous layer across full wall face</u>			
11	On walls (LI)	m2	267
<u>Cement plaster steel trowelled on concrete, including necessary grinding of shutter marks and filling in imperfections to Architect's approval</u>			
12	On soffits of slabs (LI)	m2	332
13	On raking soffit of stairs (LI)	m2	40
<u>EXTERNAL PLASTER</u>			
<u>Cement plaster wood floated on concrete surfaces</u>			
14	On soffits of slabs (LI)	m2	392
<u>DIVIDING STRIPS, ETC</u>			
15	3 x 40mm Flat section brass dividing strips between different floor finishes (LI)	m	40
Carried Forward to Summary of Section No. 2			R
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Plastering			

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

Item
No

Quantity

Rate

Amount

SECTION NO. 2

NEW BUILDINGS

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

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

Carried Forward

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Section No. 2
Bill No. 14
Tiling

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward			R
<u>WALL TILING, ETC</u>			
<u>300 x 600 x 7.8mm Rectified Class A PE14 glazed porcelain wall tiles fixed with "Tal Gold Star 6" or other equal and approved tile adhesive and in 3mm maximum consistent joints grouted with "Tal Floor Light Grey Grout" or other equal and approved waterproof grout, prepared in accordance with the manufacturer's specifications (plaster elsewhere measured)</u>			
1	On walls (LI)	m2	879
2	On narrow widths (LI)	m2	42
<u>600 x 600 x 7.8mm Rectified Class A PE14 glazed porcelain wall tiles fixed with "Tal Gold Star 6" or other equal and approved tile adhesive and in 3mm maximum consistent joints grouted with "Tal Floor Light Grey Grout" or other equal and approved waterproof grout, prepared in accordance with the manufacturer's specifications (plaster elsewhere measured)</u>			
3	On walls (LI)	m2	559
4	On narrow widths (LI)	m2	33
<u>600 x 600 x 7.8mm Thick 'EcoTec' Class A PE14 rectified matt glazed porcelain tiles, colour - Spazio Charcoal, fixed with "Tal Gold Star 6" or other equal and approved adhesive, with maximum 3mm consistent joints grouted using "Tal Floor Dark Grey Grout" or equal and approved waterproof grout, prepared in accordance with the manufacturers' specifications (plaster elsewhere measured)</u>			
5	On walls (LI)	m2	97
6	On narrow widths (LI)	m2	12
Carried Forward			R
Section No. 2 Bill No. 14 Tiling			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

	Brought Forward		R
<u>FLOOR TILING, ETC</u>			
<u>600 x 600 x 7.8mm Thick 'EcoTec' Class PE14 rectified matt glazed porcelain tiles, colour - Spazio Charcoal, fixed with "Tal Gold Star 6" or other equal and approved adhesive, with maximum 3mm consistent joints grouted using "Tal Floor Dark Grey Grout" or equal and approved waterproof grout, prepared in accordance with the manufacturers' specifications (plaster elsewhere measured)</u>			
7	On floors (LI)	m2	24
<u>600 x 600 x 7.8mm Thick 'EcoTec' Class PE14 rectified matt glazed porcelain tiles, colour - Avenue Grey, fixed with "Tal Gold Star 6" or other equal and approved adhesive, with maximum 3mm consistent joints grouted using "Tal Floor Dark Grey Grout" or equal and approved waterproof grout, prepared in accordance with the manufacturers' specifications (plaster elsewhere measured)</u>			
8	On floors (LI)	m2	327
9	On shower floors (LI)	m2	31
10	Circular cutting (LI)	m	51
<u>EXPANSION JOINTS COVERS</u>			
<u>Fully flexible expansion joint cover strip, all in accordance with manufacturers specifications, strip and welding rod colours to Architects approval</u>			
11	On floors (LI)	m	180
<u>SKIRTINGS, NOSINGS, ETC.</u>			
<u>3mm natural anodised M-trim dividing strips between floor types</u>			
12	3mm Flat section dividing strips (LI)	m	136
<u>Stainless steel square edge tile trim fixed simultaneously with tiling including mitres, ends, etc. sealed to tiled skirting with an approved sealant</u>			
13	12mm Edge trim to walls (LI)	m	204
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 14			
Tiling			

**SOUTH AFRICAN POLICE SERVICES
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>NEW BUILDINGS</u>			
	<u>BILL NO. 15</u>			
	<u>PLUMBING AND DRAINAGE (CPAP WORK GROUP NO. 148 UNLESS OTHERWISE STATED) (PROVISIONAL)</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2017 Edition).			
	<u>All materials and workmanship shall comply with the relevant SABS specifications</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Wire gratings</u>			
	Descriptions of gutter outlets etc. shall be deemed to include wire balloon gratings.			
	<u>Stormwater channels</u>			
	Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc. and disposal of surplus material on site.			
	<u>Stainless steel basins, sinks, wash troughs, urinals, etc.</u>			
	Stainless steel for water closet, urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/10).			
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.			
	<u>Sealing of edges</u>			
	Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone.			
	Carried Forward		R	
	Section No. 2 Bill No. 15 Plumbing and Drainage (Provisional)			

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

Brought Forward	R
<u>uPVC pipes and fittings</u> 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. <u>uPVC pressure pipes and fittings</u> 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. <u>High density polyethylene (HDPE) pipes and fittings</u> Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings. <u>"Polycop" polypropylene pipes</u> 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. <u>Copper pipes</u> 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.	
Carried Forward	R
Section No. 2 Bill No. 15 Plumbing and Drainage (Provisional)	211 <i>[Handwritten signatures and initials]</i>

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

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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).

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.

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Section No. 2
Bill No. 15
Plumbing and Drainage (Provisional)

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

Brought Forward				R
<u>Laying, backfilling, bedding, etc of pipes</u>				
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.				
<u>RAINWATER DISPOSAL</u>				
<u>0.9mm thick seamless aluminium pre-painted gutters and rainwater pipes</u>				
1	185 x 165mm Seamless modern box gutter with support brackets at 600mm centres	m	211	
2	75 x 50mm Rainwater down pipes fixed to brickwork	m	26	
3	75 x 50mm Rainwater down pipe esncased in brickwork (elsewhere measured)	m	18	
4	Extra over eaves gutter for drop box suitable for 185 x 165mm seamless aluminium gutter	No	10	
5	Extra over eaves gutter for outlet for 75 x 50mm pipe	No	10	
6	Extra over gutter for angle	No	6	
7	Extra over rainwater pipe for bend	No	14	
8	Extra over rainwater pipe for shoe	No	10	
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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R
<u>SABS grade uPVC pipes</u>			
9	50mm Diameter rainwater down pipe encased in brickwork (elsewhere measured)	m	28
10	70mm Diameter rainwater down pipe encased in brickwork (elsewhere measured)	m	80
11	70mm Diameter rainwater down pipe fixed to brickwork	m	102
12	Extra over eaves gutter for outlet for 50mm pipe	No	7
13	Extra over eaves gutter for outlet for 70mm pipe	No	18
14	Extra over eaves gutter for drop box suitable for 50mm diameter gutter	No	7
15	Extra over eaves gutter for drop box suitable for 70mm diameter gutter	No	24
16	Extra over 70mm diameter rainwater pipe for bend	No	78
17	Spreader for 50mm diameter rain water pipe	No	7
18	Spreader for 70mm diameter rain water pipe	No	6
19	Extra over 50mm diameter rainwater pipe for shoe	No	7
20	Extra over 70mm diameter rainwater pipe for shoe	No	33
<u>"Full-flow" roof outlets cast into concrete</u>			
21	180 degree Full flow dome roof outlet with 50mm diameter vertical outlet set in concrete slab and including formwork for same and joint to uPVC pipe (elsewhere measured) in accordance with manufacturers specification	No	7
22	180 degree Full flow dome roof outlet with 70mm diameter vertical outlet set in concrete slab and including formwork for same and joint to uPVC pipe (elsewhere measured) in accordance with manufacturers specification	No	15
Carried Forward			R
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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

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23	180 degree Full flow dome roof outlet with 75 x 50mm vertical outlet set in concrete slab and including formwork for same and joint to aluminium pipe elsewhere measured) in accordance with manufacturers specification	No	4	
<u>Grade 304 stainless steel parapet fullbore outlet</u> <u>(Refer to Architects Drawing No. S4-140 Rev 5)</u>				
24	50mm Diameter stainless steel grade 304 vertical fullbore outlet recessed into concrete slabs and brick wall (elsewhere measured)	No	26	
<u>"Seaqual" or other equal and approved</u>				
25	150 x 100 mm "4All" linear drainage channel including 1m HD-PE grate, stopped ends and bottom outlet opening installed according to the manufacturer's recommendations (Refer to Architect's Drawing No. S4-140 Rev 5)	m	31	
26	250 x 250mm grate and housing with outlet suited to fit 110mm drain (elsewhere measured), installed in accordance with the manufacturer's recommendations (Refer to Architect's Drawing No. S4-140 Rev 5)	No	4	
<u>SANITARY FITTINGS</u>				
<u>The Tenderer is to refer to the Architects Sanware schedule S4-502 Rev 5 when pricing the following items</u>				
<u>"Ceramic industries" or other equal and approved</u>				
27	375 x 485mm Basinbox free standing wash hand basin (Code: WBTA0108A), including 15 x 15mm angle valve (Code: TVAC1408/CH)	No	22	
28	480 x 600mm Basinbox free standing wash hand basin (Code: WBTA0108A), including 15 x 15mm angle valve (Code: TVAC1408/CH)	No	16	
<u>"Franke" or other equal and approved</u>				
29	370 x 490 x 125mm Combination wash hand basin and drinking fountain with 40mm waste outlet, recessed 125mm into brickwork (Code: SAPSDF)	No	5	
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Section No. 2 Bill No. 15 Plumbing and Drainage (Provisional)				

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

Brought Forward			R
30	800 x 460mm "Nouveau" Stainless steel single bowl sink, including 90mm waste (Code: NVN 611) and 15 x 15mm angle valves for hot and cold water (Code: TVAC1408/CH)	No	18
31	420 x 340 x 185mm deep "Oval A" stainless steel (grade 304) single bowl sink with 50mm spalsback and 100mm rounded apron fixed to walls with 4 x 6mm anchor bolts (elsewhere measured, including 40mm waste and 32mm sliding escutcheon bottle trap(elsewhere measured) (Code: 002958)	No	1
32	Stainless steel (grade 304) single pot right hand sink size 1500 x 650 mm high with 150mm splash back and 50 x 10mm apron with beaded edge, bowl size 500 x 500 x 300mm deep including galvanised backing and angle iron frame comprising of two pairs of stainless steel round legs with adjustable foot flanges (Code: 2621163)	No	1
33	Stainless steel (grade 304) double pot sink size 1650 x 1063mm high with 150mm splash back and 50 x 10mm apron with beaded edge, bowl size 500 x 500 x 300mm deep including galvanised backing and angle iron frame comprising of two pairs of stainless steel round legs with adjustable foot flanges (Code: SE2 2621115)	No	1
<u>"LG Green" or other equal and approved</u>			
34	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	1
<u>"Euro" or other equal and approved</u>			
35	Floor mounted suite with slim line seat (Code: YTEU016A)	No	25
36	Floor mounted suite top flush water closet (Code: XTEU016A)	No	9
<u>"Lecico" or other equal and approved</u>			
37	Floor standing paraplegic water closet with back inlet (Code: LEC-PARPANLLF0000UE)	No	5
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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R
<u>"Geberit" or other equal and approved</u>			
38	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	44
<u>"Franke" or other equal and approved</u>			
39	395 x 550 x 445mm Stainless steel heavy duty wall and floor mounted water closet, including necessary fixings (Code: SAPX597)	No	5
<u>"Walcro" or other equal and approved</u>			
40	Concealed toilet flush valve (Code: No104C), including integral vacuum breaker and modified push-rod connector	No	5
<u>"Ceramic industries" or other equal and approved</u>			
41	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	10
<u>"Lecico" or other equal and approved</u>			
42	630 x 320 x 150mm Wide ceramic urinal separator (Code: ATLURISEP0630UE) fixed to walls	No	5
<u>WASTE UNIONS, ETC.</u>			
<u>"International Tap Distributors" or other equal and approved</u>			
43	32mm Chrome plated anti-vandal waste (Code: TVAC1033/CH)	No	22
44	32mm Chrome plated anti-vandal waste (Code: TVAC1034/CH)	No	16
45	50mm Square high flow shower waste (Code: WRSW001)	No	20
46	90mm Unslotted basin waste with backnut, plug and stirrup (code: 317-40)	No	18
Carried Forward			R
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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R
<u>TRAPS, ETC.</u>			
<u>"Stylux" or other equal and approved</u>			
47	32 x 40mm Chrome bottle trap (Code: TVAC9016/CH)	No	39
<u>"Geberit" or other equal and approved</u>			
48	50mm Diameter concealed siphonic trap (Code: GEUS0002)	No	10
<u>TAPS, VALVES, ETC.</u>			
<u>"Grohe" or other equal and approved</u>			
49	Chrome cosmopolitan T-self closing bib tap (Code: G-36266000)	No	18
50	"Bauedge" 1/2" single lever basin mixed (Code: G-32858001)	No	11
51	"BauEco" 1/2" single lever sink mixer (Code: G-31680000)	No	18
52	"1/2" deck mounted self closing pillar tap (Code: FSK2D1LE-0GT02)	No	1
<u>"Cobra" or other equal and approved</u>			
53	Chrome plated heavy pattern medical pillar tap (Code: 505-21B/HP)	No	5
54	1/2" Male iron standard brass wall tap (Code: 200-15/N)	No	1
55	Concealed compression stop tap with 15mm sliding wall flange (Code: L0-238-15/N)	No	38
56	Deck-mounted sink tap with aerated swivel spout (Code: FSK2D1LE-0GT02)	No	1
57	Chrome plated heavy pattern medical pillar tap (Code: 505-21R/HP)	No	2
<u>"Walcro" or other equal and approved</u>			
58	"155" Concealed push-button metering non hold shower valve, including 100 x 65 x 7mm mild steel angle shaped around valve	No	4
Carried Forward			R
Section No. 2 Bill No. 15 Plumbing and Drainage (Provisional)			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward		R
<u>"Idral" or other equal and approved</u>		
59	Wall mounted anti-ligature shower head, including unscrewing control system (Code: 09033)	No 19
<u>"Grohe" or equal and approved</u>		
60	Chrome plated paraplegic hand shower (Code: G-27598001) with three way mounted diverter (Code: 54003) and 15mm round rainshower outlet (Code: GRO-G-27057000)	No 1
<u>ELECTRIC WATER HEATERS</u>		
<u>"Franke" or other equal and approved</u>		
61	5 Litre Hydroboil (Code: 1330212)	No 5
<u>DRINKING FOUNTAINS</u>		
<u>"GRC WilsonStone" or other equal and approved</u>		
62	400 x 400 x 1000 mm precast concrete drinking fountain, including 500 x 500 mm C250 square flat grating with frame drinking fountain tap, fittings, galvanised pipe, etc. as per the Architects approval	No 1
<u>SOIL DRAINAGE</u>		
<u>uPVC Pipes</u>		
63	110mm Pipes vertically or ramped to cleaning eyes etc (no excavation)	m 44
<u>Extra over uPVC pipes for fittings</u>		
64	110mm Pan connector	No 44
65	110mm Air vent cowl	No 44
<u>SLEEVES</u>		
<u>PVC sleeves for pipes not exceeding 100mm diameter</u>		
66	Sleeve not exceeding 250mm long.	No 48
Carried Forward		R
Section No. 2 Bill No. 15 Plumbing and Drainage (Provisional)		

CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward

R

PVC sleeves for pipes exceeding 100mm and not exceeding 200mm diameter

67 | Sleeve not exceeding 250mm long.

No

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Carried Forward to Summary of Section No. 2

Section No. 2
Bill No. 15
Plumbing and Drainage (Provisional)

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**Item
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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

	Brought Forward			R
	<u>ON INTERNAL BAG-WASHED PLASTER BRICK</u>			
	<u>Prepare and brush surface to remove all loose contaminants and apply one coat gypsum & plaster primer and two coats paint</u>			
4	On walls (LI)	m2	267	
	<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	On fascia boards (LI)	m2	48	
	<u>ON PLASTERBOARD SURFACES</u>			
	<u>Prepare and brush surface to remove all loose contaminants and apply one coat gypsum & plaster primer and two coats matt paint</u>			
6	On ceilings (LI)	m2	300	
	<u>Prepare and brush surface to remove all loose contaminants and apply one coat gypsum & plaster primer and two coats professional super matt paint</u>			
7	On ceilings (LI)	m2	337	
	<u>ON PLASTERED CONCRETE SURFACES</u>			
	<u>Prepare and brush surface to remove all loose contaminants and apply one coat gypsum & plaster primer and two coats professional super matt paint</u>			
8	On concrete soffits (LI)	m2	724	
	<u>ON WOOD SURFACES</u>			
	<u>Prepare and sand down surface to remove all loose contaminants, stop with wood filler where necessary and apply one coat wood primer and two coats waterbased wood paint</u>			
9	Doors (LI)	m2	730	
	Carried Forward			R
Section No. 2 Bill No. 16 Paintwork				

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward			R
<u>ON POLYSTYRENE SURFACES</u>			
<u>Prepare and apply two coats waterbased paint</u>			
10	Skirtings, etc not exceeding 300mm girth (LI)	m	710
<u>ON METAL SURFACES</u>			
<u>Prepare and apply one coat phosphate epoxy primer and two coats polyurethane paint</u>			
11	Strongroom doors and frames (LI)	m2	106
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 16			
Paintwork			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

SECTION SUMMARY - NEW BUILDINGS

Bill No		Page No	Amount
1	Earthworks (Provisional)	43	
2	Concrete, Formwork and Reinforcement (Provisional)	50	
3	Precast Concrete	52	
4	Masonry	58	
5	Waterproofing	61	
6	Roof Coverings, Etc.	63	
7	Carpentry and Joinery	77	
8	Ceilings, Partitions and Access Flooring	81	
9	Floor Coverings, etc.	84	
10	Ironmongery	94	
11	Structural Steel	98	
12	Metalwork	116	
13	Plastering	118	
14	Tiling	121	
15	Plumbing and Drainage (Provisional)	132	
16	Paintwork	135	
Carried to Final Summary			R
Section No. 2			22

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

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	Guarantee and maintenance for the complete Electrical Installation including fittings, materials and workmanship for a period of TWELVE MONTHS after date of completion and handover.	Item		
2	Allow for testing and commissioning the whole of the electrical installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Engineer.	Item		
3	3 sets of as built drawings showing all conduit routes, draw boxes and positions of outlets etc.	Item		
4	Provision for final testing and Certificate of Compliance to be issued on completion of the project in addition to the detailed testing specified. (Electrical COC's).	Item		
	Carried Forward		R	
	Section No. 3 Bill No. 1 Electrical Installation			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

	Brought Forward			R
5	Provision for SSEG application to Municipality inclusive of all application forms required for Grid Tied SSEG system.		Item	
6	Allow for engraved labels to all light switches, switch socket outlets and isolators indicating the DB name and circuit numbers.		Item	
7	Earth cable trays and ladders with 10 mm ² Cu PVC cable jumpers across joints, splices, elbows, tees etc.		Item	
<u>SITE RETICULATION</u>				
8	Excavate not exceeding 800mm deep in soft material for cabling and cable pipe trench including bedding, backfilling, compaction and disposal of surplus material	m3	42	
9	Excavate not exceeding 800mm deep in intermediate rock material for cabling and cable pipe trench including bedding, backfilling, compaction and disposal of surplus material	m3	15	
10	Excavate not exceeding 800mm deep in hard rock material for cabling and cable pipe trench including bedding, backfilling, compaction and disposal of surplus material	m3	15	
11	Earthing and bonding of cable ladder and galvanised trunking 10mm ² Cu PVC jumpers with lugs		Item	
<u>ELECTRICAL/ELECTRONIC MANHOLES</u>				
12	Supply and install 600 x 600 x 600mm manhole to specification complete with heavy duty manhole cover	No	3	
13	Supply and install 800 x 800 x 800mm manhole to specification complete with heavy duty manhole cover	No	4	
14	Supply and install 1000 x 1000 x 1000mm manhole to specification complete with heavy duty manhole cover	No	4	
<u>SLEEVES</u>				
<u>Supply the following cable sleeves:</u>				
15	160mm uPVC sleeves	m	65	
16	110mm uPVC sleeves	m	375	
Carried Forward				R
Section No. 3 Bill No. 1 Electrical Installation				

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

Brought Forward				R
17	75mm uPVC sleeves	m	45	
18	50mm uPVC sleeves	m	25	
<u>Extra on last to install the following in trench (trenching measured elsewhere):</u>				
19	160mm uPVC sleeves	m	65	
20	110mm uPVC sleeves	m	375	
21	75mm uPVC sleeves	m	45	
22	50mm uPVC sleeves	m	25	
<u>Supply the following 600/1000 Volt Cu PVC SWA PVC ECC cables:</u>				
23	185mm ² 4 core	m	85	
24	150mm ² 4 core	m	10	
25	120mm ² 4 core	m	114	
26	95mm ² 4 core	m	250	
27	70mm ² 4 core	m	200	
28	50mm ² 4 core	m	6	
29	35mm ² 4 core	m	10	
30	25mm ² 4 core	m	96	
31	16mm ² 4 core	m	225	
32	10mm ² 4 core	m	45	
33	6mm ² 4 core	m	25	
34	16mm ² 2 core	m	192	
35	10mm ² 2 core	m	25	
36	6mm ² 2 core	m	12	
Carried Forward				R
Section No. 3 Bill No. 1 Electrical Installation				

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward				R
<u>Extra on last to install in cable sleeve, ladder, tray, basket:</u>				
37	185mm ² 4 core	m	85	
38	150mm ² 4 core	m	10	
39	120mm ² 4 core	m	114	
40	95mm ² 4 core	m	250	
41	70mm ² 4 core	m	200	
42	50mm ² 4 core	m	6	
43	35mm ² 4 core	m	10	
44	25mm ² 4 core	m	96	
45	16mm ² 4 core	m	225	
<u>L.V Cabling</u>				
46	10mm ² 4 core	m	45	
47	6mm ² 4 core	m	25	
48	16mm ² 2 core	m	192	
49	10mm ² 2 core	m	25	
50	6mm ² 2 core	m	12	
<u>Termination inclusive of cable glands, lugs etc.:</u>				
51	185mm ² 4 core	m	2	
52	150mm ² 4 core	m	2	
53	120mm ² 4 core	m	4	
54	95mm ² 4 core	m	12	
55	70mm ² 4 core	No	4	
56	50mm ² 4 core	No	4	
Carried Forward				R
Section No. 3 Bill No. 1 Electrical Installation				

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

Brought Forward			R
57	35mm ² 4 core	No	4
58	25mm ² 4 core	No	6
59	16mm ² 4 core	No	16
60	10mm ² 4 core	No	6
61	6mm ² 4 core	No	4
62	16mm ² 2 core	No	6
63	10mm ² 2 core	No	8
64	6mm ² 2 core	No	6
<u>Supply and install Scotchcast cable joint for the following PVC SWA PVC ECC cable:</u>			
65	95mm ² 4 core	No	1
66	50mm ² 4 core	No	1
67	35mm ² 4 core	No	1
68	16mm ² 4 core	No	1
<u>DISTRIBUTION BOARDS</u>			
<u>Supply and delivery of the following distribution:</u>			
69	Main Metering Kiosk as per single line diagram - Drawing No. 23044_401	No	1
70	Extra on last to install	No	1
71	Main LV Kiosk as per single line diagram - Drawing No. 23044_402	No	1
72	Extra on last to install	No	1
73	DB-A / AE as per single line diagram - Drawing No. 23044_403	No	1
74	Extra on last to install	No	1
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			229

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

	Brought Forward			R
75	DB-B / BE as per single line diagram - Drawing No. 23044_404	No	1	
76	Extra on last to install	No	1	
77	DB-C / CE as per single line diagram - Drawing No. 23044_405	No	1	
78	Extra on last to install	No	1	
79	DB-LGF / LGF-E as per single line diagram - Drawing No. 23044_406	No	1	
80	Extra on last to install	No	1	
81	DB-LG / LG-E as per single line diagram - Drawing No. 23044_407	No	1	
82	Extra on last to install	No	1	
83	DB-FF / FF-E as per single line diagram - Drawing No. 23044_408	No	1	
84	Extra on last to install	No	1	
85	DB-Meter Frame as per single line diagram - Drawing No. 23044_409	No	1	
86	Extra on last to install	No	1	
87	DB-GH as per single line diagram - Drawing No. 23044_410	No	1	
88	Extra on last to install	No	1	
<u>DISTRIBUTION BOARDS</u>				
89	DB-Mech-E as per single line diagram - Drawing No. 23044_411	No	2	
90	Extra on last to install	No	2	
91	DB-Inverter Output as per single line diagram - Drawing No. 23044_412	No	1	
92	Extra on last to install	No	1	
Carried Forward				R
Section No. 3 Bill No. 1 Electrical Installation				

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

Brought Forward			R
93	DB-Manual Changeover as per single line diagram - Drawing No. 23044_413	No	1
94	Extra on last to install	No	1
95	DB-Inverter Load as per single line diagram - Drawing No. 23044_414	No	1
96	Extra on last to install	No	1
97	DB-Residence as per single line diagram - Drawing No. 23044_415	No	10
98	Extra on last to install	No	10
<u>LIGHTING AND SMALL POWER: GROUND FLOOR</u>			
<u>LIGHTING:</u>			
<u>Supply and install the following:</u>			
99	25mm PVC conduit surface mounted	m	845
100	25mm PVC conduit cast-in to floor slab	m	175
101	25mm PVC conduit in partition wall	m	364
<u>PVC insulated 1000V grade hard drawn copper wire drawn into trunking/conduit and coloured as per phase:</u>			
102	2.5mm ²	m	14,357
103	2,5mm ² PVC insulated surfix cable	m	15
104	Extra on last to terminate inclusive of glands etc.	No	2
105	Single lever 1-way 16amp "Crabtree classic" or other equal and approved light switch in 100 x 50/50 galvanised box inclusive of cover	No	184
106	2 lever 1-way 16amp "Crabtree classic" or other equal approved light switch or other in 100 x 50/50 galvanised box inclusive of cover	No	65
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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

	Brought Forward			R
107	2 lever 2-way 16amp "Crabtree classic" or other equal and approved light switch in 100 x 50/50 galvanised box inclusive of cover	No	49	
108	6amp unswitched socket outlet (yellow)	No	487	
109	65mm PVC round box for 25mm conduit	No	345	
110	65mm 3-way PVC round draw box	No	125	
111	20A Photocell inclusive of bulkhead enclosure	No	15	
112	Occupancy sensor - "Province Lighting (PS-PIR3)" or other equal and approved flush mounted, white with 360 degree detection angle	No	45	
113	Deman Alux Controller Alux M6 Master unit - AluxM6A10	No	2	
114	Deman Alux Controller Alux M7 Master unit - AluxM7A10	No	2	
115	Deman Alux Slave Alux S1 unit - AluxS1A11	No	2	
116	Deman Alux Slave Alux S2 unit - AluxS2A10	No	2	
<u>LIGHTING AND SMALL POWER</u>				
117	Deman Alux Slave Alux S3 unit - AluxS3A10	No	2	
118	Deman Alux Slave cable - Alux12H10	No	2	
119	Supply and install P9000 trunking complete with cover plate to soffit	m	140	
120	Supply and install P9000 Tee-piece	No	5	
121	Supply and install P9000 4-way piece	No	2	
122	Supply and install P9000 end caps	No	20	
<u>SMALL POWER</u>				
123	20mm PVC conduit surface mounted	m	145	
124	20mm PVC conduit cast-in slab	m	348	
Carried Forward				R
Section No. 3 Bill No. 1 Electrical Installation				

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

Brought Forward			R
125	20mm PVC conduit in partion wall	m	397
126	25mm PVC conduit surface mounted	m	124
127	25mm PVC conduit cast-in to floor slab	m	943
128	25mm PVC conduit in partion wall	m	487
129	32mm PVC conduit surface mounted	m	121
130	32mm PVC conduit cast-in to floor slab	m	842
131	32mm PVC conduit in partion wall	m	314
<u>PVC insulated 1000V grade hard drawn copper wire drawn into trunking/conduit and coloured as per phase</u>			
132	2.5mm ²	m	2,347
133	4.0mm ²	m	16,871
134	6.0mm ²	m	1,257
135	2,5mm ² PVC insulated surfix cable	m	12
136	Extra on last to terminate inclusive of glands etc.	No	2
137	Supply and install single switch socket outlet, with euro combo outlet in 100 x 100/50 PVC conduit box "Crabtree classic" or other equal and approved	No	95
<u>LIGHTING AND SMALL POWER</u>			
138	Supply and install 20A 3 pin UPS switch socket outlet installed in power skirting / floor box	No	66
139	Supply and install 20A 3 pin dedicated switch socket outlet installed in power skirting / floor box	No	66
140	Supply and install 20A 3 pin normal switch socket outlet in installed in power skirting / floor box	No	66
141	Supply and install 20A 3 pin Euro switch socket outlet in installed in power skirting / floor box	No	101
142	Blank cover plate	No	35
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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

Brought Forward			R
143	65mm PVC round box for 25mm conduit	No	95
144	100 x 100/50 PVC conduit boxes for AC controller	No	65
145	Supply and install P9000 trunking complete with cover plate to soffit	m	138
146	Supply and install P9000 crossover	No	5
147	Supply and install P9000 elbow	No	5
148	Supply and install P9000 Tee-piece	No	2
149	Supply and install P9000 end caps	No	20
150	Supply and install P9000 4-way piece	No	3
151	Supply and install 10A single phase isolator for extraction	No	15
152	Supply and install 20A single phase isolators for aircon supply	No	25
153	Supply and install 20A single phase isolators for hydroboil / kitchen equipment	No	6
154	Supply and install 20A single phase isolators for hand dryer power supplies	No	12
155	Supply and install 30A single phase isolators	No	2
156	Supply and install 30A single phase weather proof isolator for aircon supply	No	14
157	Supply and install 40A single phase weather proof isolator for aircon supply	No	8
158	Supply and install 30A three phase isolators for aircon supply	No	12
159	Supply and install 40A three phase isolators for aircon supply	No	15
160	Supply and install 40A three phase weather proof isolator for aircon supply	No	15
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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Sup. Mr. M.C. Paul

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

Brought Forward			R
161	Supply and install 16A weather proof switch socket outlet	No	35
162	Supply and install "Cabstrut" or other 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	5
<u>TELEPHONE AND DATA</u>			
<u>Supply and install the following:</u>			
163	Supply and install Krone RJ 11 telephone outlets installed in power skirting	No	53
164	Supply and install Krone RJ 45 data outlets installed in power skirting inclusive of cradle and cover plate	No	53
<u>Supply and Install the following:</u>			
165	2 Compartment 2 cover, epoxy powder coated power skirting, surface mounted, inclusive of cover	m	385
166	Supply and install End caps	No	70
167	Supply and install 90° bends	No	72
<u>SOLAR PHOTOVOLTAIC INSTALLATION</u>			
<u>Supply and install the following:</u>			
168	Supply 550Watt Solar Panel	No	105
169	Extra on last to install on purpose made brackets	No	105
170	Supply and install aluminium purpose made brackets for mounting of solar panels (8 panels per frame)	No	14
171	Sundries for the complete installation of panels	Item	
172	6mm ² Cu PVC 1800V DC UV stabilised cable	m	600
173	4mm ² Black/Red Cu PVC 1800V DC UV stabilised cable	m	500
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward

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174	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
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No

6

175	Supply and install on load 2 pole 40A DC isolators
-----	--

No

12

176 Budgetary allowance for communication links

Item

177	Supply and install 60A 3-way break before make rotary switch
-----	--

No

4

178	Supply and install AVD Lith Ex 9L Lithium fire extinguisher or other equal and approved
-----	---

No

12

Supply and install the following 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 warranty

179	25kW hybrid inverter, SMA 3 phase or other equal and approved complete with MPPT
-----	--

No

2

RACK MOUNTED BATTERIES

Supply and install the following 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, integrated battery monitoring system with current limiting function, over charge protection, over discharge and over temperature battery protection and 2m canbus cable. Compete with 10 Year warranty

180	5kWh Battery
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No

10

181	10kWh Battery
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No

2

182 12-way rack for rack mounted batteries

No

2

183 16-way Rack for rack mounted batteries

No

2

Carried Forward

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Section No. 3
Bill No. 1
Electrical Installation

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward			R
184	Battery interconnect jumpers	No	10
185	Supply and install high "Voltage battery (DC 490-700V) Deye Bos G - 61,44Kwh" or other equal approved inclusive of 12 battery modules, battery rack and controller / isolator unit complete. 100Ah, 55Kwh usable Minimum, Canbus / Rs 485 Comms. 10 Year Warranty	No	2
<u>Supply and install the following:</u>			
186	Victron Lynx's distributor 1000 with 4 battery connections	No	2
187	DC 500V 125A fuse holders (suitable for cylindrical fuses)	No	11
188	125A 500V DC fuses (cylindrical)	No	22
189	250A NH1 Fuse Holder - Triple pole Disconnect	No	2
190	200A NH1 Fuses - gB	No	12
191	200A NH0 Fuse Holder - Triple pole Disconnect	No	2
192	125A NH0 Fuses - gB	No	12
<u>DATA CABLING</u>			
193	Supply and install Cat6e grey	m	120
194	RJ 45 Terminations for Cat 6e	No	8
195	Supply and install Cat6e grey 1 meter flyleads (RJ45 to RJ45)	No	2
196	Supply and install Cat6e grey 5 meter flyleads (RJ45 to RJ45)	No	1
<u>DC CABLING</u>			
<u>PVC Insulated 1000V DC stranded Cu Cable</u>			
197	25mm ² - Red / Black	m	200
198	35mm ² - Red / Black	m	80
199	50mm ² - Red / Black	m	200
Carried Forward			R
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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R
200	70mm ² - Red / Black	m	90
201	95mm ² - Red / Black	m	120
<u>Extra on last to install in cable sleeve or on basket</u>			
202	25mm	m	200
203	35mm	m	80
204	50mm	m	200
205	70mm	m	90
206	95mm	m	120
<u>Termination using crimped lugs</u>			
207	25mm ² - Red / Black	No	32
208	35mm ² - Red / Black	No	16
209	50mm ² - Red / Black	No	32
210	70mm ² - Red / Black	No	55
211	95mm ² - Red / Black	No	40
212	70mm ² - Red / Black	No	55
213	95mm ² - Red / Black	No	45
<u>CABLE LADDERS</u>			
<u>The complete supply, transport to site, and storage of hot dipped galvanised heavy duty cable ladder and offsets as required below:</u>			
214	300mm wide	m	300
215	600mm wide	m	95
216	800mm wide	m	115
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward			R
<u>Extra on last to install horizontally (trapeze) or vertically (P1000 unistrut). Fixings at 1000mm. Installation is to include for all joiner splices, raw bolts and fixing cable ladder to unistrut with bolt fasteners complete with spring washer, fixing bolts etc.</u>			
217	300mm wide	m	300
218	600mm wide	m	95
219	800mm wide	m	115
<u>CABLE BASKETS</u>			
<u>The complete supply, transport to site, and storage of hot dipped galvanised medium duty cable basket and offsets as required below:</u>			
220	150mm wide	m	350
221	300mm wide	m	115
<u>Extra on last to install horizontally (trapeze) or vertically (P1000 unistrut). Fixings at 1000mm. Installation is to include for all joiner splices, raw bolts and fixing cable basket to unistrut with bolt fasteners complete with spring washer, fixing bolts etc.</u>			
222	150mm wide	m	350
223	300mm wide	m	115
<u>LUMINARIES</u>			
<u>Supply the following luminaires, inclusive of lamps as per drawing No. 23044 600</u>			
224	Type A	No	235
225	Type Ae	No	45
226	Type A1	No	69
227	Type A1e	No	20
228	Type B	No	86
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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

		Brought Forward		R
229	Type Be	No	86	
230	Type C	No	15	
231	Type D	No	57	
232	Type De	No	15	
233	Type E	No	15	
234	Type E1	No	9	
235	Type E2	No	12	
236	Type F	No	35	
237	Type G	No	3	
238	Type H	No	33	
239	Type J	No	8	
240	Type K	No	5	
<u>Install and connect the following luminaires, inclusive of lamps as per drawing No. 23044 600</u>				
241	Type A	No	235	
242	Type Ae	No	45	
243	Type A1	No	69	
244	Type A1e	No	20	
245	Type B	No	86	
246	Type Be	No	86	
247	Type C	No	15	
248	Type D	No	57	
249	Type De	No	15	
250	Type E	No	15	
		Carried Forward		R
Section No. 3 Bill No. 1 Electrical Installation				

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

Brought Forward			R
251	Type E1	No	9
252	Type E2	No	12
253	Type F	No	35
254	Type G	No	3
255	Type H	No	33
256	Type J	No	8
257	Type K	No	5
<u>SUPPLY, INSTALL, TEST AND COMMISSION INTERCOM WITH COLOUR VIDEO SYSTEM COMPLETE WITH ALL HARDWARE, SOFTWARE, TERMINATIONS, FIXINGS ETC.</u>			
<u>AIPHONE OR OTHER EQUAL AND APPROVED SYSTEM</u>			
<u>Central Equipment</u>			
258	Master station unit suitable for 10 slave stations and hands free with 3.5" colour LCD display.	No	1
<u>Field Equipment</u>			
259	Door station with audio and video, flush mounted with stainless steel face	No	3
260	Door maglock release connection via a I/O interface to access control system located in IT Room.	No	3
<u>Cabling</u>			
261	Cat 6A cabling	m	650
262	RJ45 termination	No	25
263	4 core 1.0mm Cu PVC cable	m	550
264	Terminated in above equipment	No	25
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward			R
<u>Supply, install, test and commission Metal Detector or other equal and approved complete with connectors, adapters, fixings, power sockets, cables, consumables and all material material to complete required</u>			
265	Supply and install walk through metal detector incorporating 42 zones with illuminating indicator strip along the length of the unit	No 1	
<u>EARTHING AND LIGHTNING PROTECTION</u>			
266	Undertake soil resistivity test, witnessed by the Engineer inclusive of submitting a typed test report/certificate	Item	
267	70mm ² PVC insulated copper earth wire	m 384	
268	Extra on last to install	m 384	
269	Earthing tails clamped to top of column rebar	No 32	
270	Bonding of earth tails to sheet trusses/roof sheeting	No 32	
271	Bonding of pile caps steel to column steel	No 16	
272	Supply and install 25mm conduit	m 384	
273	Supply and install 10mm aluminium ridge conductor	m 25	
274	Supply and install stainless steel lugs	No 32	
275	Supply and install stainless steel bolts and nuts	No 32	
276	Supply and install stop cork box	No 32	
277	Supply and install 1.8m earth spike	No 32	
<u>EARTHING AND BONDING</u>			
278	Allowance for general electrical earthing and bonding in accordance with SABS 0142	Item	
279	Test and commissioning inclusive of test report	Item	
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward

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SOIL RESISTIVITY SURVEY

Allow to survey the site to establish any prevailing conditions and carry out soil resistivity testing in the locations adjacent to each Sub Station. A detailed report indicating test results and requirements to achieve the necessary earth resistance for each area is to be submitted to the Electrical Engineer.

280	Resistivity Test survey in earth	No	1
281	Test report indicating electrode requirements etc. to achieve 1 ohm or less	No	1

TRENCHING

Excavate by hand for cable trench or earth mats including backfill with sifted sand, cable trench 350 mm wide x 600 mm deep x 1 500 mm long

282	In earth	No	1
283	In shale	No	2
284	In hard rock	No	2

BONDING TO EARTH ELECTRODES

285	Supply and install 20mm lengths of 95mm ² Green PVC insulated copper conductors fitted into sleeves and trench complete with lugs, ferrules and termination clamps between substation earth bar and earth electrode.	No	1
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EARTH MATS

286	Supply and install 1,600mm copper clad Earth Electrodes driven into ground at 1,500mm by 1,500mm spacing including brass termination clamps and 50mm ² bare copper conductor interlinking to 2No. earth grid adjacent earth spike to form an earth grid	No	2
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EARTH ELECTRODES

287	Supply and install additional 1,600mm copper clad earth electrode driven into the ground including the ferrell	No	1
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Section No. 3
Bill No. 1
Electrical Installation

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward			R
<u>ACCESS CONTROL</u>			
<u>Supply, install, test and commission "Impro Access Portal Basic" or other equal and approved access control and intercom system complete with connectors, adapters, fixings, power sockets, cables, consumables and all material to complete required</u>			
<u>Control room equipment complete with all power supplies and mounting equipment.</u>			
288	Programming and enrollment station, PC (I7 processor, 8 Gb RAM 500 Gb SSD storage, Windows 10, Office and Acrobat) with 21 "monitor, mouse, keyboard etc.	No	1
289	Biometric fingerprint enrollment reader	No	2
290	Enrollment camera	No	1
291	Setup and program access control software for 100 users and 20No. doors	No	1
<u>Door control complete with all mounting equipment located in IT cupboard</u>			
292	Wall mounted door controller in IP 54 housing complete with 2No. Wiegard reader modules and power supply	No	13
293	Biometric fingerprint and Mifare reader - Morpho Access Sigma lite	No	20
294	600kg surface mounted monitored maglock with LED	No	20
295	ZL bracket for maglock	No	20
296	No touch exit sensor	No	20
297	Green break glass unit with internal buzzer (resettable)	No	20
298	25Khz, 150 Khz card reader	No	30
<u>Supply and installation of cable and wiring on cable basket in ceiling void or drawn into conduit as specified, including all labels and terminations at both ends.</u>			
299	Category 6 UTP	No	3,500
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

	Brought Forward		R
300	Termination of UTP Cat 6	No	13
301	8 twisted pair PVC insulated mylar cable. 0.22mm ² stranded tinned copper cores. Aluminium polyester shield and drain.	No	2,500
302	Termination of above cable	No	13
<u>GENERATOR</u>			
<u>GENERATOR INSTALLATION</u>			
<u>The complete supply, transport to site, install, test and commission.</u>			
303	Standby generator as per drawing no. 23044_602	No	1
304	Connection of all generator control and protection, AMF and communication information wired to terminals within the main LV panel for changeover requirements		Item
305	The complete supply and installation of Generator Earthing as specified, including testing and commissioning the entire earthing installation as per I.E.C. standards, including re- testing as may be required after making good, and typed test certificates		Item
306	Allowance to fill/re-fill diesel tanks after testing - low sulphur diesel to manufacturers specification.	I	1,500
307	Allow for 4 No. major services (2 per year), after practical completion		Item
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION

Brought Forward			R
<u>SECURITY ALARM INSTALLATION</u>			
<u>SECURITY ALARM SYSTEM (PROVISIONAL)</u>			
<u>CENTRAL EQUIPMENT</u>			
<u>Supply and installation of an alarm system complete. Prices shall include for all materials, labour, profit, transport, etc., everything necessary for the execution and complete installation of the work in accordance with the description.</u>			
308	I/O controller (minimum of 16 input, 8 output) as specified connected on to the access control system network	No	1
309	Flush mounted door position switch connected to I/O controller	No	4
310	Long range wall mounted PIR detectors connected to I/O controller	No	4
311	Ceiling Mount 360° PIR connected to I/O controller	No	6
312	Ceiling mounted PIR / microwave intrusion detector (Dual Detector) connected to I/O controller	No	55
313	Panic button wall mounted connected to I/O controller	No	12
314	Push button mounted in polyester box with green LED for panic alarm connected to I/O controller	No	12
315	Flashing red high intensity LED and siren mounted above disabled WC alarm connected to I/O controller	No	12
316	Push button mounted in polyester box with green LED for acceptance of panic alarm connected to I/O controller	No	12
<u>CABLING</u>			
317	0,5mm ² 4-core Mylar	m	1,250
318	Terminate 0,5mm ² 4-core Mylar	No	12
319	0,75mm ² 4-core Mylar	m	1,253
Carried Forward			R
Section No. 3 Bill No. 1 Electrical Installation			

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

		Brought Forward		R
320	Terminate 0,75mm ² 4-core Mylar	No	12	
321	1mm ² 4-core Mylar	m	1,352	
322	Terminate 1mm ² 4-core Mylar	No	12	
Carried to Final Summary				R
Section No. 3 Bill No. 1 Electrical Installation				

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

Item
No

Quantity Rate Amount

SECTION NO.4

MECHANICAL INSTALLATION

BILL NO.1

**HVAC INSTALLATION (PROVISIONAL)
(CPAP WORK GROUP NO. 170 UNLESS
OTHERWISE STATED)**

HVAC

SUPPLEMENTARY PREAMBLES

General

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

The bill of quantities must be read in conjunction with the rest of the contract documents and drawings.

A price must be submitted for every item. Items for which no prices are given will be regarded as being covered by other items in the Bills.

The quantities measured in the Bill of Quantities for work and material must not be viewed as a limitation of the amount of work to be done and material provided by the contractor in the complete execution of the work.

The general descriptions and data of the work given in the specification, drawings or schedules are not fully repeated in the Bill of Quantities and reference to the other documents for complete information is therefore important and necessary.

No variations or omissions may be done to the Bill of Quantities by the tenderer, any such variations or omissions will not be recognized and the text of the Bill of Quantities will be strictly adhered to.

Carried Forward

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Section No. 4
Bill No. 1
HVAC Installation

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

Brought Forward Material must be ordered as determined on site and not from the drawings or Bill of Quantities. The Employer will not accept any responsibility for surplus or inadequately ordered material. Payments will only be made for the actual re-measured quantities as installed. All fittings and accessories shall always include the connections thereto Unless otherwise stated in the Bill of Quantities, all prices shall allow for the following items: Supply, deliver to site, and store new unused and undamaged and of the best quality available and complete with small materials necessary for the installation, testing, commissioning and rendering in proper working order. Installation, fixing in position, running or laying, as applicable, in a thorough and workmanlike manner. Making of all connections necessary. Tenderer to ensure the proper working and serviceability of all items installed Complete labelling with engraved labels to indicate all functions and instructions which otherwise would be unclear to ordinary users. Corrosion protection to be applied where necessary. All profits, overheads, supervision, transport and skilled and unskilled labour Guarantee and maintainance for the complete Mechanical Installation including fittings, materials and workmanship for a period of TWELVE MONTHS after date of completion and handover. Approval and inspection by the Engineer Compliance with all relevant regulations, by-laws and codes of practice Compliance with the Specification. The installation is to comply with the project specifications if listed in this document	Carried Forward Section No. 4 Bill No. 1 HVAC Installation
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**SOUTH AFRICAN POLICE SERVICES
CONSTRUCTION OF THE NEW MSINSINI POLICE STATION**

Brought Forward			R	
Compliance with all requirements set out in this section and any other section of the Specification and Bills of Quantity.				
Tenderer to ensure Main Contractor allows for all the preliminary and general items required to provide the health & safety, mechanical and electrical installation for this project, but excluding items priced elsewhere in this Bill. This ensures there are no duplication in items priced and/or payments issued. Onus is on the tenderer to ensure the Main Contractors pricing issued incorporates P & G costs of each specialist sub-contractor appointed under them.				
<u>Air conditioning equipment and piping</u>				
<u>Supply and deliver the following Direct Expansion, Inverter split type air conditioning system, complete with condensing and evaporator units, all with electrical connection to isolator, PIR Motion Detector, refrigeration- and drain piping, electrical control wiring, brackets, supports, auxiliary extended drip tray at each indoor unit and all necessary accessories, as per the specification and manufacturer's recommendation. COP for all units to be 3. EER to be adjudicated by Engineer for acceptance upon equipment selections issued for approval</u>				
1	Wall mounted type Midwall Split Unit Cooling capacity - 3.6kW	No	4	
2	Matching Outdoor Condensing unit, complete with wall mounted bracket	No	4	
3	Diameter 6.35mm insulated refrigerant piping, installed inside trunking	m	30	
4	Diameter 9.52mm insulated refrigerant piping, installed inside trunking	m	30	
5	Diameter 32mm uPVC condensate drain piping, installed inside trunking	m	20	
6	Hard wired controller	No	4	
7	100 x 40mm uPVC Trunking	m	30	
8	Bluchem full treatment for outdoor unit	No	4	
Carried Forward			R	250
Section No. 4 Bill No. 1 HVAC Installation				J.W. R. m.

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