

Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)

Brought Forward				R
<u>Base course of earth filling supplied by the contractor under pavings, roads, etc</u>				
165	Construct 150mm thick base layer of G5 materials obtained from commercial sources, compacted to a density of at least 95% Mod. AASHTO density.	m3	93	
<u>Prescribed density tests on filling</u>				
166	Modified AASHTO Density tests	No	73	
<u>Weedkiller mixed with water and applied at a rate of 100grams/m2</u>				
167	To sides and bottoms of trench excavations (LI)	m2	998	
<u>Concrete (CPAP Work Group No. 110)</u>				
<u>Unreinforced concrete cast against excavated surfaces</u>				
<u>15MPa/19mm concrete</u>				
168	Blinding (LI)	m3	13	
<u>Reinforced concrete cast against excavated surfaces /or formworks</u>				
<u>30MPa/19mm concrete</u>				
169	Strip footings (LI)	m3	90	
<u>Test cubes</u>				
170	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	15	
<u>Formwork (CPAP Work Group No. 111)</u>				
<u>Rough formwork to sides</u>				
171	Strip footings (LI)	m2	138	
<u>Reinforcement (CPAP Work Group No. 114)</u>				
Carried Forward				R
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Brought Forward				R
<u>Mild and high tensile steel reinforcement to structural concrete work</u>				
172	Various diameter bars (LI)	t	13,50	
<u>Masonry (CPAP Work Group No. 116)</u>				
<u>Brickwork of NFX bricks in class II mortar</u>				
173	One and half brick walls in foundations (LI)	m2	224	
174	One and half brick walls (LI)	m2	86	
<u>Brickwork sundries</u>				
<u>2.5mm Galvanised brickwork reinforcement</u>				
175	155mm Wide reinforcement built in horizontally (LI)	m	2 430	
<u>Bagging of 1:3 cement and sand mixture</u>				
176	On brick walls, piers, etc. (LI)	m2	131	
<u>Joint forming material in movement joints</u>				
177	12mm Bitumen impregnated fibre board built in vertically through brick walls exceeding 300mm wide (LI)	m2	20	
<u>Face brickwork</u>				
<u>"Corojem Nebraska FBS" or other equally approved face bricks pointed with tinted recessed horizontal and vertical joints</u>				
178	Extra over brickwork for face brickwork on both sides of walls in foundations (LI)	m2	45	
179	Extra over brickwork for face brickwork on both sides of walls (LI)	m2	86	
180	Extra over brickwork for 345mm wide brick-on-edge header course bands one course high (LI)	m	172	
<u>Waterproofing (CPAP Work Group No. 120)</u>				
Carried Forward				R
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Brought Forward			
<u>Two coats emulsion bitumen emulsion waterproof coating as per approval</u>			
181	On bagged brick walls, piers, etc. (LI)	m2	131
<u>One Layer "Derbigum" or other equally approved CG4 waterproofing membrane sealed to solvent based bitumen primed surface by means of torch fusion with minimum 100mm side laps and minimum 150mm end laps</u>			
182	On retaining walls	m2	172
183	Extra over waterproofing to walls for one layer of 'interdek' or other equally approved sheeting with a minimum lap of 200mm to receive backfilling (Back filling else where measured)	m2	172
<u>Joint sealants etc</u>			
<u>Polyurethane or other equally approved sealing compound including backing cord, bond breaker, primer, etc.</u>			
184	12 x 12mm In vertical expansion joints including raking out expansion joint filler as necessary	m	57
<u>Two-part grey or other equally approved polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>			
185	15 x 10mm In horizontal expansion joints including raking out expansion joint filler as necessary	m	206
<u>Drainage (CPAP Work Ground No. 146 Unless Otherwise Stated)</u>			
<u>Slotted HDPE flexible drainage pipes</u>			
186	110mm HDPE flexible slotted agricultural pipes laid behind retaining walls for a depth not exceeding 3m including 19mm crushed stone encasing 300 x 300mm, "Kaymat" U34 geofabric filter blanket wrapped around encasing with 150mm side and 300mm end laps including stitching and 300 x 300mm river sand. (LI)	m	172
187	Extra over for 110mm cap (LI)	No	12
188	Extra over for 110mm bend (LI)	No	19

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Brought Forward		No	7
189	Extra over for 110mm access junction (LI)		
<u>BOUNDARY WALLS, FENCE AND GATES</u>			
<u>Earthworks (CPAP Work Group No. 104)</u>			
<u>Excavation other than bulk</u>			
190	Trenches (LI)	m3	1 733
<u>Extra over all excavations for loading, carting and dumping surplus excavated material, rubble, etc. (no allowance made for increase in bulk)</u>			
191	Off site to a dumping site to be found by the Contractor.	m3	768
<u>Risk of collapse of excavations</u>			
192	Sides of trench and hole excavations not exceeding 1,5m deep	m2	1 925
<u>Keeping excavations free of water</u>			
193	Keeping excavations free of all water other than subterranean water		Item
<u>Compaction of surfaces</u>			
194	Compaction of ground surface under strip footings, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	866
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density.</u>			
195	Backfilling to trenches, holes, etc. (LI)	m3	965
<u>Base course of earth filling supplied by the contractor under pavings, roads, etc</u>			
196	Construct 150mm thick base layer, under strip footings, of G5 materials obtained from commercial sources, compacted to a density of at least 95% Mod. AASHTO density. (LI)	m3	260

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Brought Forward		R	
<u>Prescribed density tests on filling</u>			
197	Modified AASHTO Density tests	No	204
<u>Weedkiller mixed with water and applied at a rate of 100grams/m2</u>			
198	To sides and bottoms of trench excavations (LI)	m2	2 791
<u>Concrete (CPAP Work Group No. 110)</u>			
<u>Unreinforced concrete cast against excavated surfaces</u>			
<u>15MPa/19mm concrete</u>			
199	Blinding (LI)	m3	36
<u>Reinforced concrete cast against excavated surfaces /or formworks</u>			
<u>30MPa/19mm concrete</u>			
200	Strip footings (LI)	m3	253
<u>Test cubes</u>			
201	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	42
<u>Formwork (CPAP Work Group No. 111)</u>			
<u>Rough formwork to sides</u>			
202	Strip footings (LI)	m2	385
<u>Reinforcement (CPAP Work Group No. 114)</u>			
<u>Mild and high tensile steel reinforcement to structural concrete work</u>			
203	Various diameter bars (LI)	t	37,95
<u>Masonry (CPAP Work Group No. 116)</u>			
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Brought Forward		
<u>Brickwork of NFX bricks in class II mortar</u>		
204	One and half brick walls in foundations (LI)	m2 626
205	One and half brick walls (LI)	m2 298
<u>Brickwork sundries</u>		
<u>2.5mm Galvanised brickwork reinforcement</u>		
206	155mm Wide reinforcement built in horizontally (LI)	m 7 244
<u>Brickwork sundries</u>		
<u>Bagging of 1:3 cement and sand mixture</u>		
207	On brick walls, piers, etc. (LI)	m2 423
<u>Joint forming material in movement joints</u>		
208	12mm Bitumen impregnated fibre board built in vertically through brick walls exceeding 300mm wide (LI)	m2 108
<u>Face brickwork</u>		
<u>"Corojem Nebraska FBS" or other equally approved face bricks pointed with tinted recessed horizontal and vertical joints</u>		
209	Extra over brickwork for face brickwork on both sides in foundations (LI)	m2 125
210	Extra over brickwork for face brickwork on both sides of walls (LI)	m2 298
211	Extra over brickwork for 345mm wide brick-on-edge header course bands one course high (LI)	m 481
<u>Waterproofing (CPAP Work Group No. 120)</u>		
<u>Two coats emulsion bitumen emulsion waterproof coating as per approval</u>		
212	On bagged brick walls, piers, etc. (LI)	m2 423
<u>Joint sealants etc</u>		

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Brought Forward			
	<u>Polyurethane or other equally approved sealing compound including backing cord, bond breaker, primer, etc.</u>		
213	12 x 12mm In vertical expansion joints including raking out expansion joint filler as necessary	m	616
	<u>Metalwork (CPAP Work Group No. 136)</u>		
	<u>Welded Mesh Fencing or other equal and approved invisible wall panels</u>		
214	1.80m High double skim clamber proof fence in panels 3.39m width with aperture size 12 x 12mm with 5x staining wires. Installed all in accordance with manufacturer's details	m	481
	<u>Fence Posts</u>		
215	3.02m High intermediate fence post mild steel galvanised, size 85mm tapering to 45mm. Post to be built into 600mm into concrete base. Concrete base size 600 x 600 x 700mm deep with and including excavations, cart away, backfilling, etc.	No	143
	<u>Minimum 600mm high galvanised high tensile steel flat wrap razor wire fixed on 3x straining wires, staining wires fixed on metal brackets. Bracket fixed on brick wall. Installed all in accordance to manufacturer's details</u>		
216	600mm High flat wrap razor wire on top of brick walls	m	481
	<u>Minimum 600mm high galvanised high tensile steel flat wrap razor wire fixed on 3x straining wires, staining wires fixed steel posts (steel posts elsewhere measured). Installed all in accordance to manufacturer's details</u>		
217	600mm High flat wrap razor wire on top of steel fence	m	481
	<u>100mm Electro-galvanized, 2mm thick, toughened steel security spikes fixed on top of walls, fence, etc., installed all in accordance to manufacturer's details</u>		
218	100mm Electro-galvanized security spikes fixed on top steel fence	m	481

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Brought Forward			R
<u>Gates, screens, etc.</u>			
<u>Gates, etc.</u>			
219	A motorized double swing gate side hung gate fixed to brick walls / brick piers, size 4900 x 2180mm high. The access gate shall be manufactured from the same materials used for perimeter fencing on street boundaries. Provide that the gate must be lockable with a heavy-duty padlock from inside the premises. Heavy duty frame and ironmongery by specialist. All steel to be galvanised and prepared to receive two coats of primer & paint for steel/metal by Dulux/Plascon/Duram O.O.E.A. all to paint manufacturer's specification & instruction. Type D19 Tenderer's are referred to Architect's drawing No. UKU-A-1006-03, annexed to these bills of quantities.	No	3
220	1430 x 2250mm High Titan full height free rotation turnstile by "Turnstar" or other equally approved and comprises of rotalok rotation locking mechanism and electronic control panel incorporates of anti-trap safety system, suspended Rotor technology, mechanical key override, shock absorbing rubber coupling, lockable top cover, 50mm diameter tube arms spaced 120mm apart, access control reader mounting position, rotarun perpetual base bearing, wiring side entry point, wiring bottom entry point, floor bolting positions, wall bolting positions, etc. and installed all in accordance to manufacturer's specifications.	No	1
<u>Drainage (CPAP Work Ground No. 146 Unless Otherwise Stated)</u>			
<u>Class 34 heavy duty uPVC pipes</u>			
221	395mm Long weep pipe built into one brick walls with one end left 50mm projection in front of walls	No	803
<u>DRIVEWAY AND PARKING AREA</u>			
<u>(CPAP WORK GROUP NO. 154 UNLESS OTHERWISE STATED)</u>			
<u>Excavation other than bulk</u>			
222	Excavate to reduced level	m3	1 961
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Brought Forward				R
<u>Extra over all excavations for loading, carting and dumping surplus excavated material, rubble, etc. (no allowance made for increase in bulk)</u>				
223	Off site to a dumping site to be found by the Contractor.	m3	1 961	
<u>Keeping excavations free of water</u>				
224	Keeping excavations free of all water other than subterranean water		Item	
<u>Compaction of surfaces</u>				
225	Compaction of ground surface under pavings, roads etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	3 992	
<u>Base course of earth filling supplied by the contractor under pavings, roads, etc</u>				
226	150mm Thick layer of G7 sub-base course under roads, parking areas, etc., with selected and approved natural G7 quality material, supplied and carted onto site by the contractor, compacted in layers of 150mm thickness to at least 95% Mod. AASHTO density.	m3	603	
227	150mm Thick layer of G5 sub-base course under roads, parking areas, etc., with selected and approved natural G5 quality material, supplied and carted onto site by the contractor, compacted in layers of 150mm thickness to at least 95% Mod. AASHTO density.	m3	12	
228	150mm Thick layer of C4 stabilized sub-base course under roads, parking areas, etc., stabilised cement in accordance with SABS 1200 DM, with selected and approved natural G5 quality material, supplied and carted onto site by the contractor, compacted in layers of 150mm thickness to at least 98% Mod. AASHTO density.	m3	587	
229	200mm Thick layer of C4 stabilized sub-base course under roads, parking areas, etc., stabilised cement in accordance with SABS 1200 DM, with selected and approved natural G5 quality material, supplied and carted onto site by the contractor, compacted in layers of 200mm thickness to at least 98% Mod. AASHTO density.	m3	32	
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Brought Forward				R
230	150mm Thick layer of G3 sub-base course under roads, parking areas, etc., with selected and approved natural G3 quality material, supplied and carted onto site by the contractor, compacted in layers of 150mm thickness to at least 98% Mod. AASHTO density.	m3	591	
<u>Testing of material and filling</u>				
Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series				
The items of testing given below are for additional testing which may be required by the Engineer over and above those required in accordance with the SABS 1200 series				
<u>Additional tests required by Engineer</u>				
231	Maximum dry density and optimum moisture content test in accordance with Method A7 of TMH 1	No	103	
232	Atterberg limits test in accordance with methods A2 to A4 of TMH 1	No	68	
233	In-situ dry density test in accordance with method A10(b) of TMH 1		Item	
<u>Weedkiller mixed with water and applied at a rate of 100grams/m2</u>				
234	Under parking area, etc. (LI)	m2	3 205	
<u>Bituminous premix road surfacing</u>				
235	Supply and apply primer coat on crusher base layer. Prime that complies with the requirements of SABS 748 or 749. MC-30 or MC-70 that complies with the requirements of SABS 308.	m2	3 126	
236	Supply and construct continuously medium graded hot premix asphalt surfacing layer 40mm thick (compacted thickness) 40/50 pen bitument 9.5mm stone to roadways compacted to 96% Marshal density and laid to falls	m2	3 126	
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**Proposed New Makhaza Police Station
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Brought Forward			R
<u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u>			
237	Kerb (SABS 927 fig 9) 150 x 300mm high with 525 x 100mm unreinforced concrete base including excavation, backfilling, haunching at back of each joint, etc. (Type: Barrier kerb BK2)	m	745
238	Kerb (SABS 927 fig 9) 150 x 300mm high with 525 x 100mm unreinforced concrete base circular on plan not exceeding 4m radius formed with short lengths of straight kerb including excavation, backfilling, haunching at back of each joint, etc. (Type: Barrier kerb BK2)	m	49
239	Kerb (SABS 927 fig 12) 75 x 150mm high with 286 x 70mm unreinforced concrete base including excavation, backfilling, haunching at back of each joint, etc. (Type: Edging E1)	m	400
240	Kerb (SABS 927 fig 12) 75 x 150mm high with 300 x 70mm unreinforced concrete base including excavation, backfilling, haunching at back of each joint, etc. (Type: Edging E3)	m	120
241	Barrier kerb and channel formed of kerb (SABS 927 fig 9) 150 x 300mm high and kerb (SABS 927 fig 8C) 300 x 200mm high with 935 x 100mm unreinforced concrete base including excavation, backfilling, haunching at back of each joint, etc. (Type: Barrier kerb and channel BK2 + C1)	m	50
242	Barrier kerb and channel formed of kerb (SABS 927 fig 9) 150 x 300mm high and kerb (SABS 927 fig 8C) 300 x 200mm high with 935 x 100mm unreinforced concrete base circular on plan not exceeding 4m radius formed with short lengths of straight kerb including excavation, backfilling, haunching at back of each joint, etc. (Type: Barrier kerb and channel BK2 + C1)	m	34
243	V-channel formed of 2x kerbs (SABS 927 fig 8C) 300 x 200mm high with 1010 x 100mm unreinforced concrete base including excavation, backfilling, haunching at back of each joint, etc. (Type: C1 + C1 V-channel)	m	160
<u>Masonry</u>			
244	80mm 'Corobrick' or other equally approved interlocking paving bricks laid in herringbone pattern to SANS 1200MJ, bricks laid on 25mm sand layer	m2	79
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**Proposed New Makhaza Police Station
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Brought Forward				R
<u>Paintwork</u>				
<u>Prepare and apply one coat non reflective road marking paint at a nominal rate of 0.42l/m² on bituminous road surfacing, pre-cast concrete paving blocks, etc.</u>				
245	100mm Wide solid lines to parking demarcation bays, etc.	m	782	
246	5,0m Long directional arrows	No	16	
247	6,0m Long curved directional arrows	No	12	
248	1,3m Long letters to 'STOP' sign, etc.	No	4	
249	11 x 1,5m Wide pedestrian walkway	No	1	
250	Disabled parking bay sign approximately 1,2m high	No	5	
251	Ambulance parking sign approximately 1,2m high	No	1	
252	Painted white parking numbers	No	97	
<u>DOMESTIC WATER STORAGE TANKS AND PUMPS</u>				
<u>Metalwork (CPAP Work Group No. 136)</u>				
<u>Hot Dipped Galvanised Sundry Steelwork</u>				
253	Supply, delivery, installation, connection, testing & commissioning of tank infill system pipe, ML, 50mm pipes	Item		
<u>Mechanical (CPAP Work Group No. 170)</u>				
Carried Forward				R
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Brought Forward		R	
<p><u>Supply and deliver the following booster pumps ("KSB" or other approved), complete with all with electrical connection to isolator, internal pump house reticulation piping- and drain piping, electrical control wiring, brackets, supports, steel bases, control panel and all necessary accessories, as per the specification and manufacturer's recommendation.</u></p>			
254	Supply, delivery, installation, connection, testing & commissioning of complete domestic water Bi-Plex Electric pump set including valves, vacuum breaks, auto air vents, etc. Pumps to operate Duty and Standby. Each Pump sized for 270 L/m @2.18bar	No	1
255	Supply, delivery, installation, connection, testing & commissioning of pump control panels		Item
256	Supply, delivery, installation, connection, testing & commissioning of all electrical work in the pump house		Item
257	190 x 190mm Photoluminescent pictograms statutory signs on chromadek or other equally approved material	No	11
258	Supply, delivery, installation, connection, testing & commissioning of trunk mains from pump house to building		Item
<p><u>SABS approved Black Mild Steel pipes including all holderbats and couplings in the running length with welded type fittings to be used. All pipe in wall/floor chases to be wrapped twice in brown Kraft paper. Pipes passing through opening in brickwork or slab shall be coated with DENZO Protective pipe wrapping. All pipes to be painted with one coat primer and two coats signal red.</u></p>			
259	40mm Pipes (LI)	m	31
<u>Pipework, valves, fittings, etc.</u>			
260	2500kPa Pressure gauge	No	8
261	Domestic water pump test meter	No	1
262	100mm Butterfly valve	No	2
263	150mm Butterfly valves	No	3
Carried Forward		R	
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Brought Forward		R	
264	150mm Non-return valve	No	2
265	150mm Expansion joints	No	4
266	150mm Strainer	No	1
267	150mm Gate valve	No	3
268	250mm Gate valve	No	2
269	Vortex impellers	No	2
270	Pressure switch	No	5
271	20mm Ball valve	No	5
272	20mm Check valve	No	4
273	50mm Rubber expansion joints	No	2
274	50mm Check valve	No	1
275	50mm Ball valve	No	1
276	Membrane vessel	No	1
277	100mm Brass elbows	No	5
278	150mm Brass elbows	No	4
279	250mm Brass elbows	No	3
280	150mm Brass tee-pieces	No	2
281	250mm Brass tee-pieces	No	1
282	100mm Brass straight piping	No	8
283	150mm Brass straight piping	No	30
284	250mm Brass straight piping	No	18
<u>FIRE WATER STORAGE TANKS AND PUMPS</u>			
<u>Metalwork (CPAP Work Group No. 136)</u>			
Carried Forward		R	
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Brought Forward		R	
<u>Hot Dipped Galvanised Sundry Steelwork</u>			
285	Supply, delivery, installation, connection, testing & commissioning of Cylindrical 235KL effective capacity dedicated fire storage tank for adequate supply of fire system including flanges, connections, fittings, hangers, brackets, vortex inhibitor, water level indicator, water inlets, water outlets to fire pumps, catladder, access hatches, valves, drains, etc complete. Reference to be made to DWG D0000-MF-A1-03 and technical specification when pricing, annexed to these bills of quantities.	No	1
286	Supply, delivery, installation, connection, testing & commissioning of tank infill		Item
<u>Mechanical (CPAP Work Group No. 170)</u>			
<u>Supply and deliver the following booster pumps ("KSB" or other approved), complete with all with electrical connection to isolator, internal pump house reticulation piping- and drain piping, electrical control wiring, brackets, supports, steel bases, control panel and all necessary accessories, as per the specification and manufacturer's recommendation.</u>			
287	Supply, delivery, installation, connection, testing & commissioning of complete fire water (Electric) pump set including valves, vacuum breaks, auto air vents, etc. Electric pump sized for 2400 L/m @12.08bar, Electrical Jockey pump sized for 60 L/min @12.08bar)	No	1
288	Supply, delivery, installation, connection, testing & commissioning of pump control panels		Item
289	Supply, delivery, installation, connection, testing & commissioning of all electrical work in the pump house		Item
290	190 x 190mm Photoluminescent pictograms statutory signs on chromadek or other equally approved material	No	11
291	Supply, delivery, installation, connection, testing & commissioning of trunk mains from pump house to installation of control valves		Item
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Brought Forward			R
<p><u>SABS approved Black Mild Steel pipes including all holderbats and couplings in the running length with welded type fittings to be used. All pipe in wall/floor chases to be wrapped twice in brown Kraft paper. Pipes passing through opening in brickwork or slab shall be coated with DENZO Protective pipe wrapping. All pipes to be painted with one coat primer and two coats signal red.</u></p>			
292	40mm Pipes (LI)	m	25
293	100mm Pipes (LI)	m	23
<u>Pipework, valves, fittings, etc.</u>			
294	2500kPa Pressure gauge	No	8
295	Fire water pump test meter	No	1
296	100mm Butterfly valve	No	2
297	150mm Butterfly valves	No	3
298	150mm Non-return valve	No	2
299	150mm Expansion joints	No	4
300	150mm Strainer	No	1
301	150mm Gate valve	No	3
302	250mm Gate valve	No	2
303	Vortex impellers	No	2
304	Pressure switch	No	5
305	20mm Ball valve	No	5
306	20mm Check valve	No	4
307	50mm Rubber expansion joints	No	2
308	50mm Check valve	No	1
309	50mm Ball valve	No	1
Carried Forward			R
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Brought Forward		R	
310	Membrane vessel	No	1
311	100mm Black mild steel elbows	No	5
312	150mm Black mild steel elbows	No	4
313	250mm Black mild steel elbows	No	3
314	150mm Black mild steel tee-pieces	No	2
315	250mm Black mild steel tee-pieces	No	1
316	100mm Black mild steel straight piping	No	8
317	150mm Black mild steel straight piping	No	30
318	250mm Black mild steel straight piping	No	18
<u>Auxiliary equipment</u>			
<u>Allow for all auxiliary equipment as specified in this document as well as the SANS 10287 code of practice, incl. valves, fittings supports, fire detection, ventilation, sprinkler protection to pumphouse, etc. Pricing to be in accordance with requirements of pump room as per D0000- MB-A1-03</u>			
319	Ventilation fan sized for 30 Air changes per hour	No	1
320	Upright Sprinkler head directly above pump inclusive of range piping	No	2
321	250L Diesel tank with bund	No	1
322	Pumproom alarm siren and strobe	No	1
323	Fire retardant cable Class A wiring (ph 30)	m	10
324	25mm PVC conduit in accordance with SANS 10139	m	10
<u>WATER TANK BASE AND PLINTH</u>			
<u>Earthworks (CPAP Work Group No. 104)</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
325	Reduced levels under floors (LI)	m3	16
Carried Forward		R	
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**Proposed New Makhaza Police Station
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	Brought Forward			R
326	Edge thickening (LI)	m3	3	
	<u>Extra over all excavations for carting away</u>			
327	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	19	
	<u>Risk of collapse of excavations</u>			
328	Sides of trench and hole excavations exceeding 1,5m and not exceeding 3m deep	m2	12	
	<u>Compaction of surfaces</u>			
329	Compaction of ground surface under floors, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% mod AASHTO density	m2	27	
	<u>Earth filling of G5 material supplied by contractor from commercial sources in accordance with SABS 1200 DM compacted to 98% Mod AASHTO density in 150mm thick layers</u>			
330	Under floors, steps, pavings, etc. (LI)	m3	8	
	<u>Prescribed density tests on filling</u>			
331	Modified AASHTO Density tests	No	2	
	<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years</u>			
332	Under floors, sides, etc. including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming (LI)	m2	39	
	<u>Concrete (CPAP Work Group No. 110)</u>			
	<u>Reinforced concrete cast against excavated surfaces</u>			
	<u>30MPa/19mm concrete</u>			
333	Surface base (LI)	m3	8	
	Carried Forward			R
	Bill No. 19			
	External Works			

Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)

Brought Forward				R
334	Edge thickening (LI)	m3	3	
	<u>Reinforced concrete cast against on/in formwork</u>			
	<u>30MPa/19mm concrete</u>			
335	Upstand beams (Plinth) (LI)	m3	4	
	<u>Test cubes</u>			
336	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	3	
	<u>Concrete sundries</u>			
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
337	Surface beds, slabs, etc. (LI)	m2	27	
	<u>40Mpa Non-shrink grout:</u>			
338	Bedding approximately 250 x 40mm thick	m	31	
	<u>Formwork (CPAP Work Group No. 111)</u>			
	<u>Smooth formwork to sides</u>			
339	Upstand beams (Plinth) (LI)	m2	28	
340	Edges, risers, ends and reveals not exceeding 300mm high or wide (LI)	m	21	
	<u>Reinforcement (CPAP Work Group No. 114)</u>			
	<u>High tensile steel reinforcement to structural concrete work</u>			
341	Bars of various diameters (LI)	t	2,55	
	<u>Waterproofing (CPAP Work Group No. 120)</u>			
	<u>One layer of 375 micron waterproof sheeting sealed at laps as per approval</u>			
342	Under surface beds including sides (LI)	m2	39	
Carried Forward				R
Bill No. 19 External Works				

Brought Forward			
<u>Metalwork (CPAP Work Group No. 136)</u>			
<u>80 x 8mm Thick heavy duty GMS plate fixed on to reinforced concrete plinth</u>			
343	5180mm long flat plate	No	6
<u>SAND, OIL AND GREASE TRAP</u>			
<u>Earthworks (CPAP Work Group No. 104)</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
344	Holes (LI)	m3	9
<u>Extra over all excavations for carting away</u>			
345	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	8
<u>Risk of collapse of excavations</u>			
346	Sides of trench and hole excavations exceeding 1,5m and not exceeding 3m deep	m2	17
<u>Compaction of surfaces</u>			
347	Compaction of ground surface under floors, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% mod AASHTO density	m2	7
<u>Earth filling obtained from excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>			
348	Backfilling to trenches, holes, etc. (LI)	m3	1
<u>Prescribed density tests on filling</u>			
349	Modified AASHTO Density tests	No	2

Carried Forward

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External Works

Brought Forward				R
<u>Approved anti-termite soil insecticide applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years including forming and poisoning shallow furrows along sides of foundation walls, etc., filling in and ramming:</u>				
350	Under floors, sides, etc. including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming (LI)	m2	24	
<u>Concrete (CPAP Work Group No. 110)</u>				
<u>Reinforced concrete cast against excavated surfaces and/or formwork</u>				
<u>30MPa/19mm concrete</u>				
351	Surface base (LI)	m3	2	
<u>Reinforced concrete cast against on/in formwork</u>				
<u>30MPa/19mm concrete</u>				
352	Slabs (LI)	m3	1	
<u>Test cubes</u>				
353	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	2	
<u>Concrete sundries</u>				
<u>Finishing top surfaces of concrete smooth with a wood float</u>				
354	Surface beds, slabs, etc. (LI)	m2	13	
<u>Formwork (CPAP Work Group No. 111)</u>				
<u>Smooth formwork to soffits</u>				
355	Slabs, propped up not exceeding 3.5m high (LI)	m2	6	
<u>Smooth formwork to sides</u>				
356	Edges, risers, ends and reveals not exceeding 300mm high or wide (LI)	m	39	
Carried Forward				R
Bill No. 19 External Works				

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Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)

Brought Forward		R	
<u>Boxing in smooth formwork to form</u>			
357	Extra over formwork to form opening size 225 x 225mm through 180mm thick slab (LI)	No	2
358	Extra over formwork to form opening size 550mm diameter through 180mm thick slab (LI)	No	3
<u>Movement Joints, Etc.</u>			
<u>Two sheets of tempered hardboard (smooth sides together) to form slip joint between abutting horizontal concrete and brickwork surfaces</u>			
359	Not exceeding 300mm wide (LI)	m	14
<u>Reinforcement (CPAP Work Group No. 114)</u>			
<u>High tensile steel reinforcement to structural concrete work</u>			
360	Bars of various diameters (LI)	t	0,15
<u>Fabric reinforcement</u>			
361	Type Ref. 193 fabric reinforcement in concrete surface beds, slabs, etc. (LI)	m2	7
<u>Masonry (CPAP Work Group No. 116)</u>			
<u>Brickwork of NFX bricks in class II mortar</u>			
362	Half brick walls (LI)	m2	3
363	One brick walls (LI)	m2	9
<u>Brickwork sundries</u>			
<u>2.5mm Galvanised brickwork reinforcement</u>			
364	75mm Wide reinforcement built in horizontally (LI)	m	12
365	155mm Wide reinforcement built in horizontally (LI)	m	35
<u>Waterproofing (CPAP Work Group No. 120)</u>			
Carried Forward		R	
Bill No. 19 External Works			



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322

Brought Forward			
	<u>One layer of 375 micron Brikgrit DPC embossed damp proof course as per approval</u>		
366	In walls (LI)	m2	3
	<u>One layer of 375 micron waterproof sheeting sealed at laps as per approval</u>		
367	Under surface beds (LI)	m2	7
	<u>Drainage (CPAP Work Ground No. 146 Unless Otherwise Stated)</u>		
	<u>uPVC pipes cast into concrete slabs, fixed to soffit and walls, or chased into walls, chased into concrete, etc. in accordance with manufacturers specifications</u>		
368	110mm Pipes (LI)	m	9
	<u>Extra over uPVC pipes for:</u>		
369	110mm Bend (LI)	No	5
370	110mm Junction (LI)	No	2
	<u>Gratings, covers, etc.</u>		
371	225 x 255mm, cast iron cover and frame including	No	2
372	550mm Diameter x 176kg, type 2A cast iron cover and frame including	No	3
	<u>ATTENUATION TANKS (2 NO.)</u>		
	<u>Earthworks (CPAP Work Group No. 104)</u>		
	<u>Excavation in earth not exceeding 2m deep</u>		
373	Holes (LI)	m3	306
	<u>Excavation in earth exceeding 2m and not exceeding 4m deep</u>		
374	Holes (LI)	m3	173

Carried Forward

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Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)

Brought Forward				R
<u>Extra over bulk excavation in earth for excavation in:</u>				
375	Intermediate material	m3	48	
376	Hard material	m3	24	
<u>Extra over all excavations for loading, carting and dumping surplus excavated material, rubble, etc. (no allowance made for increase in bulk)</u>				
377	Off site to a dumping site to be found by the Contractor.	m3	387	
<u>Keeping excavations free of water</u>				
378	Keeping excavations free of all water other than subterranean water		Item	
<u>Risk of collapse of excavations</u>				
379	Risk of collapse of sides of trenches and holes exceeding 1,5m deep	m2	228	
<u>Compaction of surfaces</u>				
380	Compaction of ground surface under bases etc., including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod. AASHTO density	m2	153	
<u>Earth filling obtained from excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>				
381	Backfilling to trenches, holes, etc. (LI)	m3	92	
<u>Earth filling of G5 material supplied by contractor from commercial sources in accordance with SABS 1200 DM compacted to 98% Mod AASHTO density in 150mm thick layers</u>				
382	Under floors, steps, pavings, etc. (LI)	m3	69	
<u>Prescribed density tests on filling</u>				
383	Modified AASHTO Density tests	No	27	
Carried Forward				R

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**Proposed New Makhaza Police Station
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	Brought Forward		R
	<u>Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years</u>		
384	Under floors, sides, etc. including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming (LI)	m2	381
	<u>Concrete (CPAP Work Group No. 110)</u>		
	<u>Unreinforced concrete cast against excavated surfaces</u>		
	<u>15MPa/19mm concrete</u>		
385	Blinding (LI)	m3	10
	<u>Reinforced concrete cast against excavated surfaces and/or formwork</u>		
	<u>35MPa/19mm concrete</u>		
386	Surface base (LI)	m3	36
	<u>Reinforced concrete cast against on/in formwork</u>		
	<u>35MPa/19mm concrete</u>		
387	Walls (LI)	m3	37
388	Slabs (LI)	m3	36
	<u>Test cubes</u>		
389	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	18
	<u>Concrete sundries</u>		
	<u>Finishing top surfaces of concrete smooth with a wood float</u>		
390	Surface beds, slabs, etc. (LI)	m2	237
	<u>Formwork (CPAP Work Group No. 111)</u>		
	Carried Forward		R
	Bill No. 19 External Works		

Proposed New Makhaza Police Station
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Brought Forward			R
<u>Smooth formwork to sides</u>			
391	Walls, propped up not exceeding 3.5m high (LI)	m2	125
392	Edges, risers, ends and reveals not exceeding 300mm high or wide (LI)	m	130
<u>Smooth formwork to soffits</u>			
393	Slabs exceeding 250mm and not exceeding 500mm thick, propped up not exceeding 3.5m high (LI)	m2	119
<u>Boxing in smooth formwork to form</u>			
394	Extra over formwork to form opening size 375mm diameter through 300mm thick walls (LI)	No	4
395	Extra over formwork to form opening size 1000 x 1000mm through 300mm thick slab (LI)	No	2
<u>Reinforcement (CPAP Work Group No. 114)</u>			
<u>High tensile steel reinforcement to structural concrete work</u>			
396	Bars of various diameters (LI)	t	18,53
<u>Galvanised wire support. Tenderer's are refer to Civil Engineer drawing no.: 23023-STR-007 for details, annexed to these bills of quantities.</u>			
397	Approximate 300mm R10 clip (LI)	No	434
398	Approximate 250mm Y10 clip (LI)	No	434
<u>Drainage (CPAP Work Ground No. 146 Unless Otherwise Stated)</u>			
<u>Gratings, covers, etc.</u>			
399	1000 x 1000mm, cast iron cover and frame including	No	2
<u>COVERED WALKWAY</u>			
<u>Earthworks (CPAP Work Group No. 104)</u>			

Carried Forward

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Proposed New Makhaza Police Station
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Brought Forward			
<u>Excavation in earth not exceeding 2m deep</u>			
400	Bases	m3	58
<u>Extra over all excavations for carting away</u>			
401	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	30
<u>Risk of collapse of excavations</u>			
402	Sides of trench and hole excavations exceeding 1,5m and not exceeding 3m deep	m2	192
<u>Compaction of surfaces</u>			
403	Compaction of ground surface under bases, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% mod AASHTO density	m2	58
<u>Earth filling obtained from excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>			
404	Backfilling to trenches, holes, etc.	m3	28
<u>Earth filling of G5 material supplied by contractor from commercial sources in accordance with SABS 1200 DM compacted to 98% Mod AASHTO density in 150mm thick layers</u>			
405	Under bases, etc.	m3	9
<u>Prescribed density tests on filling</u>			
406	Modified AASHTO Density tests	No	2
<u>Concrete (CPAP Work Group No. 110)</u>			
<u>Unreinforced concrete cast against excavated surfaces</u>			
<u>15MPa/19mm concrete</u>			
407	Surface blinding under bases	m3	3
Carried Forward			

R

R

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External Works

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Brought Forward			
<u>Reinforced concrete cast against excavated surfaces and/or formwork</u>			
<u>30MPa/19mm concrete</u>			
408	Base	m3	17
<u>Reinforced concrete cast against on/in formwork</u>			
<u>30MPa/19mm concrete</u>			
409	Stub columns	m3	2
<u>Test cubes</u>			
410	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	3
<u>40Mpa Non-shrink grout</u>			
411	Bedding approximately 25mm thick under base plate including chamfered edges all round	m2	2
<u>Holding down bolts, etc</u>			
412	Set out and embed 100mm long M12 holding down bolts with 30 x 30 end plates in top of concrete in exact position	No	160
<u>Formwork (CPAP Work Group No. 111)</u>			
<u>Smooth formwork to sides</u>			
413	Stub columns	m2	19
<u>Reinforcement (CPAP Work Group No. 114)</u>			
414	Various diameter bars in high tensile steel reinforcement	t	2,25
<u>Roof Coverings, Etc. (CPAP Work Group No. 124)</u>			

Carried Forward

Bill No. 19
External Works

**Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)**

Brought Forward				R
<u>0.6mm thick colour coated galvanised sheet metal double-interlocking concealed fix profiled roofing fixed to timber purlins (timber purlins elsewhere measured)</u>				
415	Roof covering with pitches not exceeding 25 degrees fixed at walkways.	m2	142	
<u>Sundries</u>				
416	Ridge capping 550mm girth 3 times bent and notched on site to suit roof profile	m	59	
417	Hip capping 550mm girth 3 times bent and notched on site to suit roof profile	m	5	
<u>0.6mm aluminium sheet</u>				
418	Lining to valleys with riveted and sealed joints, with girth not exceeding 600mm.	m	5	
<u>Carpentry and Joinery (CPAP Work Group No. 126)</u>				
<u>Pre-treatment of timber</u>				
This service falls within the areas defined in the National Building Regulations for treatment of timber against insect infestation / insect pest affecting softwood fixed permanently in all buildings.				
The regulations require that the timber be treated in terms of SABS 05 and to comply with SABS 457, 753, 754 or 1288 as relevant. Tenderer's are to make allowance in there rates.				
<u>Sawn softwood:</u>				
419	50 x 75mm Purlins	m	354	
420	50 x 228mm Rafter	m	113	
<u>Laminated Wrot Saligna</u>				
421	76 x 222mm Beams	m	116	
Carried Forward				R
Bill No. 19 External Works				

Brought Forward				R
<u>"Everite Nutec" or other equally approved medium density pressed fibre-cement</u>				
422	15 x 255mm Fascias, including galvanised steel H-profile joiners	m	116	
423	80 x 275mm Angle section barge board, including galvanised steel H-profile joiners	m	5	
<u>Metalwork (CPAP Work Group No. 136)</u>				
<u>Hot Dipped Galvanised Sundry Steelwork</u>				
<u>Brackets, posts, etc. to roof timbers, etc.</u>				
424	100 x 100 x 3mm Hollow section post 2750mm high with 200 x 200 x 10mm thick base plate welded to one end and the other end welded to and including purpose made U-shaped bracket to suit 76 x 222mm high timber beam (Timber beam elsewhere measured) with 6 No. M8 pre-drilled holes on bracket and 4 No. M10 pre-drilled holes on base plate to suit site conditions.	No	40	
<u>Plumbing an Drainage (CPAP Work Group No. 148)</u>				
<u>0.9mm Pre-coated aluminium seamless gutter colour brown with baked enamel finish, including hanger brackets, etc.</u>				
425	Purpose made 150 x 125mm Eaves gutters	m	116	
426	Extra over gutter for stop end	No	4	
427	Extra over gutter for corner	No	8	
428	Extra over gutter for outlet	No	18	
<u>0.9mm Pre-coated aluminium seamless rainwater downpipes colour brown with baked enamel finish, including holder butts, etc.</u>				
429	100 x 100mm Rainwater downpipes	m	55	
430	Extra on rainwater pipe for bend	No	36	
431	Extra on rainwater pipe for shoe	No	18	
Carried Forward				R
Bill No. 19 External Works				

Brought Forward			R
<u>Paintwork (CPAP Work Group No. 152)</u>			
<u>Two coats Carbolineum</u>			
432	On exposed trusses (LI)	m2	122
<u>One coat primer, one coat universal undercoat and two coats "Velvaco Polyurethane Enamel" or equal and approved paint</u>			
433	On fascia and barge boards (LI)	m	121
<u>Prepare and apply one coat of zinc chromate primer one coat universal undercoat and two coats of universal SABS approved gloss enamel paint. Colour to be chosen by Architect.</u>			
434	On steel posts (LI)	m2	44
<u>COVERED CARPORTS</u>			
<u>Earthworks (CPAP Work Group No. 104)</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
435	Bases (LI)	m3	213
<u>Extra over all excavations for carting away</u>			
436	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	116
<u>Risk of collapse of excavations</u>			
437	Sides of trench and hole excavations exceeding 1,5m and not exceeding 3m deep	m2	656
<u>Compaction of surfaces</u>			
438	Compaction of ground surface under bases, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% mod AASHTO density	m2	186

Carried Forward

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Brought Forward			R
<u>Earth filling obtained from excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>			
439	Backfilling to trenches, holes, etc. (LI)	m3	97
<u>Earth filling of G5 material supplied by contractor from commercial sources in accordance with SABS 1200 DM compacted to 98% Mod AASHTO density in 150mm thick layers</u>			
440	Under bases, etc. (LI)	m3	25
<u>Prescribed density tests on filling</u>			
441	Modified AASHTO Density tests	No	20
<u>Concrete (CPAP Work Group No. 110)</u>			
<u>Unreinforced concrete cast against excavated surfaces</u>			
<u>15MPa/19mm concrete</u>			
442	Surface blinding under bases (LI)	m3	9
<u>Reinforced concrete cast against excavated surfaces and/or formwork</u>			
<u>30MPa/19mm concrete</u>			
443	Base (LI)	m3	65
<u>Reinforced concrete cast against on/in formwork</u>			
<u>30MPa/19mm concrete</u>			
444	Stub columns (LI)	m3	18
<u>Test cubes</u>			
445	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	14
<u>40Mpa Non-shrink grout</u>			
446	Bedding approximately 25mm thick under base plate including chamfered edges all round	m2	21
Carried Forward			R
Bill No. 19 External Works			

Proposed New Makhaza Police Station
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Brought Forward				R
<u>Holding down bolts, etc</u>				
447	Set out and embed 100mm long M12 holding down bolts with 30 x 30 end plates in top of concrete in exact position	No	408	
<u>Formwork (CPAP Work Group No. 111)</u>				
<u>Smooth formwork to sides</u>				
448	Stub columns (LI)	m2	158	
<u>Reinforcement (CPAP Work Group No. 114)</u>				
449	Various diameter bars in high tensile steel reinforcement (LI)	t	9,91	
<u>Structural Steel (CPAP Work Group No. 134)</u>				
<u>Welded columns in single lengths with flat section base, top, bearer and connection plates bolted to reinforced concrete at bottom and parallel flanged channel at top</u>				
450	100 x 100 x 4 SHS Columns	t	3,49	
<u>Welded beams in single lengths with flat section bearer and connection plates bolted to columns</u>				
451	150 x 100 x 3 RHS Beams	t	3,94	
<u>Welded purlins, bracing, trimmers, eaves runner, etc. with flat section connection plates bolted to steel</u>				
452	150 x 75 x 20 x 2.5 CFLC purlins	t	6,99	
453	45 x 45 x 3 Angle bracing	t	1,02	
454	50 x 50 x 5 Angle bracing	t	3,55	
<u>Sundry Steelwork</u>				
455	Cleats, plates, gussets, connectors, etc.	t	8,75	
<u>Paintwork</u>				
Carried Forward				R
Bill No. 19 External Works				



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Brought Forward			
<u>Remove all grease and oil by washing with a water emulsifiable solvent degreaser and rinsing with potable water, dry abrasive blast to rear white metal in accordance with Sa 2.5 of the International Standard ISO 850-1 to obtain a surface profile of 25 - 75 microns and apply one coat Inter guard 269 galvanizing primer and two coats Interthane 990 re-coatable polyurethane</u>			
456	On columns, beams, purlins, angles, etc.	t	18,99
457	On cleats, plates, gussets, connectors, etc.	t	8,75
<u>Roof Coverings, Etc. (CPAP Work Group No. 124)</u>			
<u>Profiled Metal Sheetting and Accessories</u>			
<u>0.6mm thick colour coated galvanised sheet metal double-interlocking concealed fix profiled roofing fixed to steel purlins (steel purlins elsewhere measured)</u>			
458	Roof covering with pitch not exceeding 25 degrees	m2	1 202
<u>Sundries</u>			
459	Barge flashing, 550mm girths	m	276
460	Fascia flashing, 550mm girths	m	206
<u>Plumbing an Drainage (CPAP Work Group No. 148)</u>			
<u>0.9mm Pre-coated aluminium seamless gutter colour brown with baked enamel finish, including hanger brackets, etc.</u>			
461	Purpose made 150 x 125mm Eaves gutters	m	206
462	Extra over gutter for stop end	No	22
463	Extra over gutter for outlet	No	32
<u>0.9mm Pre-coated aluminium seamless rainwater downpipes colour brown with baked enamel finish, including holder butts, etc.</u>			
464	100 x 100mm Rainwater downpipes	m	101

Carried Forward

Bill No. 19
External Works

Brought Forward		R	
465	Extra over rainwater pipe for bend	No	64
466	Extra over rainwater pipe for shoe	No	32
<u>RAINWATER TANKS AND BASES</u>			
<u>Earthworks (CPAP Work Group No. 104)</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
467	Reduced level (LI)	m3	19
468	Edge thickening (LI)	m3	4
<u>Extra over all excavations for carting away</u>			
469	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	23
<u>Risk of collapse of excavations</u>			
470	Risk of collapse of sides of trench excavations exceeding 1.5m deep	m2	23
<u>Compaction of surfaces</u>			
471	Compaction of ground surface under floors compacted to 95% Mod. AASHTO density	m2	34
<u>Earth filling of G5 material supplied by contractor from commercial sources in accordance with SABS 1200 DM compacted to 98% Mod AASHTO density in 150mm thick layers</u>			
472	Under floors, steps, pavings, etc. (LI)	m3	10
<u>Prescribed density tests on filling</u>			
473	Modified AASHTO Density tests	No	2
Carried Forward		R	
Bill No. 19 External Works			

N.B SS

335

Brought Forward				R
	<u>Approved anti-termite soil insecticide applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years including forming and poisoning shallow furrows along sides of foundation walls, etc., filling in and ramming:</u>			
474	Under floors, sides, etc. including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming (LI)	m2	49	
	Concrete (CPAP Work Group No.110)			
	<u>Reinforced concrete cast against excavated surfaces and/or formwork</u>			
	<u>30MPa/19mm concrete</u>			
475	Surface bed (LI)	m3	8	
476	Edge thickening (LI)	m3	4	
	Test Cubes			
477	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	2	
	Concrete Sundries			
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
478	Surface beds, slabs, etc. (LI)	m2	34	
	Formwork (CPAP Work Group No. 111)			
	<u>Smooth formwork to sides</u>			
479	Edges, risers, ends and reveals not exceeding 300mm high or wide (LI)	m	27	
	Reinforcement (CPAP Work Group No. 114)			
	<u>Fabric reinforcement</u>			
480	Type ref. 193 fabric reinforcement in concrete surface beds, slabs, etc. (LI)	m2	34	
Carried Forward				R
Bill No. 19 External Works				

Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)

Brought Forward				R
481	Type ref. 193 fabric reinforcement in concrete edge thickening (LI)	m2	24	
	<u>Masonry (CPAP Work Group No. 116)</u>			
	<u>Brickwork of NFP bricks in class II mortar</u>			
482	One brick walls (LI)	m2	7	
	<u>Brickwork sundries</u>			
	<u>2.5mm Galvanised brickwork reinforcement</u>			
483	155mm Wide reinforcement built in horizontally (LI)	m	27	
	<u>Brickwork sundries</u>			
	<u>Bagging of 1:3 cement and sand mixture</u>			
484	On brick walls, piers, etc. (LI)	m2	7	
	<u>Face brickwork</u>			
	<u>"Corojem Nebraska FBS" or other equally approved face bricks pointed with tinted recessed horizontal and vertical joints</u>			
485	Extra over brickwork for face brickwork on both sides of wall (LI)	m2	7	
486	Extra over brickwork for brick-on-edge header course bands one course high (LI)	m	27	
	<u>Waterproofing (CPAP Work Group No. 120)</u>			
	<u>Two coats emulsion bitumen emulsion waterproof coating as per approval</u>			
487	On bagged brick walls, piers, etc. (LI)	m2	7	
	<u>Plumbing (CPAP Work Group No. 148)</u>			
Carried Forward				R
Bill No. 19 External Works				

Brought Forward				R
<u>Polyethylene rainwater tanks, etc.</u>				
488	5000 Litres "JoJo" rainwater tank or other equally approved, with 100 x 100mm opening for downpipe from gutter including 50mm diameter overflow opening and outlet union for 20mm tap (tap elsewhere measured) and place in position on plinth and secure with twisted double strand 4mm galvanised wire.	No	4	
<u>Taps, valves, etc.</u>				
489	Hose bib tap, brass including 3/4 hose union, etc. (Code: COB-208-20)	No	4	
<u>Plastering (CPAP Work Group No. 142)</u>				
<u>Screeds wood floated, on concrete</u>				
490	Average 170mm thick on floors to falls (LI)	m2	34	
<u>FLAGPOLES</u>				
<u>Earthworks (CPAP Work Group No. 104)</u>				
<u>Excavation in earth not exceeding 2m deep</u>				
491	Bases (LI)	m3	1	
<u>Extra over all excavations for carting away</u>				
492	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	1	
<u>Risk of collapse of excavations</u>				
493	Sides of trench and hole excavations exceeding 1,5m and not exceeding 3m deep	m2	4	
<u>Compaction of surfaces</u>				
494	Compaction of ground surface under bases, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% mod AASHTO density	m2	1	
<u>Concrete (CPAP Work Group No. 110)</u>				
Carried Forward				R
Bill No. 19 External Works				



Brought Forward			R
<u>Reinforced concrete cast against excavated surfaces and/or formwork</u>			
<u>30MPa/19mm concrete</u>			
495	Base (LI)	m3	1
<u>Test cubes</u>			
496	Making and testing set of three 150 x 150 x 150mm concrete strength test cube (Provisional)	No	1
<u>40Mpa Non-shrink grout</u>			
497	Bedding approximately 25mm thick under base plate including chamfered edges all round	m2	1
<u>Reinforcement (CPAP Work Group No. 114)</u>			
498	Various diameter bars in high tensile steel reinforcement (LI)	t	0,12
<u>Metalwork (CPAP Work Group No. 136)</u>			
<u>Flagpole</u>			
499	Flagpole comprises of 2x no. of 102mm x 50mm mild steel taper flange channels fixed to foundation, 200mm x 50mm x 6mm mild steel flat bar, 3x no. of 16mm diameter bolt with nut, 100mm diameter x 5000mm long aluminium pole with 4.2mm thickness, 100 x 50mm diameter aluminium reducer, 50mm diameter x 4000mm long aluminium pole with 4.2mm thickness, end cap, galvanised pulley, etc. all in accordance to flagpole details and specifications	No	2
<u>LANDSCAPING</u>			
<u>(CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)</u>			
<u>Ground preparation</u>			
500	Site clearance	m2	3 610
501	Rip and prepare areas to receive planting/lawn/seeding	m2	3 610
Carried Forward			R
Bill No. 19 External Works			

**Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)**

Brought Forward			R
<u>Topsoil, compost, lime and fertilizer</u>			
502	Import topsoil for planting/lawn/seeding areas (100mm) (LI)	m3	361
503	Final shaping of planting/lawn/seeding areas (LI)	m2	3 610
504	Compost to planting areas (50mm) (LI)	m3	42
505	Fertilizer to planting/lawn beds (50g/m ²) (LI)	kg	72
<u>Grassing, Trees, etc</u>			
<u>Supply and plant the following plants</u>			
506	Lampranthus at the rate of five per square metre (LI)	m2	141
507	Chondropetalum at the rate of three per square metre (LI)	m2	141
508	Heteropyxis Natalensis 200mm high (LI)	No	25
509	Podocarpus Henkel 200mm high (LI)	No	25
<u>Supply and plant the following grass</u>			
510	Grass planting to level areas with Cynadon Dactylon continuous root planting described including all necessary fertiliser, weed killer, watering and rolling, mowing, etc. (LI)	m2	3 329
<u>Maintenance</u>			
511	Maintenance of grassed areas for a period of 4 months (total area approximately 3329m ²) including regularly cutting, weeding and irrigating as necessary (LI)		Item
<u>Outdoor furniture</u>			
512	"Builders Merchant" or other equally approved quality garden concrete benches (two number) and table (one number), fixed to ground surfaces with approved epoxy glue (LI)	No	4
513	"SA Bins" or other equally approved 500mm Diameter x 740mm high concrete ribbed round litter bin (grey colour finish), fixed to ground surfaces with approved epoxy glue (LI)	No	8

Carried to Summary

Bill No. 19
External Works



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**Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)**

Brought Forward		R
4	Profit	390 000,00
5	Attendance	390 000,00
<u>CONTRACT SKILLS DEVELOPMENT GOALS - CSDG</u>		
The following allowance will be subject to adjustment based on the notional cost (see Table 3) as per Government Gazette No. 48491 of 28 April 2023 as amended in line with the training opportunity agreed with the employer .		
6	Minimum Contract Skills Development Goal (CSDG) (0.5% x "Sub total A" on the Final Summary)	0,50%
7	Profit	
8	Attendance	
Carried to Summary		R
Bill No. 20 Project Assessment Scheme (Provisional)		

**Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)**

FINAL SUMMARY		Page No	Amount
Bill No			
1	Preliminaries	40	
2	Earthworks	44	
3	Concrete, Formwork and Reinforcement	50	
4	Masonry	55	
5	Waterproofing	58	
6	Roof Coverings, etc.	62	
7	Carpentry and Joinery	76	
8	Ceilings, Partitions and Access Flooring	79	
9	Floor Covering	81	
10	Ironmongery	93	
11	Metalwork	110	
12	Plastering	113	
13	Tiling	116	
14	Plumbing and Drainage (Provisional)	134	
15	Electrical Works	170	
16	Mechanical Works	184	
17	Glazing	187	
18	Paintwork	190	
19	External Works	252	
	Sub Total (A)		R
20	Project Assessment Scheme (Provisional)	254	
	Sub Total		R
	Carried Forward		R



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Proposed New Makhaza Police Station
Potion On ERF 75169 OF 59037 (Khayelitsha)

Bill
No

FINAL SUMMARY

Brought Forward

Add: "Allow the amount of R 4 000 000.00 (Four Million Rand) for price escalation to be adjusted in terms of JBCC Contract Price Adjustment Provisions (CPAP)"

Sub Total

Add: Value Added Tax @ 15%

Page
No

Amount

R

Item

4 000 000.00

R

R

Carried to Form of Tender

R

*CONSTRUCTION OF NEW MAKHAZA POLICE STATION: WESTERN
CAPE PROVINCE*

BID: 19/1/9/1/34 TB(25)

PART C:

CONTRACT

Part C3

Scope of Work



C3: SCOPE OF WORKS - CONSTRUCTION OF NEW MAKHAZA POLICE STATION

JBCC Series 2000

CONTENTS

Document reference	Document title	No. of Pages
C3	SCOPE OF WORKS	24- including this one

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C3: SCOPE OF WORKS

JBCC Series 2000

Project : Construction of New Makhaza Police Station

Employer : South African Police Service

Reference : 19/1/9/1/34 TB (25)

C3.1. DESCRIPTION OF THE WORKS

C3.1.1. Employer's objectives

The South African Police Service endeavors to complete the Construction of New Makhaza Police Station.

In addition to the above, the project aims to achieve the following:

- a) to provide a minimum Contract Participation Goal (CPG) of 5% of the total contract value and develop targeted enterprises by the main or lead partner contractors
- b) to train learners in Occupational qualifications, trade qualification, work integrated learners – P1 and P2 learners, professional candidates (which ever is applicable after award of the tender
- c) to deliver public infrastructure using labour-intensive methods in accordance with EPWP Guidelines
- d) Small Micro and Medium Enterprises (SMME's) involvement of at least 30% of the contract value to be sourced from within the specified range from the project site that is Makaza (ward 95, 96), local, district and within the borders of the province the project is located.

The **employer** intends to appoint a suitable **contractor** to construct facilities and amenities as per the **employer** 's specifications

The general intent of this contract is that the **contractor** shall procure all items necessary to construct and complete the **works** in accordance with the terms of this contract, in a workmanlike and expeditious manner

C3.1.2. Overview of the works

Works included in this contract comprise the construction of a new police station, including all associated services.

The total size of the site is approximately 1.0229 ha

In addition to the requirements specified, the design will ensure that the buildings comply with the national building regulations and standards of the country (SANS), the legal, safety, and health requirements, and should observe sustainable design principles

The extent of the works is detailed below, and the portion of the work relevant to the successful bidder of this document has also been stated below

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C3.1.3. Extent of the works

The following is the high-level scope for the project:

- a) Community service center
- b) Public ablution block
- c) Victim friendly facilities
- d) Office block to cater for:
 - i. Station commander office , including secretary with waiting area
 - ii. Visible policing offices
 - iii. Crime prevention office (open plan office)
 - iv. DPO office
 - v. Detective services spaces
 - vi. Support services spaces
 - vii. Administration offices
 - viii. Store spaces
- e) Cell standard spaces (male, female and juveniles etc)
- f) Cleaners rest room
- g) Emergency generator room (generator must be provided)
- h) Emergency water storage
- i) Air-cons and dehumidifier must be provided where and if necessary
- j) Security fence with lights need to be provided
- k) Undercover parking
- l) Vertical transportation

C3.1.4. Location of the works

See C4: Site Information

C3.2. WORKS SPECIFICATION

C3.2.1. Applicable national and international standards

The following, but not limited to, national specifications even though not bound apply to this document, refer to purpose written specifications for all national standards:

- a) Occupation Health and Safety Act, 1993
- b) SANS 10400: National Building Regulations
- c) SANS 10400-XA: Energy Usage in Buildings
- d) SANS 10400-X: Environmental sustainability
- e) SANS 1186-1: Symbolic safety signs - Part 1: Standard signs and general requirements

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- f) SANS 10142: The wiring of premises (part 1 & 2)
- g) SANS 10389-1: Exterior lighting Part 1 Artificial lighting of exterior areas for work and safety
- h) SANS 10389-2: Exterior lighting Part 2 Exterior security lighting
- i) SANS 1765: Low voltage switchgear and control gear assemblies (distribution boards) with rated short circuit withstand strength up to and including 10kA
- j) SANS 10313: Protection against lightning - physical damage to structures and life hazard
- k) SANS 62305: Protection against lightning
- l) SANS 62040: Uninterruptible Power Systems (UPS)
- m) SANS 10252-1: Water Supply Installations for Buildings
- n) SANS 10252-2: Drainage Installations for building
- o) Local Municipality by laws & requirements
- p) SAPS Project Five Star 2012 Specifications for New and Existing Police Cell

C3.2.2. Particular or generic specifications

The following purpose written (project specific) specifications are applicable to the **works** and are attached as Annexures after C4: Site Information

- a) SANS 1200 A: General
- b) SANS 1200 C: Site Clearance
- c) SANS 1200 D: Earthworks
- d) SANS 1200 DB: Earthworks (Pipe Trenches)
- e) SANS 1200 DM: Earthworks (Roads, Subgrade)
- f) SANS 1200 G: Concrete (Structural)
- g) SANS 1200 GA: Concrete (Ordinary Building)
- h) SANS 1200 H: Structural Steelwork
- i) SANS 1200 L: Medium pressure pipelines
- j) SANS 1200 LD: Sewers
- k) SANS 1200 LE: Stormwater drainage
- l) SANS 1200 ME: Subbase
- m) SANS 1200 MF: Base
- n) SANS 1200 MK: Kerbing and channelling
- o) SANS 1200 MM: Ancillary works
- p) SANS 1123: Flange Specification
- q) SANS 10140: Part 3: Pipe marking
- r) SANS 10400: Part A: General principles and requirements
- s) SANS 10400: Part O: lighting and ventilation
- t) SANS 10400: Part S: stairways
- u) SANS 10400: Part T: fire protection

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- v) SANS 10400: Part W: fire installation
- w) SANS 10177-Part 2-4: fire testing of materials
- x) SANS 543: fire hose reels (with semi-rigid hose)
- y) SANS 1128: Part 1: components of underground and above-ground hydrant systems
- z) SANS 1128: Part 2: hose couplings, connectors, and branch pipe and nozzle connections
- aa) SANS 1186: Part 1: symbolic safety signs: standard signs and general requirements
- bb) SANS 1186: Part 5: Symbolic safety signs: photo luminescent signs
- cc) SANS 1464: Part 22: Safety of luminaries: luminaries for emergency lighting
- dd) SANS 10139: fire detection and alarm system design and installation
- ee) The Occupational Health and Safety Act, Act 85/1993
- ff) SANS 10400-T:2020 Fire Protection
- gg) SANS 10139: 2021 Fire detection and alarm systems for buildings - System design, installation and servicing
- hh) SANS 7240-16: Fire detection and alarm systems – Part 16 Sound System Control and Indicating Equipment
- ii) SANS 7240-19: Fire detection and alarm systems – Part 19 Design, Installation, Commissioning and Service of Sound Systems for Emergency Purposes
- jj) SANS 7240-24: Fire detection and alarm systems – Part 24 Sound-system loudspeakers
- kk) SANS 10400-A General Principles and Requirements
- ll) SANS 10140-3: 2017 Identification colour markings Part 3: Contents of pipelines
- mm) SANS 543:2019 Fire hose reels (with semi-rigid hose)
- nn) SANS 1086:2015 Flexible poly(vinyl chloride) (PVC) pressure hose
- oo) SANS 10087-1:2013 The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial, and industrial installations Part 1: Liquefied petroleum gas installations involving gas storage containers of individual water capacity not exceeding 500 L and a combined water capacity not exceeding 3 000 L per installation
- pp) BS EN 12101-Part 5 - Smoke and Heat Control systems
- qq) Local Municipality Emergency Services By-Laws

C3.2.3. Minimum Standard requirements

- a) CIDB Best Practice Project Assessment Scheme (Government Gazette No.43726 of 18 September 2020)
- b) Standard for Developing Skills through Infrastructure Contracts, published in Gazette Notice 48491 of 28 April 2023

Handwritten signatures and initials: S, N.B., and a large number 350.