



**prasa**

PASSENGER RAIL AGENCY  
OF SOUTH AFRICA

**UPGRADING OF STORMWATER NETWORK  
AT  
BRAAMFONTEIN ROLLING STOCK DEPOT**

**SCHEDULE OF QUANTITIES**

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## **PART A: SCHEDULE OF QUANTITIES**

CIVIL AND MINOR WORKS AT  
BRAAMFONTEIN ROLLING STOCK DEPOT

	<u><b>BILL NO. 1</b></u>	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>		<u>Amount</u>
	<u><b>ALTERATIONS (PROVISIONAL)</b></u>					
	<u><b>REMOVAL OF EXISTING WORK</b></u>					
	<b>Carefully breaking down and removing brickwork etc</b>					
1	One brick wall	m <sup>2</sup>	30	R	-	R -
	<b>Breaking up and removing mass concrete</b>					
2	600mm wide x 300mm deep x 100mm thick half round concrete drainage channel	m	50	R	-	R -
	<b>Taking out and removing doors from steel frame</b>					
3	Timber single door 813 x 2032mm high	No.	12	R	-	R -
	<b>Taking out and removing glass, etc</b>					
4	Glass from steel window frames including cleaning out rebates and preparing for new glass	m <sup>2</sup>	5	R	-	R -
	<b>Taking out and removing piping, sanitary fittings, etc including disconnection piping from fittings</b>					
5	Ceramic pan and cistern	No.	10	R	-	R -
6	Ceramic Pan only	No.	5	R	-	R -
7	Ceramic urinal basin	No.	5	R	-	R -
8	Kitchen sink cabinet	No.	2	R	-	R -
9	Ceramic wash hand basin	No.	7	R	-	R -
						R -
	<u><b>BILL NO 2</b></u>	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>		<u>Amount</u>
	<u><b>EARTHWORKS</b></u>					
	<u><b>SUPPLEMENTARY AND PREAMBLES</b></u>					
	<b>Excavation:</b>					

	<p>No claim for rock excavation will be entertain unless the contractor has timeously notified the project manager thereof prior to backfilling</p> <p>Laying, backfilling, bedding, etc</p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instruction</p> <p>Where no manufacturers' instruction exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of SABS 1200 L</p> <p>Pipe trenches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7, and 7 of SABS 1200 DB Earthworks (Pipe trenches)</p> <p>Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LB : Bedding (Pipes)</p> <p><b><u>Leave site in good condition</u></b></p> <p>The contractor shall leave the site where plumbing was executed, clean and neat at completion.</p> <p><b>EXCAVATION, FILLING, ETC</b></p> <p><b>Excavation in earth not exceeding 2m deep by hand</b></p>						
1	Trenches	m <sup>3</sup>	100	R	-	R	-
2	Hole for catch basin	m <sup>3</sup>	10	R	-	R	-
	<b><u>Keeping excavation free of water</u></b>						
3	Keeping excavation free of water	Item		R	-	R	-
	<b>Earth filling obtain from the excavation and/or prescribed stock piles on site compacted to 93% Mod AASHTO before and after bedding, final backfilling, etc</b>						
4	100mm Bedding after compaction of underground surfaces	m <sup>2</sup>	50	R	-	R	-
5	Backfilling to trenches, holes after open channel/Catch basin and sewer line has been laid	m <sup>3</sup>	150	R	-	R	-
	<b>Compaction of surfaces</b>						

6	Compaction of ground surface under floors etc to 93% Mod AASHTO density  <b>Cut to spoil or stockpile, site to be located by the contractor</b>  <b>Material obtained from</b>	m <sup>2</sup>	100	R	-	R	-
7	Soft excavation	m <sup>3</sup>	40	R	-	R	-
						R	-
	<b><u>BILL NO 3</u></b>	<b><u>Unit</u></b>	<b><u>QTY</u></b>	<b><u>Rate</u></b>		<b><u>Amount</u></b>	
	<b><u>CONCRETE WORK</u></b>						
	<b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>						
	<b>25MPa/20mm Concrete</b>						
1	Strip footing	m <sup>3</sup>	20	R	-	R	-
	<b>Grouting</b>						
2	70m Non shrink grouting suitable for HDPE underground pipe by the use of machinery	m <sup>3</sup>	20	R	-	R	-
	<b>Stabilizing, densifying, and increase bearing capacity of ground below concrete foundations. The injection process is deemed complete once lift of 0.5mm is achieved</b>						
3	Concrete Epoxy resin for filling resin under the buildings foundation where concrete foundation and loose material was eroded by water	kg	50	R	-	R	-
	<b>CONCRETE SUNDRIES</b>						
	<b>Finishing top surface of concrete smooth with a wood float</b>						
4	Strip footing, floor slab, etc	m <sup>2</sup>	100	R	-	R	-

	<b><u>SMOOTH FORMWORK (DEGREE OF ACCURACY III)</u></b>					
	<b>Smooth formwork to sides</b>					
5	Concrete slab	m <sup>2</sup>	10	R	-	R -
						R -
	<b><u>BILL NO 4</u></b>	<b><u>Unit</u></b>	<b><u>QTY</u></b>	<b><u>Rate</u></b>		<b><u>Amount</u></b>
	<b><u>MASONRY</u></b>					
	Bricks shall have been obtained from an approved manufactured and shall be either general purpose (special) burn clay bricks or Engineering bricks that comply with the applicable requirements of SABS 285. The contractor shall submit to the project manager samples of the bricks that he/she intends using in the construction of the works. The sample of the bricks that are approved will be retained by the Project manager. See sub clause 3.1 of SABS 1200A or 1200AA as applicable					
	<b>Bricks in Class II mortar</b>					
1	One brick wall for storm water channel and catch basin	m <sup>2</sup>	50	R	-	R -
	<b><u>FOUNDATIONS (PROVISIONAL)</u></b>					
	<b>15MPa/20mm concrete</b>					
2	50mm blinding layer	m <sup>3</sup>	40	R	-	R -
	<b>BRICKWORK SUNDRIES</b>					
	<b>Brick reinforcement</b>					
3	230mm wide reinforcement built in horizontal	m	30	R	-	R -
						R -
	<b><u>BILL NO 5</u></b>	<b><u>Unit</u></b>	<b><u>QTY</u></b>	<b><u>Rate</u></b>		<b><u>Amount</u></b>
	<b><u>CARPENTRY AND JOINERY</u></b>					

<b><u>DOORS</u></b>						
44mm thick interior grade flush solid core timber single door with 3 mm thick commercial ply on both sides with consolidated edges fitted and complying with SABS 545 in pressed steel frame. All painted in accordance with architects colour schedule.						
1	813 x 2032 x 44mm single interior leaf solid core including painting on both sides	No.	15	R	-	R -
44mm thick exterior grade flush solid core timber single door with 3mm thick commercial ply on both sides with consolidated edges fitted and complying with SABS 545 in pressed steel frame. All painted in accordance with architect's colour schedules						
2	813 x 2032 x 44mm single exterior leaf solid core including painting on both sides	No.	5	R	-	R -
						R -
<b><u>BILL NO 6</u></b>		<u>Unit</u>	<u>QTY</u>	<u>Rate</u>		<u>Amount</u>
<b><u>IRONMONGERY</u></b>						
<b><u>LOCKS</u></b>						
1	3 liver union lock with handles	No.	25	R	-	R -
2	Ultra-security heavy duty locks	No.	5	R	-	R -
3	Stainless Steel Toilet Cubicle Indicator bolt & lock set, Grade 304Stainless Steel indicator bolt fixed to surface with matching stainless steel screws.	No.	20	R	-	R -
						R -
<b><u>BILL NO 7</u></b>		<u>Unit</u>	<u>QTY</u>	<u>Rate</u>		<u>Amount</u>
<b><u>PLUMBING WORK</u></b>						
<b><u>SANITARY FITTINGS</u></b>						
1	Vaal Sanitary ware Hibiscus vitreous china close coupled suite colour White , comprising 90° outlet open rim pan with matching 9 litre front single flush cistern including lid and fitments and seat.	No.	10	R	-	R -

2	Bemis vandal proof toilet seat	No.	20	R	-	R	-
3	Ceramic wash hand basin colour White, size 510 x 405mm with one tap hole including integrated overflow and chain stay hole bolted to wall with two x 10mm bolts and including Classic floor mounted pedestal and sealed with silicone sealant where basin meets wall.	No.	10	R	-	R	-
4	Sanitary ware white vitreous china wall mounted urinal with top inlet (code 705426) or back inlet (code 7054Z1). Overall size 600x385x380mm. Supplied with 38mm c.p. domical grating, a spreader(with a 20mm tread) and two hanger brackets	No.	10	R	-	R	-
5	Floor mounted ceramic toilet pan suitable for top entry flush valve	No.	5	R	-	R	-
6	50mm pipes with all connection and make good	m	20	R	-	R	-
<b>WASTE UNINON ETC</b>							
7	Bath and Basin waste, plug, chain, stay and backnut	No.	10	R	-	R	-
<b>TRAPS ETC</b>							
8	365/40 CP bottle trap 40 x 40 INC CP/PVC adaptor to 40mm	No.	10	R	-	R	-
9	38mm sink "P" trap	No.	10	R	-	R	-
<b>TAPS, VALVES, ETC</b>							
<b>Supply and install</b>							
10	15mm push button pillar tap for hot and cold water	No.	25	R	-	R	-
11	15mm chrome plated deck mounted sink mixer with overarm swivel outlet and adjustable flanges, manufactured in accordance with SANS 226:2004 Type 1.	No.	3	R	-	R	-
12	Top entry toilet flush valve completely with flush pipe	No.	25	R	-	R	-
13	Exposed type flush valve with ball-o-stop, wall flange, chrome plate finish and non-hold open feature	No.	15	R	-	R	-
14	Flexi connector	No.	40	R	-	R	-
15	15 Brass Gate Valve	No.	5	R	-	R	-
16	Mini Ball Valve	No.	40	R	-	R	-



17	22mm Brass Gate Valve including cast iron valve box	No.	2	R	-	R	-
18	Single function vandal resistant shower head including shower arm, stainless steel polished body	No.	15	R	-	R	-
19	Chrome plated Shower tap mixer	No.	15	R	-	R	-
20	600kpa pressure control valve	No.	3	R	-	R	-
21	Relieve/safety valve	No.	6	R	-	R	-
22	Vacuum breaker	No.	6	R	-	R	-
23	Drain cock	No.	3	R	-	R	-
	<b>Extra over PVC pipes for fittings</b>						
24	110mm pan connector completely	No.	16	R	-	R	-
	<b>WATER SUPPLIERS</b>						
	<b>Class “O” copper pipe</b>						
25	15mm pipes	m	30	R	-	R	-
26	15mm pipes chased into brick walls and make good	m	30	R	-	R	-
27	22mm pipes	m	20	R	-	R	-
28	22mm pipes chased into brick walls	m	20	R	-	R	-
	<b>Extra over class “O” copper pipes for capillary fittings</b>						
29	15mm fitting	No.	20	R	-	R	-
30	22mm fitting	No.	20	R	-	R	-
31	15mm Tee	No.	26	R	-	R	-
32	22mm Tee	No.	10	R	-	R	-
	<b>Manhole covers and grid inlets</b>						
33	1000mm wide x 65mm thick heavy duty polymer grid inlet including frame	m	70	R	-	R	-
	<b>STORM WATER DRAINAGE</b>						

	<b>Class 50D concrete storm water pipes laid in class A bedding including excavation, backfilling etc</b>						
34	300mm pipes laid in 2m deep trenches	m	60	R	-	R	-
35	Cast 700mm wide x 300mm deep x 100mm thick half round concrete drainage channel as per manufacture specification	m	80	R	-	R	-
	<b>HORIZONTAL DIRECTIONAL DRILLING BUILDINGS AND INSTALLATION OF HDPE PIPE</b>						
36	HDD under the buildings and installation of 300mm diameter HDPE but welded on sleeve pipe with Nominal Pressure class 16 and material of PE100 to be used including all fittings completely installed with a 3% slope or more at an angle of 30 <sup>0</sup>	m	50	R	-	R	-
	<b>Upgrading of storm water system</b>						
37	High pressure water Pipe jetting and cleaning of 300mm concrete storm water network including manholes	m	500	R	-	R	-
38	The use of CCTV pipe inspection camera for inspection of underground 300mm concrete storm water network and providing a report	m	400	R	-	R	-
39	Testing soil drainage system	Item		R	-	R	-
						R	-
	<b><u>BILL NO 9</u></b>	<b><u>Unit</u></b>	<b><u>QTY</u></b>	<b><u>Rate</u></b>		<b><u>Amount</u></b>	
	<b><u>GLAZING</u></b>						
	<b><u>GLAZING TO STEEL WITH PUTTY</u></b>						
	<b>4mm clear float glass</b>						
1	Panes exceeding 0.5 m <sup>2</sup> and not exceeding 1.0 m <sup>2</sup>	No.	5	R	-	R	-
	<b>4mm clear obscure glass</b>						
2	Panes exceeding 0.5 m <sup>2</sup> and not exceeding 1.0 m <sup>2</sup>	No.	5	R	-	R	-
						R	-

**FINAL SUMMARY****CIVIL AND MINOR WORKS AT BRAAMFONTEIN DEPOT**

	STATION NAME	PAGE	AMOUNT
1	Alterations	3	R -
2	Earthworks	3 to 5	R -
3	Concrete work	5 to 6	R -
4	Masonry	6	R -
5	Carpentry and Joinery	6 to 7	R -
6	Ironmongery	7	R -
7	Plumbing work	7 to 10	R -
8	Glazing	10	R -
SUB TOTAL			R -
ADD VAT @ 15%			R -
TOTAL			R -

## **ANNEXURE B ELECTRICAL WORKS: SCHEDULE OF QUANTITIES**

### PROVISIONAL SCHEDULE OF QUANTITIES

Major Supply and Installation of Depot Lighting at Braamfontein

Rolling Stock Depot

	<u>Description</u>	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>	<u>Amount</u>
	<p><b>OCCUPATIONAL HEALTH AND SAFETY</b></p> <p>The contractor shall comply with all the requirements set out in the Construction Regulations, issued under The Occupational Health &amp; Safety Act no 85 of 1993.</p> <p>Safety file shall be provided by the contractor prior to commencement of work.</p> <p>The contractor shall carry out the works with as little noise and mess as possible. All rubble shall be taken away from site on a daily basis.</p> <p>Note: All designated items should comply with local content threshold.</p> <p><u>Schedule of Quantities</u></p> <p>Unless otherwise stated the description of each item shall be deemed to include manufacturing, conveying, and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, cutting, waste, patterns, plant, temporary works, establishment charges, profit and other obligations arising out of the conditions of contract</p> <p><b><u>BILL NO. 1</u></b></p> <p><b><u>ALTERATIONS (PROVISIONAL)</u></b></p> <p><b><u>REMOVAL OF EXISTING WORK</u></b></p> <p><b>Taking out and removing electrical work</b></p>				
1	Bulkhead fittings/ bulb and ballast	No.	100	R -	R -
2	4/5 foot fluorescent fittings	No.	350	R -	R -

	Carried to final summary					R -
	<b><u>BILL NO.2</u></b>	<b><u>Unit</u></b>	<b><u>QTY</u></b>	<b><u>Rate</u></b>		<b><u>Amount</u></b>
	<b><u>ELECTRICAL WORK</u></b>					
	<b>Fluorescent fittings waterproofed fixture white including 2x58w T8 LED Fluorescent tubes and polycarbonate base with clear polycarbonate cover IP65</b>					
1	Waterproof polycarbonate LED 5ft 2 x58w T8 fluorescent fitting including 2 LED tubes	No.	150	R	-	R -
2	1200m (4 foot) 2x36w Open channel cool white LED Fluorescent fittings double tubes for ticket office building	No.	150	R	-	R -
	<b>Bulkhead fittings</b>					
3	7w LED bulk head fittings completely with bulbs	No.	20	R	-	R -
	<b>The luminaire to consist of a die-cast aluminium control gear housing and spun aluminium refactor. The luminaire to bears SANS475 mark and SANS 60598 2-1 safety mark and the degree of protection, the control gear compartment to be manufactured from high pressure die cast aluminium for good dissipation. the reflector system to be manufactured of brightened and anodized aluminium, mounted onto the control gear housing via two keyholes slots and closed IP65 version</b>					
4	250w HPS 27000/31600 Lumen light fittings	No.	35	R	-	R -
5	Bulb and ballast for above 250w light fittings	No.	40	R	-	R -
6	The use of cherry picker/scaffolder or any other equipment to be used for replacing of light fittings and bulbs for the duration of the project	Item	1	R	-	R -
	<b>PLUGS</b>					
7	4 X 4 single plug	No.	20	R	-	R -

8	4 X 4 Double plug	No.	20	R	-	R	-
<b><u>SWITCHES</u></b>							
9	Day light switches	No.	2	R	-	R	-
10	Single 200v 40 Amps contactors	No.	5	R	-	R	-
11	White 1 lever 2 way switch	No.	10	R	-	R	-
12	White 2 lever 1 way switch	No.	5	R	-	R	-
<b>Electrical cables</b>							
13	4mm2 GP wires for stove and geyser	m	100	R	-	R	-
14	2.5mm2 GP wires (Red, white, blue, black and earth) for lights rewiring of shelters, footbridge, ablutions and access points in 3 phase system	m	500	R	-	R	-
15	2.5mm <sup>2</sup> suffix cable or GP wire for plugs	m	500	R	-	R	-
16	1.5mm <sup>2</sup> suffix cable or GP wire for lights	m	500	R	-	R	-
<b>Electrical casing</b>							
17	25 x 40mm PVC trunking	m	30	R	-	R	-
18	20mm PVC SABS conduit completely with all the couplings, saddle, spacer bar assembly and heavy duty U clamps	m	50	R	-	R	-
<b>Circuit breakers</b>							
19	10 A 1P 6KA single circuit breaker	No.	10	R	-	R	-
20	20 A 1P 6KA single circuit breaker	No.	15	R	-	R	-
21	40 A stove Isolator	No.	1	R	-	R	-

22	30A Air conditioner and gyser Isolator	No.	7	R	-	R	-
	<b>DB BOARDS</b>						
23	Flush mounted min distribution board completely with circuit breakers	No.	1	R	-	R	-
	<b>HVAC Systems</b>						
24	Supply, install and commission new 24000 BTU split unit, inverter technology air conditioner completely with all accessories (drain pipe, amorflex, copper pipe, refrigerant, cable, communication wire, brackets, circuit breaker, isolator, etc )	No.	5	R	-	R	-
	<b><u>ELECTRICAL COMPLIANCE</u></b>						
	All work to comply to SANS 10142 Compliance certificate to be provided on completion Pricing to include all necessary complete connection						
25	Certificate of compliance and all other testing required including 12 month guarantee certificate	Item	1	R	-	R	-
Carried to final summary						R	-

***ELECTRICAL WORK FINAL SUMMARY******ELECTRICAL WORK AT BRAAMFONTEIN ROLLING STOCK DEPOT***

	STATION NAME	PAGE	AMOUNT
1	Alterations	12 to 13	R -
2	Electrical work	13 to 16	R -
SUB TOTAL			R -
ADD VAT @ 15%			R -
TOTAL			R -

***ANNEXURE C: MINOR UPGRADES FINAL SUMMARY******MINOR UPGRADES AT BRAAMFONTEIN ROLLING STOCK***

	STATION NAME	PAGE	AMOUNT
1	Annexure A : General Building work	3 to 11	R -
2	Annexure B Electrical work	12 to 16	R -
SUB TOTAL			R -
ADD VAT @ 15%			R -
TOTAL			R -