



<b>MINOR UPGRADES AT KLIPRIVER STATION</b>
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**SCOPE, SPECIFICATIONS AND SCHEDULE OF QUANTITIES**

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# **ANNEXURE A CIVIL WORKS: SCHEDULE OF QUANTITIES**

## PROVISIONAL SCHEDULE OF QUANTITIES

### MINOR UPGRADES AT KLIPRIVER STATION

<b>OCCUPATIONAL HEALTH AND SAFETY</b>		<u>Unit</u>	<u>QTY</u>	<u>Rate</u>	<u>Amount</u>
<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>					
<b><u>BILL NO. 1</u></b>		<u>Unit</u>	<u>QTY</u>	<u>Rate</u>	<u>Amount</u>
<b><u>ALTERATIONS (PROVISIONAL)</u></b>					
<b><u>REMOVAL OF EXISTING WORK</u></b>					
Price shall include removal and disposal of rubble from site					
<b>Taking down and removing</b>					
1	Rhino board ceiling completely	m <sup>2</sup>	450	R -	R -
<b>Taking out and removing doors from steel frame</b>					
2	Timber single door 813 x 2032mm high	No.	5	R -	R -
<b>Taking out and removing doors including steel frame</b>					
3	Timber single door and steel frame 813 x 2032mm high	No.	2	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 -

5	<b>Taking out and removing steel manhole frames</b>  600 x 500mm steel manhole frames and preparation of surfaces (removed frames to be returned to the employer)	No.	5	R	-	R	-
6	<b>SERVICING, REPAIRING, RE-FIXING, CLEANING, ETC OF EXISTING WORK</b>  <b>Clean down existing roof sheeting, box gutter, flushing, etc, apply de-rusting compound to surfaces, prepare area for paint application and allow for re-fixing, replacing and waterproofing of necessary roof screws, fixing screws, etc</b>  Sheet steel box gutters in fair condition	m <sup>2</sup>	40	R	-	R	-
7	<b>Re-fixing and aligning of fascia and barge boards</b>  Fibre cement fascia and barge boards not exceeding 300mm girth	m	50	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>CARPENTRY AND JOINERY</u></b>							
<b><u>DOORS</u></b>							
1	<b>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</b>  813 x 2032 x 44mm single leaf solid core with commercial veneer for paint. pricing shall include painting as per manufactures specification	No.	3	R	-	R	-
2	<b>44mm thick interior 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</b>  813 x 2032 x 44mm single leaf solid core with commercial veneer for paint. pricing shall include painting as per manufactures specification	No.	8	R	-	R	-

	<p><b><u>Level G3 bullet resistant Anti-bandit door, complete with 100 x 50 x 3mm gauge mild steel rectangular frame and 25 x 25 x 3mm MS anlg e rebates, overall size 930 x 2100mm high in powder coating and or galvinised cladding with peep hole, supplied with a 6 pin tumbler key system, mortice dead lock with an additional heavy duty magne tic lock and striker including key switch and surface mounted casing, 6 Amp power supply, push buttons and interlock system, heavy duty aluminium continuous hinge, aluminium slam bar with heavy duty door closer and D-style pull handles. Door to comply to SABS 1658-1996</u></b></p>						
3	<p>Level G3 bullet resistant anti-bandit external door</p> <p><b><u>FITTINGS</u></b></p> <p><b><u>The following in modular timber cupboards, counters, duty stations, desk etc. as per Cupboard Connections Specification</u></b></p> <p><b><u>Carcasses of 16mm thick particle board with both faces white melamine with white Masonite backs. Shelving of 16mm particle board, both faces white melamine and front edge in white PVC. Doors of 16mm particle board with post formed vertical edges and laminated in Renolit. Tops of 32mm particle board with post formed leading edges and laminated in high pressure decorative laminate. All butt edges and edges against walls to be sealed with silicon sealant. Hinges to be “Hettich”. Drawer runners to be metal 500mm series with nylon runners or similar. All units complete with door, handles, hinges, cupboards, door, locks, barrel bolts and shelves. Floor unit complete with kick plates. (Formica tops measured elsewhere)</u></b></p> <p>Kitchen sink floor cupboard 2000 x 600 x 900mm high with sides, bottom, back, 3 hinged doors and one drawer completely working including handles, etc. top and sink measured else where</p>	No.	1	R	-	R	-
4	<p><b><u>Pressed fibre -cement</u></b></p> <p>10 x 225mm Fascia boards including galvanized steel H-profile jointing strips</p>	No.	1	R	-	R	-
5	10 x 230mm Barge boards including galvanized steel H-profile jointing strips	m	30	R	-	R	-
6		m	20	R	-	R	-

	Carried to final summary					R	-
	<b><u>BILL NO 3</u></b>	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>		<u>Amount</u>	
	<b><u>CEILING WORK</u></b>						
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>						
	<b><u>Description</u></b>						
	Items described as “nailed” shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete						
	Items described as “plugged” shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as “bolted”, bolts priced elsewhere						
	<b>6.4mm “Rhino” gypsum plaster board with H-Type pressed steel jointing strips</b>						
1	Ceiling including 38 x 38mm sawn softwood branderling at 450mm centres	m <sup>2</sup>	350	R	-	R	-
2	Extra over ceiling for 800 x 800mm trap door of 38 50mm wrought softwood rebated framing with one 38 x 38mm sawn softwood cross brander covered with ceiling board and fitted flush in opening	No.	3	R	-	R	-
	<b><u>EAVES, VERGES</u></b>						
	<b>Everite flexit pressed nucle cement</b>						
3	Eaves soffit covering 1500mm wide 5mm thick sheets including 50 x 50mm sawn softwood branderling along the edges and centre and at ends of sheet, with open joints	m <sup>2</sup>	50	R	-	R	-
	<b>“Rhino” gypsum plasterboard cornice</b>						
4	75mm coved cornices fixed to ceiling	m	200	R	-	R	-
	Carried to final summary					R	-
	<b><u>BILL NO 4</u></b>	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>		<u>Amount</u>	

	<b><u>IRONMONGERY</u></b>					
	<b><u>LOCKS</u></b>					
	<b><u>Supply and install</u></b>					
1	Ultra-security heavy duty locks	No.	5	R	-	R -
2	3 liver mortice lockset with handles	No.	10	R	-	R -
3	Indicator door lock chrome plated	No.	10	R	-	R -
	Carried to final summary					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>PLUMBING WORK</u></b>					
	<b><u>SANITARY FITTINGS</u></b>					
	<b><u>Supply and install</u></b>					
1	Anti-vandal High traffic suite complete (Front flush), suite to includes CC Cistern, <b>including CC Pan and</b> and heavy duty seat.	No.	6	R	-	R -
2	Close coupled suite colour White , comprising 90° outlet open rim pan with matching 9 litre front single flush cistern including lid and fitments and heavy duty seat.	No.	2	R	-	R -
	<b><u>Urinal Basin</u></b>					
3	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.	2	R	-	R -
4	Wall mounted white Vandal Resistant Wash Hand Basin, 330mm (w) x 310 (d) x 325mm (h). Installation as per manufacturer's specification.	No.	4	R	-	R -
5	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	No.	2	R	-	R -

	meets wall.						
6	Double bowls stainless steel double end bowl inset sink, overall size 1200 x 535mm wide with two 340 x 370 x 150mm deep bowls, fitted onto cupboard (elsewhere specified) including 38mm waste fitting and PVC traps (traps elsewhere specified).	No.	1	R	-	R	-
7	50mm pipes with all connection and make good	m	20	R	-	R	-
	<b>TAPS, VALVES, ETC</b>						
	<b>Supply and install</b>						
8	15mm pillar tap for hot and cold water	No.	6	R	-	R	-
9	15mm chrome plated deck mounted sink mixer with overarm swivel outlet and adjustable flanges, manufactured in accordance with SANS 226:2004 Type 1.	No.	1	R	-	R	-
10	Exposed type flush valve with ball-o-stop, wall flange, chrome plate finish and non-hold open feature	No.	2	R	-	R	-
11	Flexi connector	No.	15	R	-	R	-
12	15 Brass Gate Valve	No.	2	R	-	R	-
13	Mini Ball Valve	No.	15	R	-	R	-
14	22mm Brass Gate Valve including cast iron valve box	No.	2	R	-	R	-
	<b>Extra over PVC pipes for fittings</b>						
15	110mm pan connector completely	No.	13	R	-	R	-
	<b>WATER SUPPLIERS</b>						
	<b>Class “O” copper pipe</b>						
16	15mm pipes	m	30	R	-	R	-
17	15mm pipes chased into brick walls and make good	m	40	R	-	R	-
18	22mm pipes	m	10	R	-	R	-
19	22mm pipes chased into brick walls	m	30	R	-	R	-
	<b>Extra over class “O” copper pipes for capillary fittings</b>						



20	15mm fitting	No.	15	R	-	R	-
21	22mm fitting	No.	15	R	-	R	-
22	15mm Tee	No.	20	R	-	R	-
23	22mm Tee	No.	10	R	-	R	-
<b>SOIL DRAINAGE</b>							
<b>Upvc class 34 pipes including excavation, bedding, backfilling and compaction and disposal of surplus material</b>							
24	110mm pipes laid in and including trenches not exceeding 1m deep	m	20	R	-	R	-
<b>Extra over Upvc class 34 pipes for fittings</b>							
25	110 Bend	No.	1	R	-	R	-
26	110mm junction	No.	1	R	-	R	-
27	110mm Access bend	No.	1	R	-	R	-
<b>0.8mm galvanized (Anti-vandal Proof material ) sheet iron</b>							
28	150 x 100mm eaves gutter	m	70	R	-	R	-
29	Extra over 150 x 100mm eaves gutter for stopped end	No.	40	R	-	R	-
30	Extra over 150 x 100 eaves gutter for angle	No.	20	R	-	R	-
31	Extra over 150 x 100mm eaves gutter for outlet for 100 x 75mm pipe	No.	20	R	-	R	-
32	100 x 75mm rainwater pipes	m	150	R	-	R	-
33	Extra over 100 x 75mm rainwater pipe for shoe	No.	20	R	-	R	-
<b>PLATFORM MANHOLE COVERS AND FRAMES</b>							
<b>The concrete manhole covers to be installed completely frame and cover as per the applicable Standard</b>							
34	Type 9B MD concrete lid and frame including to make good after completion	No.	5	R	-	R	-

	Carried to final summary					R -
	<b><u>BILL NO.6</u></b>	<b><u>Unit</u></b>	<b><u>QTY</u></b>	<b><u>Rate</u></b>		<b><u>Amount</u></b>
	<b><u>METAL WORK</u></b>					
	<b>SECURITY GATES</b>					
	<b>Supply and install Burglar door</b>					
1	900 x 2100mm high Heavy duty single Burglar door and frame with 16mm steel round bar and 40 x 40 x 2.5mm square tubing as per attached drawing for single door	No.	3	R -	R	-
	<b>PRESSED STEEL DOOR FRAMES</b>					
	<b>1.2mm double rebated frames suitable for one brick wall</b>					
2	Frame for door 813 x 2032mm high	No.	2	R -	R	-
	<b>FENCING AND GATES</b>					
	<b><u>STEEL PALISADE FENCE</u></b>					
3	Supply and erect 2.4m galvanized steel palisade fence in concrete footings, complete with post, pales, ground beam, horizontal rails, fixing accessories and recess in rails to be epoxy cement Grouted including painting as per manufactures specifications with Prasa colours.	m	20	R -	R	-
4	2.4m high mild steel palisade fence gate in concrete footings, complete with post, pales, ground beam, horizontal rails, fixing accessories and recess in rails to be epoxy cement Grouted including painting as per manufactures specifications with Prasa colours.	No.	2	R -	R	-
5	2.4m high Heavy duty Galvanized welded mesh fence in concrete footings, complete with post, fixing accessories and recess in rails to be epoxy cement Grouted including painting as per manufactures specifications with Prasa colours.	m	100	R -	R	-
	Carried to final summary					R -

	<b><u>BILL NO.7</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>GLAZED TO STEEL WITH PUTTY</u></b>				
	<b>4mm clear float glass</b>				
1	Panes exceeding 0.1 m <sup>2</sup> and not exceeding 0.5m <sup>2</sup>	m <sup>2</sup>	5	R -	R -
	<b>4mm clear obscure glass</b>				
2	Panes exceeding 0.1 m <sup>2</sup> and not exceeding 0.5 m <sup>2</sup>	m <sup>2</sup>	5	R -	R -
Carried to final summary					R -
	<b><u>BILL NO.8</u></b>	<b><u>Unit</u></b>	<b><u>QTY</u></b>	<b><u>Rate</u></b>	<b><u>Amount</u></b>
	<b><u>PAINTWORK</u></b>				
	For preambles see “Model Preambles for Trades” 2008 edition published by the Association of South African Quantity Surveyors				
	<b>SUPPLEMENTARY PREAMBLES</b>				
	<b>Previously painted plastered surfaces</b>				
	Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth				
	<b>Previously painted metal surfaces</b>				
	Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal				
	<b>Previously painted wood surfaces</b>				
	Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and				

	cracks and crevices shall be primed, filled with a suitable filler and finished smooth						
	<b>PAINTWORK, ETC TO NEW WORK</b>						
	<b>ON FLOATED PLASTER</b>						
	<b>One coat professional plaster primer and two coats acrylic paint</b>						
1	On ceiling and cornices	m <sup>2</sup>	450	R	-	R	-
	<b>ON WOOD</b>						
	<b>One coat wood primer, one Universal Undercoat and two coats Prasa Oakley Brown enamel paint</b>						
2	On doors	m <sup>2</sup>	70	R	-	R	-
	<b>ON METAL</b>						
	<b>One coat zinc chromate primer, one under coat and two coats professional white gloss enamel paint</b>						
3	On buglers, gates, door frames, window frames, gutters and down pipes	m <sup>2</sup>	100	R	-	R	-
	<b>PAINTWORK ETC TO PREVIOUSLY PAINTED WORK</b>						
	<b>Surface preparations, and apply three quote of exterior Brick and Slasto Dressing to face brick work</b>						
4	On walls	m <sup>2</sup>	200	R	-	R	-
	<b>ON FLOATED PLASTER</b>						
	<b>Wash with polycell sugar soap and rinse with clean water to remove all traces of soap, remove all loose flaking paint and repair any cracks and defects, spot prime bare and repaired areas with bonding liquid and apply one coat sealer and two coats of interior quality Prasa neutral</b>						
5	On internal walls	m <sup>2</sup>	400	R	-	R	-

	<b>ON WOOD</b>  <b>One coat wood primer, one Universal Undercoat and two coats Prasa Oakley Brown enamel paint</b>						
6	On doors	m <sup>2</sup>	150	R	-	R	-
	<b>ON METAL</b>  <b>One coat zinc chromate primer, one under coat and two coats professional white gloss enamel paint</b>						
7	On buglers, gates, door frames, window frames, gutters and down pipes	m <sup>2</sup>	200	R	-	R	-
						R	-
	<b><u>BILL NO.9</u></b>  <b><u>TILING</u></b>  <b>FLOOR TILING</b>  <b>Full bodied porcelain tiles, size 600 x 600mm x 10mm fixed to internal floor screed with TAL tile adhesive mixed with TAL bonding liquid in lieu of water with diagonal joints continuous in both directions and grouted with TAL tile grout, excess grout on the surface to be cleaned with water as work proceeds.</b>	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>		<u>Amount</u>	
1	On floors	m <sup>2</sup>	70	R	-	R	-
	<b>WALL TILING</b>  <b>Matt Full Bodied Porcelain tiles, size 600 x 300mm x 12mm fixed to internal wall plaster backing with TAL tile adhesive mixed with TAL bonding liquid in lieu of water with joints continuous in both directions and grouted with TAL tile grout, excess grout on the surface to be cleaned with water as work proceeds.</b>						
2	On walls	m <sup>2</sup>	5	R	-	R	-
						R	-

	<b><u>BILL NO.10</u></b>  <b><u>WATERPROOFING</u></b>  <b><u>WATERPROOFING TO ROOFS</u></b>  <b>On flat concrete roofs slab with parapet walls</b>  Surface preparation, Supply and lay <b>4mm</b> torch on waterproofing system saturated with Bitumen Silver UV protective agent (approved by the Professional Waterproofing Association) applied by means of the torch on fusion/gas weld application method, with 75mm overlaps, 100mm endlaps and 200mm upturns onto parapet walls. laid in strict accordance with Manufacturer's instructions	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>	<u>Amount</u>
1		m <sup>2</sup>	40	R -	R -
Carried to final summary					R -
	<b><u>BILL NO.11</u></b>  <b><u>BLINDS</u></b>  <b>Vertical blinds with 90mm slat width, colour to match walls and floor tiling</b>	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>	<u>Amount</u>
1	Blinds to fit 2 x 2m high opening	No.	10	R -	R -
					R -
	<b><u>BILL NO.12</u></b>  <b><u>Earthworks (Provisional)</u></b>  <b><u>Supplementary Preambles</u></b>  All soil poisoning and insecticide to be applied under a ten year guarantee by an approved firm of specialist  <b><u>General notes</u></b>  Fill material shall be placed in lift of not more than 150mm Compaction density to be controlled using DCP apparatus to a maximum of 30mm/blow 93% MOD	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>	<u>Amount</u>

	<p>AASHTO compaction is to be achieved</p> <p>Where backfill is required on both sides of walls, backfill both sides simultaneously.</p> <p>Where compaction of fill material behind retaining walls is done using mechanical rollers, the rollers must be kept 500mm away from the wall and this 500mm portion must be compacted with hand stampers or wackers.</p> <p><b><u>Cutting of tar</u></b></p>						
1	Cutting and removal of tar	m <sup>2</sup>	5	R	-	R	-
	<b><u>Extra over all excavation for carting away</u></b>						
2	Surplus material from excavation and/or stock piles on site to a dumping site to be located by the contractor	m <sup>3</sup>	10	R	-	R	-
	<b><u>Cut and borrow to fill including all material, site to be located by the contractor</u></b>						
3	G5 Material in compacted layer thickness 200mm less compacted to 90% modified AASHTO density	m <sup>3</sup>	20	R	-	R	-
	<b><u>Compaction of surfaces</u></b>						
4	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	m <sup>2</sup>	20	R	-	R	-
	<b><u>Tar resurfacing</u></b>						
5	apply hot mix asphalt re-surfacing after cable has been laid	m <sup>2</sup>	40	R	-	R	-
						R	-

**CIVIL WORKS FINAL SUMMARY****MINOR UPGRADES AT KLIPRIVER STATION**

	STATION NAME	PAGE	AMOUNT
1	Alterations	3 to 4	R -
2	Carpentry and Joinery	4 to 6	R -
3	Ceiling work	6	R -
4	Ironmongery	6 to 7	R -
5	Plumbing work	7 to 10	R -
6	Metal work	10	R -
7	Glazing	11	R -
8	Paint work	11 to 13	R -
9	Tiling	13	R -
10	Waterproofing	14	R -
11	Blinds	14	R -
12	Earthworks	14 to 15	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 Platform and Shelter Lighting at  
Meyerton Station

	<u>Description</u>	<u>Unit</u>	<u>QTY</u>	<u>Rate</u>	<u>Amount</u>
	<b>OCCUPATIONAL HEALTH AND SAFETY</b>  The contractor shall comply with all the requirements set out in the Construction Regulations, issued under The Occupational Health & Safety Act no 85 of 1993.  Safety file shall be provided by the contractor prior to commencement of work.  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.  Note: All designated items should comply with local content threshold.  <u>Schedule of Quantities</u>  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  <u>BILL NO. 1</u>  <u>ALTERATIONS (PROVISIONAL)</u>  <u>REMOVAL OF EXISTING WORK</u>  Taking out and removing electrical work				
1	4/5 foot fluorescent fittings	No.	40	R -	R -
2	Bulkhead fittings	No.	15	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.	30	R -	R	-
2	1500m (5 foot) 58w Open channel LED Fluorescent fittings double tubes for ticket office building	No.	30	R -	R	-
	<b>Bulkhead fittings</b>					
3	Vandal proof incandescent compact ceiling light fittings 75w power, 1210 lumens with Die cast aluminum housing and tough polycarbonate refractors	No.	18	R -	R	-
4	7w LED bulk head fittings completely with bulbs	No.	5	R -	R	-
	<b>High mast pole street light fitting</b>					
5	279W LED Luminaire (34460 lumen) with 3 an optical compartment with LED engine, glass protector, LED warm light with colour temperature of 3000 kelvin, gear compartment and a spigot top entry adjustable compartment. Both optical and gear compartments to be rated IP 66. 20kV/kA surge protection. The luminaire housing to be manufactured of marine grade cast aluminium (EN 1706 AC-44300). Including 1 opening tool	No.	8	R -	R	-
6	Wall mounted 380 x 345 x 275mm, 150w LED Flood lights, 100 – 240 Vac input voltage, 13500 lumens, 6500K cool white, 141 degrees beam angle, die cast aluminium black housing and IP65 ingress protection	No.	5	R -	R	-
	<b><u>SWITCHES</u></b>					
7	Day light switches	No.	6	R -	R	-

8	11 kw contactors	No.	4	R	-	R	-
9	White 1 lever 2 way switch	No.	15	R	-	R	-
10	White 2 lever 1 way switch	No.	5	R	-	R	-
<b>Electrical cables</b>							
11	70mm <sup>2</sup> 4 core cable on sleeves (priced elsewhere)	m	50	R	-	R	-
12	25mm <sup>2</sup> 4 core cable on sleeves (priced elsewhere)	m	70	R	-	R	-
13	10mm <sup>2</sup> 4 core cable on sleeves (priced elsewhere)	m	900	R	-	R	-
14	4mm <sup>2</sup> GP wires for stove and geyser	m	30	R	-	R	-
15	2.5mm <sup>2</sup> GP wires (Red, white, blue, black and earth) for lights rewiring of shelters, footbridge, ablutions and access points in 3 phase system	m	150	R	-	R	-
16	2.5mm <sup>2</sup> suffix cable or GP wire for plugs	m	200	R	-	R	-
17	1.5mm <sup>2</sup> suffix cable or GP wire for lights	m	200	R	-	R	-
<b>Electrical casing</b>							
18	20mm galvanized SABS conduit completely with all the couplings, galvanized saddle, spacer bar assembly and heavy duty U clamps	m	50	R	-	R	-
19	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>							
20	10 A 1P 6KA single circuit breaker	No.	20	R	-	R	-
21	10 A 3P 6KA circuit breaker	No.	5	R	-	R	-
22	12 A 3P Contactor	No.	2	R	-	R	-

23	20 A 1P 6KA single circuit breaker	No.	18	R	-	R	-
24	20 A 3P 6KA circuit breaker	No.	3	R	-	R	-
25	30 A 1P 6KA circuit breaker	No.	3	R	-	R	-
26	30 A 2P 6KA circuit breaker	No.	3	R	-	R	-
27	40 A 2P 6KA circuit breaker	No.	3	R	-	R	-
28	60 A 3P 6KA circuit breaker	No.	3	R	-	R	-
29	60 A 3P AC1 Contactor	No.	2	R	-	R	-
30	63 A 2P 6KA circuit breaker	No.	2	R	-	R	-
31	63 A 3P 6KA circuit breaker	No.	2	R	-	R	-
32	63 A 30Ma 3P + N Earth leakage	No.	2	R	-	R	-
33	250 A 3P Isolator	No.	1	R	-	R	-
34	40 A stove Isolator	No.	1	R	-	R	-
35	30A Air conditioner Isolator	No.	3	R	-	R	-
<b>PLUGS</b>							
36	4 x 4 Double plug	No.	10	R	-	R	-
37	4 x 4 single plug	No.	10	R	-	R	-
<b>DB BOARDS</b>							
38	Flush mounted min distribution board 2 x 15w completely	No.	2	R	-	R	-
39	Lockable fiber glass water proofed 12 way CBIDB Eaves box to be mounted on external walls for	No.	6	R	-	R	-

	platform shelters, waiting areas, access point, ablutions, etc					
	<b>HVAC Systems</b>					
40	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.	3	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					
41	Certificate of compliance and all other testing required including 12 month guarantee certificate	Item	1	R	-	R -
Carried to final summary						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>EARTHWORKS</u></b>					
	<b><u>EXCAVATION, FILLING, ETC</u></b>					
1	Cutting of tar and apply hot mix asphalt re-surfacing after cable has been laid	m <sup>2</sup>	500	R	-	R -
	<b>Excavation in earth not exceeding 1m deep</b>					
2	Trenches	m <sup>3</sup>	350	R	-	R -
	<b>15 Mpa/20 mm unreinforced concrete</b>					
3	15 Mpa/20mm unreinforced concrete on top of underground cable	m <sup>3</sup>	100	R	-	R -
	<b>Earth filling obtain from the excavation and/or prescribed stock piles on site compacted to 90% Mod AASHTO density</b>					
4	Backfilling to holes after concrete has been laid	m <sup>3</sup>	500	R	-	R -
	Carried to final summary					R -

***ELECTRICAL WORK FINAL SUMMARY*****Major Supply and Installation of Platform and Shelter Lighting at Klipriver Station**

	STATION NAME	PAGE	AMOUNT
1	Alterations	17 to 18	R -
2	Electrical work	18 to 21	R -
3	Earthworks	21	R -
SUB TOTAL			R -
ADD VAT @ 15%			R -
TOTAL			R -

***MINOR UPGRADES AT KLIPRIVER FINAL SUMMARY***

	DESCRIPTION	PAGE	AMOUNT
1	Annexure A Civil works BoQ Final summary	3 to 16	R -
2	Annexure B Electrical works BoQ Final summary	17 to 22	R -
SUB TOTAL			R -
ADD VAT @ 15%			R -
TOTAL			R -