

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
Part C2.2 BILL OF QUANTITIES

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>1300</b>	<b>SECTION 1300</b>					
<b>13.00</b>	<b>CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</b>					
<b>13.01</b>	<b>Contractor's general obligations</b>					
	(a) Fixed obligations		Lump Sum	1		
	(b) Value-related obligations		Lump Sum	1		
	(c) Time-related obligations		Month	12		
<b>B13.02(a)</b>	Community Liaison Officer		Prov Sum	1	120 000.00	R120 000.00
<b>B13.02(b)</b>	(b) Handling costs and profit in respect of sub-item B13.02 (a)		%	120 000		
<b>B13.03</b>	<b>(a)Provisional sum for training allowance to targeted labor undergoing training</b>					
	(i) Technical Skills		Prov Sum	1		
	(ii) Generic Skills		Prov Sum	1		
	(iii) Entrepreneurial skills		Prov Sum	1		
	(iv) Remuneration of labours undergoing technical skills training.		Prov Sum	1		
	(v) Training Venue		Prov Sum	1	10 000.00	R10 000.00
	(b) Contractors handling costs, profit and all other charges in respect of sub-item B13.03 (a)		%	10 000		
<b>B13.04</b>	<b>(a) Contractors time related obligation in OHS</b>					
	All staff and compliance in respect of occupational health and safety Act, construction regulations and <b>COVID-19 (C19 OHS), 2020</b> will be paid by the contractor		Months	12		
	(b) Contractors time related obligation EMP		Months	12		
<b>1300</b>	<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>B13.05</b>	<b>Relocation and/or protection of existing services:</b>					
	(a) By the contractor		Prov Sum	1	10 000.00	R10 000.00
	(b) By the service provider		Prov Sum	1	10 000.00	R10 000.00
	( c) Handling cost in respect of B13.05 (b)		%	20 000		
<b>B13.06</b>	Information Board		No	2		
<b>B13.07</b>	Hand excavation to determine the position of existing service in soft material		m <sup>3</sup>	200		
<b>NB</b>	Should the combined total tendered for subitems (a), (b), and (c) exceed 15% of the tender sum (excluding CPA, contingencies and VAT), the tenderer shall states the reasonsin writing for tendering in this manner					
<b>1300</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>1400</b>	<b>SECTION 1400</b>					
<b>B14.00</b>	<b>HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL</b>					
<b>14.01</b>	Office and laboratory accommodation:					
	(a) Office accommodation for the Engineer		Prov Sum	1	120 000.00	R120 000.00
	(b) Handling cost and profits in respect of		%	120 000		
<b>14.02</b>	<b>Office and laboratory furniture</b>					
	(a) Chairs		No	6		
	(d) Desks, complete with drawers and locks		No	2		
	(f) Conference table		No	1		
<b>14.03</b>	<b>Office and laboratory fittings installations and equipment</b>					
	(a) Items measured by number					
	(i) 220/250 volt power points		No	4		
	(iii) Double 80 watt fluorescent light fittings complete with ballast and tubes		No	4		
	(v) Single incandescent-light fittings complete with 100 watt globes		No	4		
	(vi) Wash-hand basins complete with taps and drains		No	1		
	(x) Fire extinguishers, 9,0 kg, all purpose dry powder type, complete, mounted on wall with brackets		No	3		
	(xi) Air conditioning units with 2,2 kW minimum capacity, mounted and with own power connection		No	1		
<b>1400</b>	<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>					

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>14.03 (cont)</b>	(xiv) General-purpose steel cupboards with shelves		No	1		
	(xv) Steel filing cabinets with drawers		No	1		
	(xvi) Refrigerators		No	1		
	(xviii) Voltage stabilizers		No	1		
<b>(b) Prime cost items and items measured and paid for in a lump sum</b>						
	(i) The provision of telephone service, including the cost of calls in connection with contract administration and telephone rental		PC Sum	1	50 000.00	R50 000.00
(c) Items measured by area:						
	(vii) Venetian blinds		m <sup>2</sup>	8		
	(viii) Notice boards as specified		m <sup>2</sup>	8		
<b>14.04</b>	<b>Car ports</b>					
	(a) Car ports, as specified, at offices and laboratory buildings		No	2		
	(viii) Notice boards as specified		m <sup>2</sup>	5		
<b>14.07</b>	<b>Rented, hotel and other accommodation</b>					
	(a) Provisional Lump Sum for providing rented housing, hotel or other accommodation as described in subclause 1403(c)(ii)		Prov Sum	1	150 000.00	R150 000.00
	(b) Handling costs and profit in respect of subitem 14.07(a)		%	150 000		
<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>						

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>14.08</b>	<b>Services</b>					
	(a) Services at office and laboratories					
	(i) Fixed costs		Lump Sum	1		
	(ii) Running costs		Month	6		
<b>B14.03</b>	<b>(d)Provisional Sums items</b>					
	(i)Provision for use by the Engineer for an independent Geotechnical laboratory		Prov Sum	1	150 000.00	R150 000.00
	(ii)Handling cost and profits in respect of sub-item B1403 (d) (i)		%	150 000		
	(iii)Provision for Training of Engineering		Prov Sum	1	100 000.00	R100 000.00
	(iv)Handling cost and profits in respect of sub-item B1403 (d) (iii)		%	100 000		
	(v)Provision for use by Engineer of Surveyor		Prov Sum	1	90 000.00	R90 000.00
	(vi)Handling costs and profit in respect of subitem B14.03 (d)(v) above		%	90 000		
	(vii)Provision for use by Engineer of Environmental Specialist		Prov Sum	1	300 000.00	R300 000.00
	(viii)Handling costs and profit in respect of subitem B14.03(d)(vx) above		%	300 000		
	(ix) Provision of a direct independent telephone line for the Engineer		Prov Sum	1	30 000.00	R30 000.00
	(x) Handling costs and profit in respect of subitem B14.03(d)(ix) above		%	30 000		
	(xi) Provision of Site Monitoring Fees- Resident Engineer		Prov Sum	1	600 000.00	R600 000.00
	(xiii)Handling costs and profit in respect of subitem B14.03(d)(xi) and (xii) above		%	600 000		
	(xiv)Provision of safety consultant		Prov Sum	1	300 000.00	R300 000.00
	(xv)Handling costs and profit in respect of subitem% B14.03(d)(xiv) above		%	300 000		
<b>1400</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>1500</b>	<b>SECTION 1500</b>					
<b>15.00</b>	<b>ACCOMMODATION OF TRAFFIC</b>					
<b>15.01</b>	<b>Accommodating traffic and maintaining temporary deviations</b>		km	1		
<b>B15.03</b>	<b>Temporary traffic-control facilities</b>					
	(a) Flagmen		man-day	1 200		
	(e) Road signs, R- and TR-series, (1200 Ø)		No	38		
	(f) Road signs, TW-series, (1500 mm sides)		No	16		
	(g) Road signs, STW-, DTG-, TGS- AND TG-series (excluding delineators and barricades)		m <sup>2</sup>	12		
	(h) Delineators (TW401 or TW402) (800x200):					
	(i) Single		No	160		
	(ii) Mounted back to back		No	20		
	(j) Traffic cones (750 mm high)		No	50		
	(l) Moveable barriers (Plastic "New Jersey" type)		m	10		
	(n) Other traffic control measures ordered by the Engineer:					
	(i) Provision of other traffic control measures		Prov Sum	1	20 000.00	R20 000.00
	(ii) Handling costs and profit in respect of sub-item B15.03 (o)(i)		%	20 000		
<b>15.05</b>	<b>Gravelling and repair of temporary deviations and existing gravel shoulders used as temporary deviations</b>					
	(a) Temporary deviations					
	(i) Regrading existing gravel road to 150 mm G5 layer compacted to 93% of modified AASHTO density		m <sup>3</sup>	1 675		
<b>1500</b>	<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
15.06	Watering of temporary deviations		kl	1200		
B15.14	<b>Provision of traffic safety equipment for visitors</b>  (a) Rotating Amber lights  (b) Safety vests		No	2		
1500	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>1700</b>	<b>SECTION 1700</b>					
<b>17.00</b>	<b>CLEARING AND GRUBBING</b>					
<b>B17.01</b>	<b>Clearing and grubbing</b>		ha	2.5		
<b>17/22.12</b>	<b>Removing existing concrete and brickwork (for including roadwork)</b>					
	(a) Concrete		m <sup>3</sup>	20		
	(b) Reinforced concrete		m <sup>3</sup>	20		
<b>B17.07</b>	<b>Relocation / replacement of walls and fencing</b>					
	(a) Provisional Lump Sum		Prov Sum	1	320 000.00	R320 000.00
	(b) Handling Cost and profit in respect of Sub-item B17.07 (a)		%	320 000		
<b>1700</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>B1800</b>	<b>DAYWORKS</b>					
<b>B18.01</b>	<b>Personnel</b>					
	(i) During normal working hours					
	(a) Unskilled labour		hour	140		
	(b) Semi-skilled labour		hour	35		
	(c) Skilled labour		hour	15		
	(d) Ganger		hour	15		
	(e) Foreman		hour	20		
	(ii) During outside normal working hours					
	(a) Unskilled labour		hour	70		
	(b) Semi-skilled labour		hour	15		
	(c) Skilled labour		hour	15		
	(d) Ganger		hour	5		
	(e) Foreman		hour	10		
<b>B18.02</b>	<b>Equipment</b>					
	(a) Front-end loaders, 1,9 m <sup>3</sup> (97kW)		hour	15		
	(b) Graders (140 G or similar)		hour	15		
	(c) Rollers-vibratory (10 ton)		hour	15		
	(d) Pneumatic tyre rollers (20 ton)		hour			
	(e) Trucks (6 m <sup>3</sup> )		hour	15		
	(f) Water truck (9 000 litres)		hour	15		
<b>B1800</b>	<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
	(g) TLB (416 or similar)		hour	15		
	(h) Hand propelled vibratory roller (0.5 ton)		hour	15		
	(j) Wacker compactor		hour	15		
	(k) Compressor plus two jackhammers and two paving breakers, including hoses		hour	15		
<b>B18.03</b>	<b>Materials</b>					
	(a) Procurement of materials		Prov Sum	1	30 000.00	R40 000.00
	(b) Contractor's handling costs, profit and all other charges in respect of subitem		%	30 000		
<b>B18.04</b>	<b>Transport</b>					
	(a) LDV (2 000 cc)		km	500		
	(b) Flatbed truck (5 ton)		km	500		
<b>1800</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>2100</b>	<b>SECTION 2100</b>					
<b>21.00</b>	<b>DRAINS</b>					
<b>B21.01</b>	<b>Excavation for open drains</b>					
	(a) Excavating soft material situated within the following depth ranges below the surface level:					
	(i) 0 m up to 1,5 m		m <sup>3</sup>	400		
	(b) Extra over subitem 21.01(a)(i) for excavation in hard material irrespective of depth		m <sup>3</sup>	40		
<b>21.02</b>	<b>Clearing and shaping existing open drains</b>		m <sup>3</sup>	100		
<b>21.03</b>	<b>Excavation for subsoil drainage systems</b>					
	(a) Excavating soft material situated within the following depth ranges below the surface level:					
	(i) 0 m up to 1,5 m		m <sup>3</sup>	900		
	(b) Extra over subitem 21.03(a) for excavation in hard material irrespective of		m <sup>3</sup>	180		
<b>21.04</b>	<b>Impermeable backfilling to subsoil drainage systems</b>					
	(a) Unstabilised natural gravel		m <sup>3</sup>	75		
<b>21.06</b>	<b>Natural permeable material in subsoil drainage systems (washed crushed stone)</b>					
	(b) Crushed stone obtained from commercial sources					
	(i) Course Grade - 20mm nominal size		m <sup>3</sup>	75		
<b>21.07</b>	<b>Natural permeable material in subsoil drainage systems (washed sand)</b>					
	(b) Sand from commercial sources					
	(ii) Medium Grade		m <sup>3</sup>	900		
TOTAL CARRIED FORWARD TO NEXT PAGE						

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>21.08</b>	<b>Pipes in subsoil drainage systems</b>  (c) High-density type pipe polyethylene pressure pipes and fittings, complete with couplings (110mmØ slotted)		m	1 000		
<b>21.10</b>	<b>Synthetic -fibre filter fabric</b>  (a) Grade 2		m <sup>2</sup>	1 500		
<b>21.12</b>	<b>Concrete outlet structures, manhole boxes, Junction boxes, and cleaning eyes for subsoil drainage systems</b>  (a) Outlet structures  (c) Junction boxes		No	4		
<b>21.13</b>	<b>Concrete caps for subsoil drain pipes</b>		No	4		
<b>21.19</b>	<b>Selected backfill material under concrete-lined side drains compacted to 93% of modified AASHTO density</b>		m <sup>3</sup>	80		
<b>2100</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>2200</b>	<b>SECTION 2200</b>					
<b>22.00</b>	<b>PREFABRICATED CULVERTS</b>					
<b>22.01</b>	<b>Excavation:</b>					
	(a) Excavating soft material situated within the following depth ranges below the surface level:					
	(i) 0 m up to 1,5 m		m <sup>3</sup>	2 700		
	(ii) 1.5 m up to 3.0 m		m <sup>3</sup>	800		
	(iii) 3.0 m up to 4,5 m		m <sup>3</sup>	300		
	(b) Extra over subitem 22.01(a)(i) for excavation in hard material irrespective of depth		m <sup>3</sup>	1 140		
	(c) Extra-over sub-item 22.01(a) for excavation by hand		m <sup>3</sup>	3 100		
<b>22.02</b>	<b>Backfilling:</b>					
	(a) Using the excavated material		m <sup>3</sup>	100		
	(b) Using imported selected material		m <sup>3</sup>	150		
<b>22.03</b>	<b>Concrete pipe culverts:</b>					
	(c) On class C bedding					
	(i) 750 mm diameter interlocking joint pipes Class 100D		m	960		
	(ii) 900 mm diameter interlocking joint pipes Class 100D		m	40		
<b>2200</b>	<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>					

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>22.07</b>	<b>Cast in situ concrete and formwork:</b>					
	(a) In class A bedding, screeds and the encasing of pipes, including formwork, class 20/20 concrete		m <sup>3</sup>	10		
	(b) In floor slabs for portal or rectangular culverts, including formwork, joints and class U2 surface finish, class 30/20 concrete		m <sup>3</sup>	5		
	(c) In inlet and outlet structures, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding formwork but including class U2 surface finish					
	(1) Class 15/20 blinding (min. 200mm)		m <sup>3</sup>	2		
	(2) Class 30/20 in concrete inlet and outlet structures		m <sup>3</sup>	5		
	(d) Formwork of concrete under subitem					
	(1) Vertical formwork for F1 surface finish		m <sup>2</sup>	20		
	(2) Horizontal formwork for F1 surface finish		m <sup>2</sup>	30		
	(3) Vertical formwork for F2 surface finish		m <sup>2</sup>	30		
	(4) Horizontal formwork for F2 surface finish		m <sup>2</sup>	20		
<b>22.10</b>	<b>Steel reinforcement:</b>					
	(a) Mild steel bars		t	0.5		
	(b) High-tensile steel bars		t	1		
	(c) Welded steel fabric - Ref 245		kg	200		
<b>2200</b>	<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>					

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>B22.17</b>	<b>Manholes, catchpits, precast inlet and outlet structures complete:</b>					
	(a) Manholes					
	(i) Raised manholes		No.	5		
	(ii) Manhole junction		No.	6		
	(b) Catchpits					
	(i) Side inlets		No.	18		
	(f) Headwalls					
	(i) for 600 mm dia pipe (skewed)		No	5		
<b>2200</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

BROUGHT FORWARD

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						R0.00
<b>22.18</b>	<b>Brickwork</b>					
	(b) 230 mm thick		m <sup>2</sup>	0		
<b>22.21</b>	<b>Accessories</b>					
	(a) Manhole covers including frames					
	(i) Medium duty 1220 mm x 1220 mm cast iron		No	11		
	(d) Netlon drainage strips					
	(i) M65 Netlon drainage pipe		m	22		
	(ii) 1800 mm x 325 mm DNI netlon drainage strips, with Geofabric grade 2 covering netlon strips and wrapped around M65 netlon drainage pipe, and 20 mm Ø weepholes at 600 mm centers		No.	30		
<b>B22.23</b>	<b>Service Ducts</b>					
	(a) Pitch fibre pipes					
	(ii) 250 mm diameter		m	50		
<b>22.24</b>	Duct marker blocks		No	2		
22.25	Overhaul on excavated material carted to spoil, backfill material (but excluding Portland cement in the case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and removing and stacking existing prefabricated culverts, for haul in excess of the free-haul distance		m <sup>3</sup> km	2 500		
	SCHEDULE OF QUANTITIES					
<b>2200</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

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<b>2300</b>	<b>SECTION 2300</b>					
<b>23.00</b>	<b>CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES AND CONCRETE LININGS FOR OPEN DRAINS</b>					
<b>23.01</b>	<b>Concrete kerbing</b> precast with class 30/20 concrete to SANS 927:2007:					
	(b) Figure 8b mountable kerb		m	1690		
	(c) Figure 12 kerb		m	1700		
<b>B23.02</b>	<b>Concrete kerbing-channelling combination</b> with class 30/20 concrete					
	(a) Figure 8b mountable kerb and channel combination		m	50		
<b>23.07</b>	<b>Trimming of excavations for concrete-lined open drains + Island</b>					
	(a) in soft material		m <sup>2</sup>	2 600		
	(b) in hard material		m <sup>2</sup>	260		
<b>23.08</b>	<b>Concrete lining for open drains complete as shown on drawings</b>					
	(a) Cast in situ concrete lining class 30/20 concrete:		m <sup>3</sup>	330		
	(b) Class U2 surface finish to cast in situ concrete for all types open drains		m <sup>2</sup>	2 650		
<b>23.08</b>	<b>Repairs to existing drainage Concrete lining for open drains complete as shown on drawings</b>					
	(a) Cast in situ concrete lining class 30/20 concrete:		m <sup>3</sup>	5		
	(b) Class U2 surface finish to cast in situ concrete for all types open drains		m <sup>2</sup>	20		
<b>2300</b>	<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>					

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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>23.09</b>	<b>Formwork to cast in situ concrete lining for open drains (Class F2 surface finish only)</b>					
	(b) To sides with formwork on both internal and external faces (each face measured)		m <sup>2</sup>	530		
	(c) To ends of slabs		m <sup>2</sup>	20		
<b>23.10</b>	<b>Sealed joints in concrete linings of open drains</b>					
	(a) Polysulphide sealant		m	540		
<b>23.12</b>	<b>Steel reinforcement</b>					
	(c) Welded steel fabric (Ref. no 193)		kg	4 550		
<b>23.13</b>	<b>Cutting bituminous surfacing and pavement layers for concrete kerbing, channelling or concrete-lined drains</b>					
	(i) 40mm asphalt surfacing		m	150		
	(i) 150mm concrete surfacing		m	100		
<b>B23.16</b>	<b>Demolition and removal of existing kerbs and/or channel (minimum height of 100mm)</b>		m <sup>3</sup>	20		
<b>2300</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>3300</b>	<b>SECTION 3300</b>					
<b>33.00</b>	<b>MASS EARTHWORKS</b>					
<b>33.01</b>	<b>Cut and borrow to fill, including free-haul up to 0,5 km:</b>					
	(a) Material in compacted layer thicknesses of 200 mm and less:					
	(ii) Compacted to 93% of modified AASHTO density		m <sup>3</sup>	3 300		
	(iii) Eight roller passes compaction		m <sup>3</sup>	2 000.00		
<b>33.04</b>	<b>Cut to spoil, including free-haul up to 0,5 km. Material obtained from:</b>					
	(a) Soft excavation		m <sup>3</sup>	2 000		
33.03	Extra over item 33.01 for excavating and breaking down material in:					
	(b) Hard excavation		m <sup>3</sup>	3 500.00		
	(c) Boulder excavation class A		m <sup>3</sup>	2 600.00		
	(d) Boulder excavation class B		m <sup>3</sup>	1 800.00		
B33.04	Cut to spoil including free haul of up to 1.0km material obtained from:					
	(c) Hard excavation		m <sup>3</sup>	3 500.00		
	(d) Boulder excavation class A		m <sup>3</sup>	2 600.00		
	(e) Boulder excavation class B		m <sup>3</sup>	1 800.00		
33.05	Overbreak in hard and boulder class A excavation		m <sup>2</sup>	1 300.00		
B33.07	Removal of unsuitable material including free-haul					
	(a) In layer thicknesses of 200 mm and less:					
	(i) Stable material		m <sup>3</sup>	500.00		
	(ii) Unstable material		m <sup>3</sup>	250.00		
33/B16.02	Overhaul on material hauled in excess of 1.0km		m <sup>3</sup> km	30 000.00		
<b>3300 TOTAL CARRIED FORWARD TO NEXT PAGE</b>						

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>33.06</b>	<b>Variations in the number of roller passes (applicable to sub items 33.01 (a)(3) and 33.01(b)(3) and item 33.11):</b>					
	(a) Vibratory rollers		m <sup>2</sup> -pass	2800		
<b>33.07</b>	<b>Removal of unsuitable material (material to spoil - off site):</b>					
	(a) In layer thicknesses of 200mm or less					
	(i) Stable material		m <sup>3</sup>	1 200		
<b>33.09</b>	<b>Material bladed to windrow</b>		m <sup>3</sup>	400		
<b>33.10</b>	<b>Roadbed preparation and the compaction of material:</b>					
	(a) Compaction to 93% of modified AASHTO density		m <sup>3</sup>	1 720		
<b>33.13</b>	<b>Finishing-off cut and fill slopes, medians and interchange areas:</b>					
	(a) Cut slopes		m <sup>2</sup>	5500		
	(b) Fill slopes		m <sup>2</sup>	6500		
<b>33.14</b>	<b>Extra over item 33.01 for excavating material from the pavements and fills of existing roads:</b>					
	(a) Non-cemented material		m <sup>3</sup>	200		
	(b) Cemented material		m <sup>3</sup>	50		
<b>3300</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					<b>R0.00</b>

#REF!

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>3400</b>	<b>SECTION 3400</b>					
<b>34.00</b>	<b>PAVEMENT LAYERS OF GRAVEL MATERIAL</b>					
<b>B34.01</b>	<b>Pavement layers constructed from gravel obtained from commercial sources:</b>					
	(a) Gravel selected layer compacted to:					
	(i) 93% of modified AASHTO density (150 mm thick G7 layer)		m <sup>3</sup>			
	(f) G5 Gravel base (chemically stabilized material) compacted to:					
	(ii) 95% of modified AASHTO density (150 mm thick C4 layer)		m <sup>3</sup>			
<b>3400</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
Part C2.2 BILL OF QUANTITIES

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>3500</b>	<b>SECTION 3500</b>					
<b>35.00</b>	<b>STABILIZATION</b>					
<b>35.01</b>	<b>Chemical stabilization extra over unstabilized compacted layers</b> (Gravel subbase layer compacted to 95% of modified AASHTO density 150 mm (G5))		m <sup>3</sup>	1 600	-	R0.00
<b>35.02</b>	<b>Chemical stabilizing agent:</b>					
	(a) Ordinary portland cement		ton (t)	135	-	R0.00
35.04	Provision and application for water curing		l	6000	-	R0.00
<b>3500</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
Part C2.2 BILL OF QUANTITIES

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>5100</b>	<b>SECTION 5100</b>					
<b>51.00</b>	<b>PITCHING, STONEMWORK and PROTECTION AGAINST EROSION</b>					
<b>51.01</b>	<b>Stone pitching</b>					
	(b) Grouted stone pitching		m <sup>2</sup>	200		
<b>51.04</b>	<b>Concrete pitching and block paving</b>					
	(b) Segmented block paving to walkways					
	(i) 40mm interlocking		m <sup>2</sup>	2550		
<b>51.05</b>	<b>Concrete edge beams - 300x300, 30/19</b>		m <sup>3</sup>	22		
<b>51.06</b>	<b>Provision of approved herbicide and ant poison:</b>					
	(a) Provision of materials		PC Sum	1	12 000.00	R12 000.00
	(b) Contractor's charges and profit added to the prime cost sum		%	12 000		
<b>51.07</b>	<b>Foundation trenches</b>		m <sup>3</sup>	5		
<b>B51.08</b>	Construction of Speedhumps, complete as per drawing		No	4		
<b>5100</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					<b>R12 000.00</b>

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>5200</b>	<b>SECTION 5200</b>					
<b>52.00</b>	<b>GABIONS</b>					
<b>52.01</b>	<b>Foundation trench excavation and backfilling</b>					
	(b) in all classes of materials		m <sup>3</sup>	250		
<b>52.02</b>	<b>Surface preparation for bedding the gabions</b>		m <sup>2</sup>	150		
<b>52.03</b>	<b>Gabions</b>					
	(a) Galvanised gabion boxes					
	(i) Length 2 m, depth 1 m, width 1 m and nominal diameter of mesh wire 2.7 mm, mesh size 80 mm x 100 mm		m <sup>3</sup>	175		
	(c) Galvanized gabion mattresses					
	(i) 0,3 mm deep, width 2 m, length 6 m, and mesh size 80 mm x 100 mm nominal diameter of mesh size 2,5 mm, and 1 m diaphragm spacing		m <sup>3</sup>	75		
52.04	Filter fabric (grade 2)		m <sup>2</sup>	200		
<b>5200</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>5400</b>	<b>SECTION 5400</b>					
<b>54.00</b>	<b>GUARDRAILS</b>					
<b>B54.01</b>	<b>Guardrails on 3.81m spaced posts</b>					
	(a) Complete galvanised system on:					
	(i) Timber posts		m	350		
	(b) Extra over 54.01(a) for the following					
	(i) Flared ends (including end wing)		No	8		
	(iii) End treatments where double guardrail sections are used (including additional posts)		No			
<b>54.05</b>	<b>Additional guardrail posts</b>					
	(i) Timber posts		No	22		
<b>54.06</b>	<b>Reflective plates</b>		No	10		
<b>5400</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>5500</b>	<b>SECTION 5500</b>					
<b>55.00</b>	<b>FENCING</b>					
<b>55.01</b>	<b>Clearing the fence line, 2 m wide strip</b>		km	1.60		
<b>55.02</b>	<b>Supply and erect new fencing material for new fences and for supplementing material in existing fences which are being repaired or removed:</b>					
	(a) Diamind Mesh fencong 1.8m high on timber poles		km	1.60		
<b>55.03</b>	<b>New gates</b>					
	(a) Pedestrian Gates		No	12		
<b>55.05</b>	<b>Dismantling existing fences:</b>					
	(a) Fences:		km	0.8		
	(b) Gates		No	6		
<b>5500</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>5600</b>	<b>SECTION 5600</b>					
<b>56.00</b>	<b>ROAD SIGNS</b>					
<b>B56.01</b>	<p><b>Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class 1 retro-reflective material, where the sign board is constructed from:</b></p> <p>(c) Prepainted galvanized steel plate (chromadek 1,6 mm thick or approved equivalent):</p> <p>(i) Area not exceeding 2 m<sup>2</sup></p> <p>(e) Aluminum sheet regulatory warning and information signs</p> <p>(iii) Round 1220 mm dia</p>		m <sup>2</sup>	5		
<b>56.02</b>	<p><b>Extra over item 56.01 for using:</b></p> <p>(a) Background of retro-reflective material of:</p> <p>(i) Class 1</p> <p>(b) Lettering, symbols, numbers, arrows, emblems and borders of retro-reflective material:</p> <p>(i) Class 111</p>		m <sup>2</sup>	9		
			m <sup>2</sup>	9		
<b>5600</b>	<b>TOTAL CARRIED FORWARD TO NEXT PAGE</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
Part C2.2 BILL OF QUANTITIES

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
<b>56.03</b>	<b>Road sign supports (overhead road sign structures excluded):</b>					
	(c) Timber					
	(i) 100 mm dia.		m	20		
	(ii) 150 mm dia.		m	20		
<b>56.05</b>	<b>Excavation and backfilling for road sign supports (not applicable to kilometre posts)</b>		m <sup>3</sup>	10		
<b>56.06</b>	<b>Extra over item 56.05 for cement-treated backfill</b>		m <sup>3</sup>	10		
<b>56.07</b>	<b>Extra over item 56.05 for rock excavation</b>		m <sup>3</sup>	5		
<b>56.08</b>	<b>Dismantling, storing and re-erecting road signs with a surface area of:</b>					
	(a) Up to 2 m <sup>2</sup>		No	2		
	(b) Exceeding 2 m <sup>2</sup> but not 10 m <sup>2</sup>		No	1		
	(c) Exceeding 10 m <sup>2</sup>		No	1		
<b>B56.10</b>	<b>Hazard plates at culverts</b>					
	(a) Provision and erection of hazard plates at		No	10		
<b>5600</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>5700</b>	<b>SECTION 5700</b>					
<b>57.00</b>	<b>ROAD MARKINGS</b>					
<b>57.02</b>	<b>Retro-reflective road marking paint (Permanent markings):</b>					
	(a) White lines (broken or unbroken)					
	(i) 100 mm wide		km	1.60		
	(ii) 150 mm wide		km	0.60		
	(iii) 300 mm wide		km	0.2		
	(d) White lettering and symbols		m <sup>2</sup>	20		
	(f) Transverse lines, painted island and arrestor bed markings (any colour)		m <sup>2</sup>	50		
<b>57.04</b>	<b>Variations in rate of application:</b>					
	(a) White paint					
	(i) Water-based		litre	20		
	(b) Yellow paint					
	(i) Water-based		litre	20		
	(d) Retro-reflective beads		kg	10		
<b>B57.06</b>	<b>Setting out and pre-marking the lines (excluding traffic-island markings, lettering and symbols)</b>		km	2.4		
<b>5700</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>5800</b>	<b>SECTION 5800</b>					
<b>58.00</b>	<b>LANDSCAPING AND PLANTING PLANTS</b>					
<b>58.01</b>	<b>Trimming</b>					
	(b) Hand trimming		m <sup>2</sup>	20000		
<b>B58.03</b>	<b>Preparing the areas for grassing:</b>					
	(c) Topsoiling within the road reserve, where the following materials are used:					
	(i) Topsoil obtained from within the road reserve or borrow areas (free haul 1,0 km)		m <sup>3</sup>	50		
	(ii) Topsoil obtained from other sources by the contractor (including all haul)		m <sup>3</sup>	950		
<b>58.04</b>	<b>Grassing:</b>					
	(b) Sodding by using the following types of sods:					
	(i) Nursery sods -		m <sup>2</sup>	20000		
	(c) Hydroseeding:					
	(i) Providing an approved seed mixture for hydroseeding		kg	45		
<b>58.05</b>	<b>Watering the grass when established by topsoiling only</b>		kl	3		
<b>5800</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
Part C2.2 BILL OF QUANTITIES

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
5900	<b>SECTION 5900</b>					
59.00	<b>FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS</b>					
59.01	<b>Finishing the road and road reserve:</b>					
	(b) Single carriageway road		km	2		
5900	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
Part C2.2 BILL OF QUANTITIES

ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>7300</b>	<b>SECTION 7300</b>					
<b>73.00</b>	<b>CONCRETE BLOCK PAVING FOR ROADS</b>					
<b>73.01</b>	<b>Concrete block paving:</b>  80mm type S-A segmented paving blocks (herringbone bond), with 20mm bedding sand		m <sup>2</sup>	10800		
<b>73.03</b>	<b>Provision for approved herbicide and ant</b>  (a) Provision of materials  (b) Contractor's Charges and profit added to		Prov Sum  %	1  25000	15 000.00	R15 000.00
<b>7300</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					<b>R15 000.00</b>

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>7400</b>	<b>SECTION 7400</b>					
<b>74.00</b>	<b>PATENTED EARTH RETAINING SYSTEMS</b>					
<b>74.01</b>	<b>Patented Earth Retaining Systems:</b>					
	(d) Flora Wall system		m <sup>2</sup>	2000		
<b>74.02</b>	<b>Excavation for concrete bases for earth retaining system</b>					
	(a) in Soft material		m <sup>2</sup>	155		
<b>74.03</b>	<b>Concrete bases for earth retaining</b>					
	(a) in Soft material		m <sup>2</sup>	90		
<b>7300</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

CONSTRUCTION OF MASINGA TO ENTOKOZWENI ROAD PHASE 2  
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ITEM	DESCRIPTION	LIC	UNIT	QTY	RATE	AMOUNT R
<b>8100</b>	<b>SECTION 8100</b>					
<b>81.00</b>	<b>TESTING MATERIALS AND WORKMANSHIP</b>					
<b>B81.02</b>	<b>Other special tests requested by the Engineer</b>					
	(a) Cost of testing		Prov Sum	1	20 000.00	R20 000.00
	(b) Handling costs and profits in respect of subitem B81.02(a)		%	20 000		
<b>8100</b>	<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

**SCHEDULE OF QUANTITIES A: SUMMARY ROAD WORKS**

SECTION	DESCRIPTION	AMOUNT (R)
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1400	HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL	
1500	ACCOMMODATION OF TRAFFIC	
1700	CLEARING AND GRUBBING	
1800	DAYWORKS	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
5100	PITCHING, STONEMWORK and PROTECTION AGAINST EROSION	
5200	GABIONS	
5400	GUARDRAILS	
5500	FENCING	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5800	LANDSCAPING AND PLANTING PLANTS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
7300	CONCRETE BLOCK PAVING FOR ROADS	
7400	PATENTED EARTH RETAINING SYSTEMS	
8100	TESTING MATERIALS AND WORKMANSHIP	
TOTAL SCHEDULE A: SUMMARY OF ROAD WORKS		

SCHEDULE OF SECTIONS TOTALS

	DESCRIPTION	AMOUNT (R)
	TOTAL SCHEDULE A: SUMMARY OF ROAD WORKS  <b>SUBTOTAL 1</b>  <u>ADD:</u> CONTINGENCIES (10% OF SUBTOTAL 1)  <b>SUBTOTAL 2</b>  <u>ADD:</u> ESCALATION ALLOWANCE (10% OF SUBTOTAL 2)  <b>SUBTOTAL 3</b>  <u>ADD:</u> VAT (15% OF SUBTOTAL 3)	
	<b>TOTAL CARRIED FORWADED TO FORM OF OFFER</b>	

Signed on behalf of the Tenderer.....(Signature)

Date.....

Tenderer's Name.....(Company Name)

**DISCLAIMER**

Kindly note that the responsibility lies with Tenderer to check the tender document and the tender addenda (if issued) to verify that all the information is correct and all changes have been incorporated as no claims will be entertained in this regard afterwards. Accordingly, we confirm that the hard copies of the original tender document and the tender addenda are to be regarded to contain the correct items and quantities.