

MOTAGANENG ACCESS BRIDGE

SECTION 1500

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
15.00	ACCOMMODATION OF TRAFFIC				
15.01	Accommodating traffic and maintaining temporary deviations	km	1.80		
15.02	Earthworks for temporary deviations				
	(a) Shaping of temporary deviations	km	1.80		
	(b) Cut and borrow to fill	m ³	150		
	(c) Cut to spoil	m ³	100		
15.03	Temporary traffic-control facilities				
	(a) Flagmen	man-day	600		
	(b) Portable STOP and GO-RY signs	No	4		
	(e) Road signs R and TR series (as shown on drawings)	No	4		
	(f) Road signs TW series (as shown on drawings)	No	4		
	(g) Road signs, STW,DTG,TGS AND TG Series	No	4		
	(h) Delineators (DTG50J) (250 mm x 1000 mm):				
	(i) Single	No	25		
	(j) Traffic cones (750 mm)	No	20		
15.04	Relocation of traffic-control facilities	Lump Sum	1		
15.05	Gravelling and repair of temporary deviations and existing gravel shoulders used as temporary deviations:				
	(a) Temporary deviations	m ³	150		
15.06	Watering of temporary deviations	kl	500		
15.07	Blading by road grader of:				
	(a) Temporary deviations	km-pass	6.0		
15/16.02	(d) Overhaul on excavated material carted to spoil, for haul in excess of a free-haul distance of 1,0 km	m ³ -km	810		
B15.14	The provision and maintenance of rotating lights, etc. for the use of the Engineer and his staff				
	(a) Rotating lights	No.	2		
	(b) Safety vests	No.	4		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 1700

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
17.00	CLEARING AND GRUBBING				
17.01	Clearing and grubbing	ha	1.50		
17.02	Removal and grubbing of large trees and tree stumps (a) Girth exceeding 1m up to and including 2m	no	20		
17.03	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha			Rate only
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 2100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
21.00	DRAINS				
21.01	Excavation for open drains:				
	(a) Excavating soft material situated within the following depth ranges below the surfaces level:				
	(i) 0 m up to 1,5 m	m ³	650		
	(b) Extra over subitem 21.01(a) for excavation in hard material, irrespective of depth	m ³	80		
21.02	Clearing and shaping existing open drains	m ³	155		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 2200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
22.00	PREFABRICATED CULVERTS				
22/66.01	Additional foundation investigation	Prov Sum	1		R 350,000.00
	(i) Handling costs and profit in respect of subitem	%	350000		
22.01	Excavation				
	(a) Excavating soft material situated within the following depth ranges below the surface level:				
	(i) 0 m up to 1,5 m	m ³	220		
	(ii) 1,5 m up to 3,0 m	m ³	360		
	(ii) 3,0 m up to 4,5 m	m ³	150		
	(b) Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth	m ³	100		
22/ 61.03	Access and Drainage				
	(a) Access	km	2		
22.02	Backfilling:				
	(a) Using the excavated material	m ³	50		
	(b) Using imported selected material from commercial sources	m ³	450		
	(c) Soil Cement	m ³	30		
22/ 62.08	Foundation fill consisting of:				
	(a) Rock fill	m ³	300		
	(b) Crushed Stone fill	m ³	150		
	(d) Mass Concrete, Class 25/19	m ³	175		
22.03	Concrete pipe culverts				
	(b) On class B bedding				
	(i) 600 mm dia class 100D concrete pipe culvert	m	900		
	(ii) 900 mm dia class 100D concrete pipe culvert	m	16		
22.05	Portal and Rectangular Culverts				
	(a) Supply, Handle and Lay 2100 x 2100mm without prefabricated floor slabs	m	75		
22.07	Cast in situ concrete and formwork				
	(a) In floor slab for rectangular culverts, including formwork, joints and class U2 surface finish				
	(i) Class 30/19 concrete	m ³	195		
	(f) 15 Mpa Concrete fill between pipes (6,7/15)	m ³	50		
22/ 64.01	Cast in situ concrete including Formwork and class F2 surface finishing				
	(a) Class 25/19 concrete	m ³	125		
22.10	Steel Reinforcement				
	(a) Mild steel bars	ton	2.5		
	(b) High-tensile steel bars	ton	3.5		
	(c) Welded steel fabric (395 mesh ref)	ton	2		
22/ 61.09	Establishment on site for the drilling of holes, for Dowel bars	Lump sum			
22/61.10	Moving to and setting up equipment at each hole to be drilled	no	42		
22/61.11	Drilling of 30mm diameter holes for dowel bars	m	45		
22/61.12	Cement Grouting for Dowel bars	kg	100		
22/61.13	Dowels bars, Y25 dowelled 800mm into hard rock	ton	1		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 2300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
23.00	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS				
23.01	Concrete kerbing				
	(a) Precast kerbing to SABS 927				
	(i) Figure 8b (Mountable)	m	2600		
	(ii) Figure 7 Kerb (semi Mountable)	m	75		
23.02	Concrete kerbing-channeling combination				
	(i) Figure 7 kerb (Non Mountable) Type B: with 300mm wide concrete channel	m	100		
	(ii) Figure 8B kerb (Mountable) Type C: with 300mm wide concrete channel	m	100		
23.04/64.01	Cast in situ concrete including Formwork and class F2 surface finishing				
	(a) Class 30/19 concrete	m ³	150		
23.07	Trimming of excavations for concrete-lined open drains				
	(a) In soft material	m ²	750		
	(b) In hard material	m ²	30		
B23.08	Concrete lining for open drains including formwork				
	(a) Cast in situ concrete lining class 25/19 for all types of open drains	m ³	250		
	(b) Class U2 surface finish to cast in situ concrete for all types of open drain	m ²	540		
23.12	Steel reinforcement				
	(a) Welded steel fabric (395 mesh ref)	ton	3.5		
23.13	Polyethylene sheeting 0,15 mm thick, or similar, approved material, for lining V-drainage systems	m ²	720		
B23.15 /73.02	Cast in situ concrete edge and intermediate beams class 30/19 concrete (Formwork and clause U2 surface finish included)				
	(i) 200mm x 100mm	m	1000		
TOTAL CARRIED FORWARD					

MOTAGANENG ACCESS BRIDGE

SECTION 3300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
33.00	MASS EARTHWORKS				
33.01	Cut and borrow to fill, including free-haul up to 0.5km (a) Gravel material in compacted layer thickness of 200 mm and less: (1) Material obtained from cut in the road prism and the road reserve areas; (i) Compacted to 90% of modified AASHTO density	m ³	6,480		
33.03	Extra over item 33.01 for excavating and breaking down material in: (a) Intermediate excavation	m ³	550		
	(b) Hard excavation	m ³	75		
33.04	Cut to spoil, including free-haul up to 0,5 km. Material obtained from: (a) Soft excavation	m ³	3,240		
	(b) Intermediate excavation	m ³	550		
	(c) Hard excavation	m ³	100		
33.07	Removal of unsuitable material (including free-haul of 0.5 km): (a) In layer thicknesses of 200 mm and less: (1) Stable material	m ³	1800		
33.10	Roadbed preparation and the compaction of material (a) Compaction to 93% of modified AASHTO density	m ³	2,400		
33.13	Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes	m ²	850		
33/16.00	Overhaul				
33/16.01	Overhaul on material hauled in excess of a free-haul distance of 0.5km, for haul up to or through 1.0km (restricted overhaul)	m ³	500		
33/16.02	Overhaul on material hauled in excess of 1.0km (ordinary overhaul)	m ³ -km	11,185		
33/32.06	Stockpiling of material	m ³	550		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 3400

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
B34.01	Pavement layers constructed from gravel from commercial sources				
	(a) 150 mm Gravel selected layer compacted to:				
	(1) 93% of modified AASHTO density	m ³	1,900		
	(d) 150 mm Gravel Subbase (Stabilized gravel C4) compacted to:				
	(1) 95% of modified AASHTO density	m ³	1,900		
	(f) 150mm Gravel base (G5) compacted to:				
	(1) 97% of modified AASHTO density	m ³	1,900		
34.01	Pavement layers constructed from gravel from cut or borrow, including free-haul up to 1,0km				
	(a) 150 mm Gravel selected layer compacted to:				
	(1) 93% of modified AASHTO density	m ³	250		
	(d) 150 mm Gravel subbase (Stabilized gravel) (C4) compacted to:				
	(1) 95% of modified AASHTO density	m ³	250		
	(f) 150mm Gravel base (G5) compacted to:				
	(1) 97% of modified AASHTO density	m ³	250		
34.02	Extra over item 34.01 for excavation of material in:				
	(a) Intermediate excavation	m ³	100		
	(b) Hard excavation	m ³	150		
34/16.00	Overhaul				
34/16.01	Overhaul on material hauled in excess of a free-haul distance of 0.5km, for haul up to or through 1.0km (restricted overhaul)	m ³	550		
34/16.02	Overhaul on material hauled in excess of 1.0km (ordinary overhaul)	m ³ -km	13,420		
34/32.04	Removal of oversize pavement material	m ³	50		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 3500

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
35.00	STABILIZATION				
35.01	Chemical stabilization extra over unstabilized compacted layers				
	(a) 150mm Subbase	m ³	1,900		
35.02	Chemical stabilizing agent:				
	(a) Ordinary portland cement CEM 42.5 (3%)	t	120		
35.04	Provision and application of water for curing	kl	3890		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 4100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
41.00	PRIME COAT				
41.01	Prime coat:				
	(c) MC-30 cut-back bitumen	litre	12000		
	(d) MC-70 cut-back bitumen	litre			Rate only
41.02	Aggregate for blinding	m ²	200		
41.03	Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	litre	200		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 4200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
42.00	ASPHALT BASE AND SURFACING				
42.02	Asphalt Surfacing				
	40mm with 80/100 penetration grade (B8 road grade)				
	(a) Medium Continuously graded	m ²	12,400		
42.04	Tack coat of 30% stable-grade emulsion	litre	7000		
42.05	Bituminous binder variations:				
	(b) B8 road-grade bitumen or 80/100 penetration grade bitumen	litre	350		
42.09	Asphalt Surfacing on Bridge decks				
	40mm with 80/100 penetration grade (B8 road grade)				
	(a) Medium Continuously graded	m ²	300		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 5100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
51.00	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION				
	Stone pitching:				
51.01	(b) Grouted stone pitching	m ²	700		
51.05	Concrete edge beams, cast in-situ class 30/19 concrete (Formwork and clause U2 surface finish included)				
	(1) 200mm x 150mm	m	650		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 5200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
52.00	GABIONS				
52.01	Foundation trench excavation and backfilling:				
	(a) In all other classes of material	m ³	350		
52.02	Surface preparation for bedding the gabions	m ²	2200		
52.03	Gabions:				
	(a) Galvanised gabion boxes:				
	(i) 1,0 m x 1,0 m x 1,0 m with 80 mm x 100mm mesh and 2,7mm dia mesh wire	m ³	80		
	(ii) 2,0 m x 1,0 m x 1,0 m with 80 mm x 100mm mesh and 2,7mm dia mesh wire	m ³	40		
	(iii) 2,0 m x 1,0 m x 0,5 m with 80 mm x 100mm mesh and 2,7mm dia mesh wire	m ³	80		
	(iii) 3,0 m x 1,0 m x 1,0 m with 80mm x 100mm mesh and 2,7mm diater mesh wire	m ³	20		
	(b) Galvanized gabion reno mattresses,				
	(i) 2.0m x 1,0m x 0,3m hexagonal Woven mesh with aperture of 80 mm x 100mm mesh and diaphragms at 1,0m centres and 2,7 mm dia mesh wire	m ³	80		
	(i) 3.0m x 1,0m x 0,3m hexagonal Woven mesh with aperture of 80 mm x 100mm mesh and diaphragms at 1,0m centres and 2,7 mm dia mesh wire	m ³	55		
52.04	Filter fabric				
	(a) Geotextile Filter Fabric , Bidium grade A4 or approved equivalent or similar	m ²	210		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 5400

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
54.00	GUARDRAILS				
54.01	Guardrails on timber posts				
	(a) Galvanised	m	300		
54.01	Guardrails on Steel posts				
	(a) Galvanised	m	200		
54.03	Extra over item 54.01 for horizontally curved guardrails factory bend to a radius of less than 45m	m	20		
54.04	End treatments:				
	(a) End wings	no	8		
	(b) Bull noses	no	8		
54.06	Reflective plates	no	40		
54.12	Extra over items 54.01 and 54.02 for drilling and blasting holes for guardrail post	no	30		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 5600

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
56.00	ROAD SIGNS				
56.01	Road sign boards with painted or coloured semi-matt background.Symbols, lettering and borders in semi-matt black or in Class I retro-reflective material, where the sign board is constructed from: (c) Prepainted galvanised steel plate (chromadek or approved equivalent) (i) Area not exceeding 2m ²	m ²	10		
B56.01	Hazard plates (a) W401	No.	10		
56.03	Road sign supports (overhead road sign structures excluded): (b) Timber (75mm CCA Treated)	kg	40		
56.05	Excavation and backfilling for road sign supports (not applicable to kilometre posts)	m ³	5.0		
56.06	Extra over item 56.05 for cement-treated soil backfill	m ³	25		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 5700

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
57.00	ROAD MARKINGS				
57.02	Retro-reflective road marking paint:				
	(a) White lines (broken or unbroken)				
	(1) 100 mm wide	km	1.8		
	(b) Yellow lines (broken or unbroken)				
	(1) 100 mm wide	km	3.6		
	(d) White lettering and symbols	m ²	75		
	(e) Yellow lettering and symbols	m ²	75		
	(f) Transverse lines, painted island and arrestor bed markings (any colour)	m ²	75		
57.06	Setting out and premarking the lines (excluding traffic-island markings, lettering and symbols)	km	5.4		
57.07	Re-establishing the painting unit at the end of the maintenance period	km	1.8		
B57.08	Traffic Calming devices Speed humps complete as indicated on drawing including road markings and signs				
	(i) Type 1	No	3		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SECTION 5900

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
59.00	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
59.01	Finishing the road and road reserve:				
	(b) Single carriageway road	km	1.8		
59.02	Treatment of old roads and temporary deviations	km	1.8		
59/56.08	Dismantling, storing and re-erecting household fencing	m	100		
TOTAL CARRIED FORWARD TO SUMMARY					

MOTAGANENG ACCESS BRIDGE

SUMMARY OF SCHEDULE OF QUANTITIES

AMOUNT

1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1400	HOUSING OFFICES AND LABORATORY FOR THE ENGINEER'S SITE PERSONNEL	
1500	ACCOMMODATION OF TRAFFIC	
1700	CLEARING AND GRUBBING	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE KERBING, CONCRETE CHANNELING, CHUTES AND DOWN PIPES AND CONCRETE LININGS FOR OPEN DRAINS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL	
3500	STABILIZATION	
4100	PRIME COAT	
4200	ASPHALT BASE AND SURFACING	
5100	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION	
5200	GABIONS	
5400	GUARDRAILS	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS	
	SUB-TOTAL 1	
	CONTINGENCY AMOUNT 10%	
	SUB-TOTAL 1	
	VAT @ 15%	
	GRAND TOTAL	