

C.2.2.1 : INDEX TO BILL OF QUANTITIES**SECTION 1 PRELIMINARY AND GENERAL****PART AA PRELIMINARIES****PART AB GENERAL SPECIFICATIONS****PART AH OCCUPATIONAL HEALTH and SAFETY****SECTION 2 ROAD UPGRADE****PART B SITE CLEARANCE****PART DA EARTHWORKS : BULK****PART DB EARTHWORKS FOR PIPE TRENCHES****PART EB GRADED CRUSHED STONE****PART EF KERBS AND HAUNCHES****PART EM CONCRETE SURFACE TO ROADS****PART F PROTECTION WORKS****PART PG NON PRESSURE PIPELINES and PC CULVERTS****PART PH MANHOLES and APPURTENANT DRAINAGE WORKS****PART S REINSTATEMENT****PART TA ROAD SIGNS****PART TB ROAD MARKINGS**

C.2.2.2 : BILL OF QUANTITIES**SECTION 1 PRELIMINARY AND GENERAL****PART AA PRELIMINARIES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	GCC 2015	Fixed Charge obligations	sum	1		
2	GCC 2015	Time Related obligations - 12 weeks	sum	1		
3	SANS 1921-1	Fixed Charge Items	sum	1		
4	SANS 1921-1	Time Related Items - 12 weeks	sum	1		
5	C1.2.3.1	Allow for a CLO - Ward 45 to be appointed	PC Sum	82000	1.00	82 000.00
6		Percentage mark-up for CLO	%	82000		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

R

PART AB GENERAL SPECIFICATIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AB.4 PS.AB.1.2	Contractor's Camp Site / Store Yard	sum	1		
2	PS.AB.2	Cost of Samples and Contractor's Preliminary and Site Control Testing	sum	1		
3	PS.AB.3	Survey for, and Preparation of, 'As-Built' Drawings and Data	sum	1		
4	PS.11	Provision of security on site to guard against any disruption of the works throughout the duration of the contract per Clause PS.11	PC Sum	50000	1.00	50 000.00

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART AH OCCUPATIONAL HEALTH and SAFETY

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>The tenderer shall ensure that the sum of 1.AH.1 / 1.AH.2 / 1AH.3 shall not be less than on epercent (1%) of the Tender Amount (excluding VAT)</u>				
1	AH.14.1 PS.10	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations 2014	sum	1		
2	AH.14.2 PS.10	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations 2014 - 12 weeks	sum	1		
3	AH.14.3 PS.10	Submission of the Health and Safety File.	sum	1		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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121612 STR, NTUZUMA GRAVEL TO SURFACE- WARD 45

SECTION 2 ROAD UPGRADE**PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2 PS.B	General clearance and grubbing in road reserve - where directed by the Engineer	m2	3000		
2	PS.B PS.B.3 PS.B.4 PS.B.5	Break up and removal on unreinforced concrete and foundation slabs above and below ground.	m3	20		
3	B.8.4 PS.B.2	Removal of trees of girth exceeding 1,5 m including de-stumping and spoil	no.	3		
4	B.8.5 PS.B.1	Removal of wire mesh fence and poles within road reserve and return to property owner for storage	m	200		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

R**PART DA EARTHWORKS : BULK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.2 PS.DA.3 PS.DA.6 PS.DA.9	Excavate intermediate material including existing embankments for road design profile and place into fill on site, compacted to 93% Mod A.A.S.H.T.O.	m3	570		
2	DA.8.3 PS.DA.4 PS.DA.9	Excavate intermediate material to spoil (approved spoil site)	m3	370		
3	DA.8.4 PS.DA.5 PS.DA.6	Import, place, process and compact in 150mm layers Sub-Base G7 or better material to 95% Mod. A.A.S.H.T.O. suitable fill material. Material from contractor's off-site source inclusive of haulage and royalties - 300mm Depth (340mm to 640mm below final) - PROVISIONAL	m3	410		
4	DA.8.9 PS.DA.7 PS.DA.8	Formation Preparation, dips and tolerances - (surface below road carriageway)	m2	2900		
5	PS.DA.10 PG.3.8 PS.DA.5	Supply and place geofabric for layer separation - Geofabric Grade A7 or better or approved equivalent. Rate shall include for wastage and overlap.	m2	100		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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121612 STR, NTUZUMA GRAVEL TO SURFACE- WARD 45

PART DB EARTHWORKS FOR PIPE TRENCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.19 PS.DB.2 PS.DB.4	Prove existing services by hand excavation (Where instructed by Engineer), where depth is: - - Over 0,0 m and not exceeding 1,5 m	m3	20		
2	DB.8.5 PS.DB.2 PS.DB.4	Excavate and backfill in all material for 450mm pipes where depth is:- - Over 0,0 m and not exceeding 1,5 m	m	20		
3	DB.8.5 PS.DB.2 PS.DB.4	Excavate and backfill in all material for 160mm duct crossings and 160mm Sewer Pipes where depth is:- - Over 0,0 m and not exceeding 1,5 m	m	60		
4	DB.8.13 PS.DB.1	Supply, placing and compaction of selected backfill and bedding material for pipe trenches from commercial or off-site source inclusive of haulage and royalties to 95% Mod. A.A.S.H.T.O.	m3	25		
5	PS.DB.5	Repair / Relocation / Lowering / Installation of various services - materials provided by Water Department. Connection to Houses. Appointment of Metro Approved Plumber.Water and Sewer Reticulation - protection / relocation / installation - collection, transport, storage and security of materials from stores. (Provisional) (Authority of Service Department and written quotations to be provided for approval) prior to acceptance.	PC Sum	25000	1.00	25 000.00
6		Percentage mark-up for Services	%	25000		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART EB GRADED CRUSHED STONE

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>EMPOWERMENT STRATEGIES - CPG COMPONENT - ITEM 2.EB.1</u>				
1	EB.8(1) PS.EB.1	Supply and Process, compact to 95% in 150mm layers graded crushed stone G4 or better quality, 150 mm thick	m3	10		
2	EB.8(2) PS.EB.2	Prime coat (applied at 0.6litres /m2) to road formation	m2	70		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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121612 STR, NTUZUMA GRAVEL TO SURFACE- WARD 45

PART EF KERBS AND HAUNCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>EMPOWERMENT STRATEGIES - CPG COMPONENT - ITEM 2.EF.1</u>				
1	EF.8.1 PS.EF.1 PS.EF.2	Barrier kerb Fig 6 installed per modified detail to line and level per design.	m	1410		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART EM CONCRETE SURFACE TO ROADS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.EM.1	Supply, Place and Compact Concrete pavement 200mm thick Grade 20/26 readymix concrete including curing compound applied at 0.3l/m2 and texturing grooving or wirebrush texture.	m3	600		
2	EM.5.7	Joints	m	200		
3	PS.EM.2	Reinforcement in concrete pavement - Multi-cell 200mm x 200mm x 150mm height (or approved equivalent), inclusive of wastage	m2	2900		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.F.4	Supply and Install 1m wide Precast Concrete Steps as per Standard Drawing 38581 in road reserve	no.	20		
2	PS.F.1	Supply and construct L500 Loffelstein block (or approved equivalent vertical hollow block wall) inclusive of sand filling as per detail, 12:1 cement stabilised G7 fill to top of wall, 1300mm wide geofabric extending into fill laid under 3rd row (Kaymat U44 or approved equivalent)	m2	360		
3	PS.F.5	Base type B including mesh ref 245, excavation and compaction of subgrade to 95% Mod A.A.S.H.T.O. (0.43m3 concrete/m length of wall)	m3	80		
4	DA.8.2 PS.F.2	Excavate intermediate material for wall (Loffelstein or approved equivalent) and spoil at tip, Rate to include for transport	m3	80		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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121612 STR, NTUZUMA GRAVEL TO SURFACE- WARD 45

PART PG NON PRESSURE PIPELINES and PC CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>EMPOWERMENT STRATEGIES - CPG COMPONENT - ITEM 2.PG.1</u>				
1	PG.8.2 PS.PG	Supply and install 450 mm diameter concrete Class 100D	m	25		
2	PG.8.2	Supply and install 160 mm diameter U.P.V.C. heavy duty duct pipes - SABS approved, backfilled and compacted with 3 Sand/1 Cement mix backfill to ducts. Rate to include for NFX Brick headwall and markers.	m	30		
3	PS.PG	Supply and install 160 mm diameter sewer pipes and associated connections - SABS approved, and connect to existing infrastructure, backfilled and compacted with 3 Sand/1 Cement mix backfill to ducts	m	25		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART PH MANHOLES and APPURTENANT DRAINAGE WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PH.8.7 PS.PH.1	Raise/lower existing cast iron valve covers in paved / unpaved area by :- - 0 to 250 mm	no.	2		
2	PH.8.3 PS.PH.1	Standard inlet type S2 with heavy duty concrete cover and frame.Depth :- - Over 1.5 m and not exceeding 2.0 m. Manhole Type A	no.	1		
3	PS.PH.5	Construct standard outlet headwall as per drawing no. 38576	no.	1		
4	PS.PH.7	Break into existing brick manhole wall and make good	no.	1		
5		Raise / Lower existing sewer manhole concrete cover and frame including replacement of 500mm / 250mm rings and sealant	no.	1		
6		Protection of septic tank installed structures, modification to standard dimensions, removal or repair where required	no.	5		
7	PS.PH.8	Supply and install compression moulded polymer compound manhole cover and frames - standard dimensions	no.	2		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART S REINSTATEMENT

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	S.8.1 PS.S.4	Reinstatement of ground surface, cut slope and fill slope embankments (Max 1m width) adjacent road edge within road reserve	m2	1100		
2	S.8.4	Reinstatement of wire or plastic coated mesh fence and treated wooden posts, with new - 1,8 m high	m	200		
3	S.8.2	Permanent road reinstatement 150 mm sub base 50 mm Asphalt - Asphalt Private Plant	m2	150		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART TA ROAD SIGNS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TA.8.1 PS.TA.2	Supply and erect road sign boards, area not exceeding 2m2	m2	2		
2	TA.8.3	Excavate and backfill for road sign supports	m3	1		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART TB ROAD MARKINGS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TB.8.1.2	Thermo - plastic marking for lettering, symbols and traffic islands (white), including setting out lettering, symbols and traffic island markings.	m2	20		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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BILL OF QUANTITIES SECTION SUMMARY

SECTION 1 PRELIMINARY AND GENERAL

PART AA	PRELIMINARIES	
PART AB	GENERAL SPECIFICATIONS	
PART AH	OCCUPATIONAL HEALTH and SAFETY	
TOTAL CARRIED TO FINAL SUMMARY		

BILL OF QUANTITIES SECTION SUMMARY**SECTION 2 ROAD UPGRADE**

PART B	SITE CLEARANCE	
PART DA	EARTHWORKS : BULK	
PART DB	EARTHWORKS FOR PIPE TRENCHES	
PART EB	GRADED CRUSHED STONE	
PART EF	KERBS AND HAUNCHES	
PART EM	CONCRETE SURFACE TO ROADS	
PART F	PROTECTION WORKS	
PART PG	NON PRESSURE PIPELINES and PC CULVERTS	
PART PH	MANHOLES and APPURTENANT DRAINAGE WORKS	
PART S	REINSTATEMENT	
PART TA	ROAD SIGNS	
PART TB	ROAD MARKINGS	
TOTAL CARRIED TO FINAL SUMMARY		

C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

Section

1	PRELIMINARY AND GENERAL		R	
AA	PRELIMINARIES	R		
AB	GENERAL SPECIFICATIONS	R		
AH	OCCUPATIONAL HEALTH and SAFETY	R		
2	ROAD UPGRADE		R	
B	SITE CLEARANCE	R		
DA	EARTHWORKS : BULK	R		
DB	EARTHWORKS FOR PIPE TRENCHES	R		
EB	GRADED CRUSHED STONE	R		
EF	KERBS AND HAUNCHES	R		
EM	CONCRETE SURFACE TO ROADS	R		
F	PROTECTION WORKS	R		
PG	NON PRESSURE PIPELINES and PC CULVERTS	R		
PH	MANHOLES and APPURTENANT DRAINAGE WORKS	R		
S	REINSTATEMENT	R		
TA	ROAD SIGNS	R		
TB	ROAD MARKINGS	R		
SUB TOTAL				R
ADD VAT (15%) - (only if a registered VAT Vendor)				R
TOTAL CARRIED TO FORM OF OFFER AND ACCEPTANCE (C.1.1)				R