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BILL OF QUANTITIES**SECTION 1 PRELIMINARY AND GENERAL****PART AA PRELIMINARIES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	GCC 2015	GENERAL CONDITIONS OF CONTRACT (GCC 2015) READ IN CONJUNCTION WITH THE CONTRACT DATA Fixed Charge obligations	sum	1		
2	GCC 2015	Time Related obligations	months	4		
3	SANS 1921-1	SANS 1921-1 : GENERAL ENGINEERING AND CONSTRUCTION WORKS READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATION DATA IN THE SCOPE OF WORKS Fixed Charge Items	sum	1		
4	SANS 1921-1	Time Related Items	months	4		
5	PS.12	COMMUNITY LIAISON OFFICER Allow for a CLO to be appointed.	PC Sum	72000	1.00	72,000.00

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL**R****PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AB.4 PS.AB.1.1 PS.17	Contractor's Camp Site / Store Yard	sum	1		
2	AB.5 PS.AB.2	Notice Board	sum	1		
3	AB.7 PS.AB.3	Road Deviations	sum	1		
4	AB.7 PS.AB.5	Initial supply of all signs, barricades and delineators	sum	1		
5	AB.7 PS.AB.5	Maintenance of all signs, barricades and delineators	sum	1		
6	AB.6 PS.AB.4 PS.14	Cost of Samples and Contractor's Preliminary and Site Control Testing	sum	1		
7	PS.AB.6 PS.13 PS.15	Survey for, and Preparation of, 'As-Built' Drawings	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL**R**

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

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 / 1.AH.3 shall not be less than one percent (1%) of the Tender Amount (excluding VAT)</u>				
1	AH.14.1 PS.AH.1 PS.8	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	months	4		
2	AH.14.2 PS.8	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	months	4		
3	AH.14.3 PS.8	Submission of the Health and Safety File	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL**R**

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

SECTION 2 SITE CLEARANCE**PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General clearance and grubbing in road reserve	m2	2520		
2	B.8.4 PS.B.6	Removal of trees of girth exceeding 1,0 m, including destumping and spoil at tip. Rate to include haulage.	no.	5		
3	B.8.5 PS.B.1	Removal of 1.5 m high wire mesh fence and spoil at tip Rate to include all haulage	m	20		
4	B.8.9 PS.B.3	Removal of brickwork	m3	2		
5	B.8.10 PS.B.2	Removal of unreinforced concrete	m3	4		
6	B.8.14 PS.B.5	Removal of roadways to tip	m3	4		
7	PS.B.4	Removal of heavy duty cast iron covers and store on site for re-use	no.	3		

TOTAL CARRIED TO SECTION 2 SUMMARY: SITE CLEARANCE**R**

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

SECTION 3 ROAD WORKS**PART DA EARTHWORKS : BULK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.3 PS.DA.2	Excavate soft material to spoil	m3	1425		
2	DA.8.3 PS.DA.2	Extra over above for the excavation of intermediate material to spoil	m3	475		
3	DA.8.3 PS.DA.2	Extra over above for the excavation of boulders greater than 0,15 m3 to spoil	m3	50		
4	DA.8.3 PS.DA.2	Excavate soft material and place directly into fill	m3	675		
5	DA.8.3 PS.DA.2	Extra over above for excavation in intermediate material to fill	m3	225		
6	PS.DA.4	Import suitable G7 material from contractor's off-site source inclusive of haulage and royalties	m3	140		
7	DA.8.5 PS.DA.5	Compact imported fill material to 93% Mod. A.A.S.H.T.O.	m3	140		
8	DA.8.9 PS.DA.6	Formation	m2	1575		
9	DA.8.3 PS.DA.3	Excavate intermediate material to spoil for undercut (Provisional)	m3	245		
10	DA.8.3 PS.DA.3	Extra over above for the excavation of boulders greater than 0,15 m3 to spoil (Provisional)	m3	80		
11	PS.DA.4	Import suitable coarse sand material from contractor's off-site source inclusive of haulage and royalties for undercut (Provisional)	m3	325		
12	DA.8.5 PS.DA.5	Compact imported coarse sand material for undercut to 95% Mod. A.A.S.H.T.O. (Provisional)	m3	325		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WORKS**R****PART EB GRADED CRUSHED STONE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EB.8(1) PS.EB.1	Graded crushed stone G5, 150 mm thick compacted to 95% Mod. A.A.S.H.T.O.	m3	350		
2	EB.8(1) PS.EB.1	Graded crushed stone G2, 150 mm thick compacted to 100% Mod. A.A.S.H.T.O.	m3	330		
3	EB.8(2) PS.EB.2	Prime coat - Inverted Emulsion applied at 0.6l/m2	m2	1575		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WORKS**R**

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

PART ED ROAD ASPHALT

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	ED PS.ED.1 PS.ED.2 PS.ED.4 PS.ED.5 PS.ED.7	Private Plant Asphalt Sa-S14. Bitumen content % as per mix design entered at time of use.	t	180		
2	ED.8.4 PS.ED.8	Tack coat	m2	1575		
3	PS.ED.6	Saw Cut existing road edge	m	15		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WORKS

R

PART EF KERBS AND HAUNCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EF.8.1 PS.EF.1	Fig 6 Type B barrier kerb and 300mm cast in-situ channel / fillet	m	510		
2	EF.8.1 PS.EF	Extra over item 3.EF.1 for curves of radius less than 25 m (1/3 m kerbs)	m	70		
3	EF.8.1 PS.EF.1	Fig 6 Type B scoop / low profile kerb (20mm show) and 300mm cast in-situ channel / fillet	m	72		
4	PS.EF.1	Transition kerb to match Fig 6 barrier kerb	m	48		
5	PS.EF.6	Concrete edge beam at existing road edge - concrete strength of 20/26 Mpa	m	15		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WORKS

R

PART EG SIDEWALKS, FOOTPATHS and MEDIAN AREAS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EG.8.1 PS.EG.1 PS.EG.2 PS.EG.4	Asphalt sidewalk 25mm, including 150mm G4, weedkiller and prime - Asphalt Private Asphalt Sa-S10	m2	625		
2	PS.EG.3	Hardened G4 gravel verge 0,5m wide, where indicated by engineer on site - (SBP is at 1.5m +-)	m2	160		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WORKS

R

PART EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EH 8.1 PS.EH	Straight steel guard rails	m	100		
2	EH 8.1 PS.EH	Curved steel guardrails	m	70		
3	EH.8.1 PS.EH	End wings	no.	15		

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

Part Continued **PART** EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
4	EH.8.1 PS.EH	Precast concrete posts	no.	42		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WORKS

R

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

SECTION 4 STORMWATER DRAINAGE**PART DB EARTHWORKS FOR PIPE TRENCHES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.5 PS.DB.3 PS.DB.5 PS.DB.9	Excavate and backfill in all material for stormwater pipe where depth is :- Over 0,0 m and not exceeding 1,5 m	m	25		
2	DB.8.5 PS.DB.3 PS.DB.5 PS.DB.9	Excavate and backfill in all material for stormwater pipe where depth is :- Over 1,5 m and not exceeding 2,0 m	m	95		
3	DB.8.5 PS.DB.3 PS.DB.5 PS.DB.9	Excavate and backfill in all material for stormwater pipe where depth is :- Over 2,0 m and not exceeding 2,5 m	m	85		
4	DB.8.5 PS.DB.3 PS.DB.5 PS.DB.9	Excavate and backfill in all material for stormwater pipe where depth is :- Over 2,5 m and not exceeding 3,0 m	m	105		
5	DB.8.5 PS.DB.3 PS.DB.5 PS.DB.9	Excavate and backfill in all stormwater pipe where depth is :- Over 3,0 m and not exceeding 3,5 m	m	5		
6	DB.8.9 PS.DB.1	Provision of selected fill for pipe bedding from a commercial or off-site source	m ³	200		
7	DB.8.10 PS.DB.1	Placing and compacting of Class B pipe bedding.	m ³	150		
8	PS.DB.1.3 PS.DB.1.4 PS.DB.1.5	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)	PC Sum	100000	1.00	100,000.00
9	PS.DB.10	Import suitable G7 material from contractor's off-site source inclusive of haulage and royalties	m ³	200		
10	PS.DB.6	Compact imported G7 material to 93% Mod. A.A.S.H.T.O.	m ³	200		

TOTAL CARRIED TO SECTION 4 SUMMARY: STORMWATER DRAINAGE**R****PART PG NON PRESSURE PIPELINES and PC CULVERTS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PG.8.2 PS.PG.1	Supply and lay 450 mm diameter concrete Class 100D for stormwater drainage	m	75		
2	PG.8.2 PS.PG.1	Supply and lay 600 mm diameter concrete Class 100D for stormwater drainage	m	250		

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

PART PG NON PRESSURE PIPELINES and PC CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
TOTAL CARRIED TO SECTION 4 SUMMARY: STORMWATER DRAINAGE						R

PART PH MANHOLES and APPURTENANT DRAINAGE WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PH.8.2 PS.PH.1	Manhole type A with heavy duty concrete cover. Depth :- - Over 0,0 m and not exceeding 1,5 m	no.	2		
2	PH.8.2 PS.PH.1	Manhole type A with heavy duty concrete cover. Depth :- - Over 1,5 m and not exceeding 2,0 m	no.	3		
3	PH.8.2 PS.PH.1	Manhole type A with heavy duty concrete cover. Depth :- - Over 2,5 m and not exceeding 3,0 m	no.	1		
4	PH.8.3 PS.PH.4	Standard Type A manhole with type S2 inlet cover and frame. Depth :- - Over 0,0 m and not exceeding 1,5 m	no.	1		
5	PH.8.3 PS.PH.4	Standard Type A manhole with type S2 inlet cover and frame. Depth :- - Over 1,5 m and not exceeding 2,0 m	no.	10		
6	PH.8.3 PS.PH.4	Standard Type A manhole with type D3 inlet cover and frame. Depth :- - Over 1,5 m and not exceeding 2,0 m	no.	1		
7	PS.PH.6	Break into existing brick manhole wall for new pipe and make good	no.	2		
8	PH.8.5.6	Heavy duty cast iron manhole cover and frame	no.	1		

TOTAL CARRIED TO SECTION 4 SUMMARY: STORMWATER DRAINAGE**R**

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

SECTION 5 PROTECTION WORKS**PART C CONCRETE WORK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.C.1 PS.C.2 PS.C.4	Base type B including mesh ref.245, excavation and compaction of sub-grade to 95% Mod. A.A.S.H.T.O	m3	100		
2	PS.C.3	Supply and lay Terrace Block TB500 (or approved equivalent) not exceeding 2m height inclusive 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), inclusive of sliders.	m2	300		
3		Supply and lay 50mm diameter PVC weepholes inclusive of no fines plug.	no.	80		

TOTAL CARRIED TO SECTION 5 SUMMARY: PROTECTION WORKS

R

PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.8	Standard 1,8 m high diamond mesh fence - supplied and installed - wire or plastic coated mesh wire or approved equivalent.	m	60		
2	F.8.8	Precast steps	no.	100		
3	F.8.7	230 mm brickwork	m2	370		
4	F.8.7	Extra over item 5.F.3 for facebrick skin to front face 115 mm	m2	190		

TOTAL CARRIED TO SECTION 5 SUMMARY: PROTECTION WORKS

R

PART S REINSTATEMENT

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	S.8.1 PS.S	Reinstatement of existing ground surface - free of loose building materials and rubble.	m2	1000		

TOTAL CARRIED TO SECTION 5 SUMMARY: PROTECTION WORKS

R

Upgrade of Sbusisiwe Road Phase 2, Gravel to Surface, Ward 42

SECTION 6 ROAD SIGNS AND MARKINGS**PART TA ROAD SIGNS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TA.8.1 PS.TA.2 PS.TA.3	Supply and erect road sign boards, area not exceeding 2m2	no.	6		
2	TA.8.3	Excavate and backfill for road sign supports	m3	3		
3	TA.8.4	Concrete grade 20/19 for road sign footings	m3	3		
4	TA.8.2	Supply and erect standard 76mm diameter hotted dipped galvanised road name sign supports. Rate to include haulage.	no.	6		

TOTAL CARRIED TO SECTION 6 SUMMARY: ROAD SIGNS AND MARKINGS**R****PART TB ROAD MARKINGS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TB.8.1.2 PS.TB.1 PS.TB.2	Road Marking for lettering, symbols and traffic islands (white), including setting out lettering, symbols and traffic island markings. Thermoplastic	m2	5		

TOTAL CARRIED TO SECTION 6 SUMMARY: ROAD SIGNS AND MARKINGS**R**

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	SITE CLEARANCE		R	_____
	B SITE CLEARANCE	R	_____	
3	ROAD WORKS		R	_____
	DA EARTHWORKS : BULK	R	_____	
	EB GRADED CRUSHED STONE	R	_____	
	ED ROAD ASPHALT	R	_____	
	EF KERBS AND HAUNCHES	R	_____	
	EG SIDEWALKS, FOOTPATHS and MEDIAN AREAS	R	_____	
	EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS	R	_____	
4	STORMWATER DRAINAGE		R	_____
	DB EARTHWORKS FOR PIPE TRENCHES	R	_____	
	PG NON PRESSURE PIPELINES and PC CULVERTS	R	_____	
	PH MANHOLES and APPURTENANT DRAINAGE WORKS	R	_____	
5	PROTECTION WORKS		R	_____
	C CONCRETE WORK	R	_____	
	F PROTECTION WORKS	R	_____	
	S REINSTATEMENT	R	_____	
6	ROAD SIGNS AND MARKINGS		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 TENDER			R	_____