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**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS, FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

**BILL OF QUANTITIES**

**SECTION 1      SECTION 1: PRELIMINARIES AND GENERAL**

**PART      AA      PRELIMINARIES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<b><u>GENERAL CONDITIONS OF CONTRACT (GCC 2015) READ IN CONJUNCTION WITH THE CONTRACT DATA</u></b>				
1	GCC 2015	Fixed Charge obligations	sum	1		
2	GCC 2015	Time Related obligations	sum	1		
		<b><u>SANS 1921-1 : GENERAL ENGINEERING AND CONSTRUCTION WORKS READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATION DATA IN THE SCOPE OF WORKS</u></b>				
3	SANS 1921-1	Fixed Charge Items	sum	1		
4	SANS 1921-1	Time Related Items	sum	1		
		<b><u>COMMUNITY LIAISON OFFICER</u></b>				
5	C.1.2.3.1	Allow for a CLO to be appointed	PC Sum	75000	1.00	75 000.00
6	C.1.2.3.1	Contractor's mark up on item 5	%	75000		

**TOTAL CARRIED TO SECTION 1 SUMMARY: SECTION 1: PRELIMINARIES AND GENERAL**

**R**

**PART      AB      GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<b><u>FIXED CHARGES</u></b>				
1	AB.2 PS.AB.2	Offices for Engineer and Staff	sum	1		
2	AB.4 PS.12	Contractor's Camp Site / Store Yard	sum	1		
3	AB.5 PS.15	Notice Board (Refer to Notice Board drawing - Dwg No. 4137 E)	sum	1		
4	PS.1	De-establish and Re-establish site camp	RateOnly	0		RATE ONLY
5	AB.7 PS.AB.7	Road Deviations	sum	1		
6	AB.7 PS.AB.7	Initial supply of all signs, barricades and delineators	sum	1		
7	PS.18	Allow for Progress Photographs (Provisional Sum)	sum	1		
8	PS.11.1	Survey for, and Preparation of, 'As-Built' Drawings	sum	1		
9	PS.11.3	Additional site survey that may be required by the Engineer	PC Sum	10000	1.00	10 000.00
10	PS.11.3	Contractor's mark up on item 8	%	10000		
11	PS.19	Site Security	sum	1		

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Part Continued **PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<b><u>TIME RELATED CHARGES</u></b>				
12	AB.2 PS.AB.2.1	Offices for Engineer and Staff	sum	1		
13	AB.4 PS.AB.4.1	Contractor's Camp Site / Store Yard	sum	1		
14	AB.7 PS.AB.7	Maintenance of all signs, barricades and delineators	sum	1		
15	AB.7 PS.AB.7	Maintenance of Pedestrian and Traffic Facilities	sum	1		
16	PS.11.2	Setting out of the works	sum	1		
17	AB.6 PS.14	Cost of Samples and Contractor's Preliminary and Site Control Testing	sum	1		
18	PS.12.2	Deduction for re-tests required when density of layer is not to specification, as determined by acceptance testing ( R2000/set)	RateOnly	0		RATE ONLY
19	PS.AB.8	Temporary protection of existing services	sum	1		
20	PS.9	Compliance with Environmental Management Plan	sum	1		

**TOTAL CARRIED TO SECTION 1 SUMMARY: SECTION 1: PRELIMINARIES AND GENERAL**

**R**

**PART AH OCCUPATIONAL HEALTH and SAFETY**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AH.14.1 PS.10	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	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	sum	1		
3	AH.14.3 PS.10	Submission of the Health and Safety File	sum	1		

**TOTAL CARRIED TO SECTION 1 SUMMARY: SECTION 1: PRELIMINARIES AND GENERAL**

**R**

**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS,  
FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

**SECTION 2 SECTION 2: SITE CLEARANCE**

**PART B SITE CLEARANCE**

<b>Item</b>	<b>Clause</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
1	B.8.2 PS.17	General clearance and grubbing	m2	30		
2	B.8.5 PS.17	Removal of 1.2 - 2.4 m high fence and store on site for re-use	m	25		
3	B.8.5 PS.17	Removal of 1.2 - 2.4 m high fence and spoil at tip. Rate to include all haulage	m	25		
4	B.8.4 PS.17	Removal of trees of girth exceeding 0.0m upto including 1.0m. Rate to include all haulage	no.	4		

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

**R**

**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS, FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

**SECTION 3      SECTION 3: CONCRETE WORK**

**PART      C      CONCRETE WORK**

<b>Item</b>	<b>Clause</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
1	C.8.1 PS.C.5	Grade 20/19 concrete to footpaths , dimensions, up to 1500mm wide x 100mm thick at 2.5m alternate panels and to V-Drains, 600mm wide x 100mm thick and to edge beams to road ends.	m3	2		
2	C.8.2	Welded mesh fabric reinforcement : SMF-REF 193 mesh with 50mm spacer blocks	kg	25		
3	C.8.3	Shuttering and formwork to cast-in-situ concrete including internal panel faces and end faces	m2	5		
4	EG.8.3	Expansion Joints with 10 mm bitumen impregnated softboard and polysulphide sealant.	m	5		
5	C.8.4	Grade 13/7.5 concrete blinding to uneven surfaces, as required on site	m3	1		

**TOTAL CARRIED TO SECTION 3 SUMMARY: SECTION 3: CONCRETE WORK**

**R**

**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS, FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

**SECTION 4 SECTION 4: EARTHWORKS**

**PART DA EARTHWORKS : BULK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.2 PS.17	Excavate 100mm topsoil to stockpile	m3	30		
2	DA.8.3 PS.17	Excavate soft material and place directly into fill as directed by the Engineer on site	m3	110		
3	DA.8.3 PS.17	Extra over above for excavation in intermediate material to fill (for item 2 above)	m3	40		
4	DA.8.3 PS.17	Extra over above for excavation in rock material to fill (for item 2 above)	m3	20		
5	DA.8.3 PS.17	Excavate soft material to spoil. Rate to include all haulage	m3	10		
6	DA.8.3 PS.17	Extra over above for the excavation of intermediate material to spoil (for item 5 above). Rate to include all haulage	m3	5		
7	DA.8.3 PS.17	Extra over above for excavation of rock material to spoil (for item 5 above). Rate to include all haulage	m3	5		
8	DA.8.3 PS.17	Excavate unsuitable material below embankments or formation and spoil at tip. Rate to include all haulage	m3	5		
9	DA.8.4	Import suitable fill material of G5 quality	m3	60		
10	DA.8.5	Compact imported fill material (G5) to 97% Mod A.A.S.H.T.O	m3	60		
11	PS.DA.12	Trimming of embankments	m2	120		
12	DA.8.9	Formation	m2	580		
13	PS.DA.8.11	Rip and recompact In-situ subgrade material toDN 3.7 - 5.7 density, TRH 14 Classification for G5	m3	60		

**TOTAL CARRIED TO SECTION 4 SUMMARY: SECTION 4: EARTHWORKS**

**R**

**PART DB EARTHWORKS FOR PIPE TRENCHES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.19 PS.2.2	Prove existing services by hand excavation (provisional), where depth is over 0.0 m and not exceeding 1.5m	m3	2.5		

**TOTAL CARRIED TO SECTION 4 SUMMARY: SECTION 4: EARTHWORKS**

**R**

**PART DD EARTHWORKS FOR STRUCTURES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DD.8.2 PS.17	Excavate in all material for Kerb and Channel: over 0.0m and not exceeding 1.5m	m3	15		

**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS,  
FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

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**PART DD EARTHWORKS FOR STRUCTURES**

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<b>Item</b>	<b>Clause</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
<b>TOTAL CARRIED TO SECTION 4 SUMMARY: SECTION 4: EARTHWORKS</b>						<b>R</b>

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**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS, FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

**SECTION 5 SECTION 5: ROADSWORKS**

**PART ED ROAD ASPHALT**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	ED.8.2 PS.ED.8.2	30mm thick Asphalt Sa - S10 [S – Standard] Traffic Loading with aggregate size 10mm. Bitumen content % as per mix design compacted to 95 % Marshall Density	m2	360		
2	AA.ED.8.1	Saw Cut existing road edge	m	60		
3	ED.8.5	Tack Coat 0.7 l/m2	m2	360		
4	PS.ED.8	Prime Coat 0.6 l/m2	m2	360		
5	C.3.3	Grade 30/19 to road, dimensions up to and including 3m wide x 200mm thick, cast in 2.5m long alternate panels	m3	50		
6	C.3.4	Ref 495 BRC weld mesh reinforcement, with 50mm cover blocks	kg	1036		

**TOTAL CARRIED TO SECTION 5 SUMMARY: SECTION 5: ROADSWORKS**

**R**

**PART EF KERBS AND HAUNCHES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EF.8.1	Fig. 6 mountable kerbs, as per typical details. Including 20mm mortar base ( 3 sand :1 cement), rough face	m	110		
2	EF.8.1	Extra over item 1 for curves of radius less than 25 m	m	15		
3	EF.8.1	Fig. 6 kerb including concrete channel/fillet as per typical details. Including 20 mm mortar(3 sand : 1 cement)	m	177		
4	EF.8.1	Extra over item 3 or curves of radius less than 25 m	m	50		
5	EF.8.1	Cast in-situ concrete Grade 20/19 for haunching - continuous	m3	5		

**TOTAL CARRIED TO SECTION 5 SUMMARY: SECTION 5: ROADSWORKS**

**R**

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

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EH 8.1	Straight steel guardrails inclusive of bolts and reflective plates	m	40		
2	EH 8.1	End wings	no.	4		
3	EH 8.1	Precast concrete posts inclusive of base excavation and concrete	no.	12		

**TOTAL CARRIED TO SECTION 5 SUMMARY: SECTION 5: ROADSWORKS**

**R**

**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS, FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

**SECTION 6 SECTION 6: PROTECTION WORKS**

**PART F PROTECTION WORKS**

<b>Item</b>	<b>Clause</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
1	F.8.1 PS.17	Topsoiling from stockpile	m2	15		
2	F.8.3	Planting of vegetation to match existing	m2	30		
3	F.8.1	Topsoiling from commercial sources.	m2	15		
4	F.8.6	Install PVC coated reno mattress (No. 1 = 2m x 1m x 0.3m) As per typical details	no.	12		
5	F.8.8	Install new 1.2 - 2.4 m high fence to match existing	m	25		
6	F.8.8	Re-erect 1.2 - 2.4 m high fence using materials stored on site	m	25		
7	F.8.6	Install PVC coated Gabion boxes ( No. 1 = 2m x 1m x 1m) As per typical details	m3	36		
8	DD.8.2	Excavation for footing to retaining wall	m3	5		
9	DA.8.5	Backfilling and compaction to 93% Mod A.A.S.H.T.O	m3	10		
10	C.8.1	Retaining wall concrete footing grade 20/19	m3	5		
11	PS.F.8	Interlocking earth retaining system / wall - Geolok 400 or similar approved	m2	13		
12	F.8.9	Stone pitching	m2	20		
13	F.8.10	Catch water berms with grass sod lining	m	20		

**TOTAL CARRIED TO SECTION 6 SUMMARY: SECTION 6: PROTECTION WORKS**

**R**

**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS, FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

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**SECTION 7 SECTION 7: DRAINAGE**

**PART PG NON PRESSURE PIPELINES and PC CULVERTS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PG.8.11 PS.PG.3	Drainage grade geofabric blanket as surround to Reno mattres and gabion basket.	m2	100		

**TOTAL CARRIED TO SECTION 7 SUMMARY: SECTION 7: DRAINAGE**

**R**

**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS, FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

**SECTION 8 SECTION 8: ANCILLARY WORKS**

**PART TA ROAD SIGNS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TA.8.1	Supply and erect road sign boards, area not exceeding 2m2	m2	4		
2	TA.8.2	Supply and erect standard 75mm diameter hot dipped galvanised road name sign supports. Rate to include haulage.	no.	4		
3	TA.8.3	Excavate and backfill for road sign supports	m3	0.5		
4	TA.8.4	Concrete grade 20/19 for road sign footings	m3	0.5		

**TOTAL CARRIED TO SECTION 8 SUMMARY: SECTION 8: ANCILLARY WORKS**

**R**

**PART TB ROAD MARKINGS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TB.8.1.1 AA.TB.1 AA.TB.1	Painted road lines 150mm wide (white), including setting out and premarking - reflective	m	10		
2	TB.8.1.1 AA.TB.1	Painted road lines 300mm wide (white), including setting out and premarking	m	10		
3	TB.8.1.2	Road Marking for lettering, symbols and traffic islands (white), including setting out lettering, symbols and traffic island markings- reflective.	m2	5		

**TOTAL CARRIED TO SECTION 8 SUMMARY: SECTION 8: ANCILLARY WORKS**

**R**

**SECTION 1 SECTION 1: PRELIMINARIES AND GENERAL**

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

**SECTION 2 SECTION 2: SITE CLEARANCE**

PART B	SITE CLEARANCE	
TOTAL CARRIED TO FINAL SUMMARY		

**SECTION 3 SECTION 3: CONCRETE WORK**

PART C	CONCRETE WORK	
TOTAL CARRIED TO FINAL SUMMARY		

**SECTION 4 SECTION 4: EARTHWORKS**

PART DA	EARTHWORKS : BULK	
PART DB	EARTHWORKS FOR PIPE TRENCHES	
PART DD	EARTHWORKS FOR STRUCTURES	
TOTAL CARRIED TO FINAL SUMMARY		

**SECTION 5 SECTION 5: ROADWORKS**

PART ED	ROAD ASPHALT	
PART EF	KERBS AND HAUNCHES	
PART EH	STEEL GUARDRAILS & CONC. MEDIAN BARRIERS	
TOTAL CARRIED TO FINAL SUMMARY		

**SECTION 6 SECTION 6: PROTECTION WORKS**

PART F	PROTECTION WORKS	
TOTAL CARRIED TO FINAL SUMMARY		

**SECTION 7 SECTION 7: DRAINAGE**

PART	PG	NON PRESSURE PIPELINES and PC CULVERTS	
TOTAL CARRIED TO FINAL SUMMARY			

**SECTION 8 SECTION 8: ANCILLARY WORKS**

PART TA	ROAD SIGNS	
PART TB	ROAD MARKINGS	
TOTAL CARRIED TO FINAL SUMMARY		

**THE PROVISION OF INCREMENTAL SERVICES TO SETTLEMENTS WITHIN THE WESTERN REGION: ROADS, FOOTPATHS AND ASSOCIATED STORMWATER(RFS)IN: PROTEA (WARD 103)**

**SUMMARY OF BILL OF QUANTITIES**

1	SECTION 1: PRELIMINARIES AND GENERAL		R	_____
	AA PRELIMINARIES	R	_____	
	AB GENERAL SPECIFICATIONS	R	_____	
	AH OCCUPATIONAL HEALTH and SAFETY	R	_____	
2	SECTION 2: SITE CLEARANCE		R	_____
	B SITE CLEARANCE	R	_____	
3	SECTION 3: CONCRETE WORK		R	_____
	C CONCRETE WORK	R	_____	
4	SECTION 4: EARTHWORKS		R	_____
	DA EARTHWORKS : BULK	R	_____	
	DB EARTHWORKS FOR PIPE TRENCHES	R	_____	
	DD EARTHWORKS FOR STRUCTURES	R	_____	
5	SECTION 5: ROADSWORKS		R	_____
	ED ROAD ASPHALT	R	_____	
	EF KERBS AND HAUNCHES	R	_____	
	EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS	R	_____	
6	SECTION 6: PROTECTION WORKS		R	_____
	F PROTECTION WORKS	R	_____	
7	SECTION 7: DRAINAGE		R	_____
	PG NON PRESSURE PIPELINES and PC CULVERTS	R	_____	
8	SECTION 8: ANCILLARY WORKS		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	_____