



DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

SCHEDULE OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK

CALCULATION OF TENDER SUMMARY

	Tender Sum
TOTAL : CIVIL REPAIR WORK	R
TOTAL : ELECTRICAL REPAIR WORK	R
TOTAL : MECHANICAL REPAIR WORK	R
TOTAL : CIVIL MAINTENANCE WORK	R
TOTAL : ELECTRICAL MAINTENANCE WORK	R
TOTAL : MECHANICAL MAINTENANCE WORK	R
TOTAL OF SCHEDULE OF QUANTITIES	R
15 % VALUE-ADDED TAX (VAT)	R
TENDER SUM CARRIED TO THE TENDER FORM	R

SIGNED ON BEHALF OF TENDERER:

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BILL OF QUANTITIES

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SCHEDULE NO 1: GENERAL

CIVIL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SABS 1200 A	100.00	<u>GENERAL</u>				
	100.01	Scheduled fixed-charge and value-related items:				
PSA 8.3.1	.01	Fixed preliminary and general charges	Sum	1		
PS 3	.02	Details of contract	Sum	1		
	.03	Details of contract, including site assessment and reports (penalty for late submission)	Sum	1		
	100.02	Scheduled time-related items:				
PSA 8.4.1	.01	Beitbridge Port of Entry	No	36		
PSA 8.8	101.00	<u>TEMPORARY WORKS</u>				
PSA 8.8.4.1	101.01	Location and protection of existing services:				
	.01	Water and sewer pipes	Sum	1		
	.02	Electrical and other cables	Sum	1		
	.03	Hand excavation for locating and exposing existing services in all materials:				
	.01	In roadways	m ³	100		
	.02	In all other areas	m ³	100		
PSA 8.12	101.02	Call Centre:				
	.01	Call Centre for breakdown calls logged	PC sum	-		350 000.00
	.02	Charge required by Contractor on sub item .01	%	350 000.00		
SB.02	101.03	Survey, compile, supply and update complete Site Plans of Beitbridge Port of Entry Operational and Residential areas:				
	.01	Existing structures, facilities, roads, paving, etc.	Sum	1		
	.02	Storm water drainage system	Sum	1		
	.03	Electrical infrastructure	Sum	1		
	.04	Fire fighting equipment and infrastructure	Sum	1		
		<i>Site Plans continued</i>				
Carried forward						

Brought forward						
SB.02	101.03	.05	Sewer network and bulk wastewater infrastructure	Sum	1	
		.06	Bulk water supply and water distribution network	Sum	1	
PSA 8.14	102.00	<u>HOUSING FOR THE ENGINEER'S REPRESENTATIVE</u>				
		.01	Housing for the Engineer's representative	PC sum	-	250 000.00
		.02	Charge required by Contractor on sub item .01 above	%	250 000.00	
SI.01	103.00	<u>OCCUPATIONAL HEALTH AND SAFETY ACT</u>				
		.01	Preparation of Health and Safety Plan and approved by Engineer	Sum	1	
		.02	Compliance with OHS Act and Construction Regulations 2014 (Scoring and Payment as per SI 06.03)	No	36	
		.03	Appoinment of OHS Agent approved and for 36 months required by the Engineer	PC Sum	-	350 000.00
	.04	Attendance and profit on subitem .03 above	%	350 000.00		
	104.00	<u>COVID-19 - OCCUPATIONAL HEALTH AND SAFETY ITEMS</u>				
		.01	OHS Signage, Medical Waste Bins, Hand Sanitizer, Masks, Themometer, Gloves and other related Personal Protective Equipment for COVID-19 and approved by Engineer	PC Sum	-	50 000.00
		.02	Attendance and profit on subitem .01 above	%	50 000.00	
Carried forward						

Brought forward						
	105.00	<p><u>HIV/AIDS AWARENESS</u></p> <p>It is required of the Contractor to thoroughly study the Additional Specification SH: HIV / AIDS Requirements (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities. Provision for pricing of HIV/AIDS awareness is made under the items hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained</p> <p>The Contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the Representative/Agent, notwithstanding the provisions of Clause 52 of the General Conditions of Contract for Works of Civil Engineering Construction or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment</p>				
SH 07	.01	<p>Awareness Champion</p> <p>Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services</p>	No	2		
Carried forward						

Brought forward						
SH 04.01	105.00	.02	Awareness Workshops Selection and appointment of a competent Service Provider approved by the Representative/Agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures.	Sum	1	
SH 04.03		.03	Posters, Booklets, Videos, etc. Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period.	Sum	1	
SH 05		.04	Access to Condoms Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period.	Sum	1	
SH 08		.05	Monitoring Monitoring HIV/AIDS awareness of workers, providing the Representative/Agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out.	Sum	1	
BF	106.00	<u>PEST CONTROL</u>				
PSA 8.6		.01	Preventative pest control	PC sum	-	360 000.00
		.02	Charge required by Contractor on sub item .01	%	360 000.00	
PSA 8.6	107.00	<u>BMA CONTINGENCY MEASURES</u>				
		.01	Provide contingency measures during festive seasons	PC sum	-	3 000 000.00
		.02	Charge required by Contractor on sub item .01 above	%	3 000 000.00	
Carried forward						

Brought forward					
SN 10.03	108.00	<u>EMPLOYMENT AND TRAINING OF LABOUR ON THE EPWP-NYS INFRASTRUCTURE PROJECTS</u>			
		Tenderers are advised to study the Additional Specification SN & SL: Employment and Training of Labour on the Expanded Public Works Programme (EPWP) Infrastructure Projects: National Youth Service, as bound elsewhere in the Technical Specification, and then price this Bill accordingly			
		.01 Employment of Unskilled Cleaners (45 Cleaners of 36 Month Contract Period)	No	45	
	109.00	<u>TRAINING OF YOUTH WORKERS (TARGET: 60 YOUTH WORKERS)</u>			
		Orientation, Life skills development and technical skills training:			
SN10.01.01	.01	Orientation and Life Skills development training for youth workers for an average of 10 days per youth worker	PC Sum	-	400 000.00
SN10.01.02	.02	Technical skills training for youth workers for an average of 90 days.	PC Sum	-	400 000.00
	.03	Profit and attendance for administration of items .01, and.02 above	%	800 000.00	
SL11.01.02	.04	Penalty due to not meeting the target as in SL 11.01.02	Youth-Worker	-	
SN10.01.03	.05	First Aid Level 1 training for EPWP workers for an average 5 of days per EPWP worker (ref. SN 10.01.03)	PC Sum	-	50 000.00
	.06	Profit and attendance for administration of items .05 above	%	50 000.00	
SN 10.01.04	.07	The above formal training, shall be provided by accredited training providers	Sum	1	
	110.00	<u>TRAVELLING AND ACCOMMODATION DURING OFF-SITE TRAINING:</u>			
		<u>Life Skills Training for 30 days (ref. SL 11.02.01)</u>			
SL11.02.01	.01	Travelling (based on 50 km/youth worker)	PC sum	-	100 000.00
	.02	Accommodation (based on R300/youth worker)	PC sum	-	80 000.00
	.03	Profit and attendance for administration of items .01 and .02 above	%	180 000.00	
	.04	Penalty for not achieving the Local Labour Target (LLT) Percentage (%) difference between the contracted LLT percentage (%) and the actual LLT percentage (%) achieved in the performance of the contract. Also see SN 07.02		Tender Sum excl. VAT & CPA	
Carried forward					

Brought forward					
	111.00	<u>SKILLS DEVELOPMENT AND TECHNICAL TRAINING</u>			
SL 11.02.01		.01 Travelling (based on 50km/youth worker)	PC sum	-	100 000.00
SL 11.02.01		.02 Accommodation (based on R300/youth worker)	PC sum	-	100 000.00
SL 11.02.01		.03 Profit and attendance for administration of item .01 and .02 above	%	200 000.00	
	112.00	<u>ALTERNATIVE WORKERS FOR THE PERIOD OF OFF-SITE TRAINING:</u>			
SL 11.03.02		Skills development and technical training for youth workers for 10 days (ref. SL 11.03.02)	worker-days	150	
	113.00	<u>EMPLOYMENT OF EPWP WORKERS</u>			
		Employment of Youth Workers			
		The unit of measurement shall be the number of Youth Workers (50) at the statutory labour rates of R1735 per month per stipend multiplied by the period employed in months and the rate tendered shall include full compensation for all costs associated with the employment of Youth Workers and for complying with the conditions of contract. The cost for the training shall be excluded from this item. This item is based on 6 Months appointment for youth workers or for the minimum criteria. Employment of EPWP worker: 60 workers x 36 months x 730 work days Plus 5% Annual Escalation (to Ministerial determination)			
SN10.03.01		.01 Employment of EPWP workers: 60 workers x 36 months x 730 work days	PC sum	-	2 500 000.00
		.02 Profit and attendance for administration of items .01	%	2 500 000.00	
	114.00	<u>PROVISION OF EPWP DESIGNED OVERALLS AND HARD HATS AND SAFETY BOOTS (PPE) TO EPWP WORKERS</u>			
SL11.05.01		.01 Supply EPWP designed Overalls (PPE) to Youth Workers (ref. SL 11.05.01) @ R1800 per Set of PPE	PC sum	-	90 000.00
SL11.05.02		.02 Profit and attendance for administration of items .01 above	%	90 000.00	
SN10.04.01		.03 Supply 2 x EPWP branded overalls to each EPWP worker(ref. SN 10.04.01)	PC sum	-	15 000.00
SN10.04.02		.04 Supply 1 x EPWP branded hard hat to each EPWP worker (ref. SN 10.04.02)	PC sum	-	15 000.00
SN10.04.03		.05 Supply 1 x pair of safety boots to each EPWP worker (ref. SN 10.04.03)	PC sum	-	20 000.00
SN10.04.04		.06 Profit and attendance for administration of items .03, .04 and .05 above	%	50 000.00	
Carried forward					

Brought forward						
	115.00	<u>PROVISION OF SMALL TOOLS FOR YOUTH WORKERS</u>				
SL11.06.02	.01	Supply of small tools to youth workers. Specification to be supplied by the EPWP-NYS Service Provider for the respective trades. (ref. SL 11.06.01) @ R1500 per worker (60)	PC sum	-		75 000.00
SL11.06.02	.02	Profit and attendance for administration of items .01 above	%	75 000.00		
	116.00	<u>APPOINTMENT OF YOUTH TEAM LEADER/S</u>				
SL11.07	.01	Appointment of Youth Team Leader/s for the	Prov sum	-		
SL11.08	.02	Liaison with Service Provider (ref. SL 11.08)hours	300		
	117.00	<u>TESTING</u>				
EJ 05	117.01	Potable water quality testing:				
	.01	Potable water quality tests to be performed by an approved SANAS laboratory on a monthly basis on the water delivered to the consumers for determinants specified in EJ04.07	No	36		
	.02	Potable water quality tests to be performed by an approved SANAS laboratory on a regular basis on the water abstracted from boreholes for determinants specified in EJ04.07	No	36		
EJ 05	117.02	Wastewater quality testing:				
EJ 05	.01	Sewage effluent compliance quality tests to be performed by an approved SANAS laboratory for determinants specified in EJ 04.05	No	36		
	.02	Raw sewage 24 h composite sample and analysis for determinants specified in EJ04.05	No	6		
PSA 8.9	117.03	Additional tests:				
	.01	Additional tests required by the Engineer	PC sum	-		50 000.00
	.02	Attendance and profit	%	50 000.00		
	118.00	<u>EMERGENCY WATER SUPPLY</u>				
DW 06.01	118.01	Potable Water:				
	.01	Supply and delivery of potable water in batches of 1000 ℓ from commercial sources on the instruction of the Engineer/Department's representatives	m ³	11 000		
Carried forward						

Brought forward					
	119.00	<u>WATER LEGISLATION COMPLIANCE</u>			
PEM.01	119.01	Licensing of Sewage Works:			
	.01	Water Quality Management Report i.t.o Aide Memoire	PC sum	-	50 000.00
	.02	Profit and attendance on item .01	%	50 000.00	
	.03	License application	PC sum	-	50 000.00
	.04	Profit and attendance on item .03	%	50 000.00	
PEM.01	.05	EIA pre-application consultation and scoping	PC sum	-	50 000.00
	.06	Profit and attendance on item .05	%	50 000.00	
PEM.03	.07	EIA authorisation and ROD	PC sum	-	50 000.00
	.08	Profit and attendance on item .07	%	50 000.00	
	120.00	<u>RECORD KEEPING</u>			
SA.07	120.01	Site Maintenance Record Keeping (monthly maintenance report for all schedules, checklists, reports, etc as detailed in specification SA 03.10 and Maintenance Control Plan):			
	.01	Beitbridge Port of Entry	No	36	
	121.00	Contingency allowance for operational damages at the port of entry			
	.01	Beitbridge Port of Entry	PC Sum	-	200 000.00
	.02	Charge required by Contractor on sub item .01 above	%	200 000.00	
Carried forward					

Brought forward						
PAM	122.00	MOBILE STRUCTURES				
		.01	Repair work entails subsequent action to restore Mobile Structures to the functional condition as before The repair work to mobile structures is a specialised field, which requires detailed training and expertise in the construction and repair of mobile structures. This work can only be done by a registered service provider with five years of experience The Contractor shall prepare relevant documentation in order to acquire three quotations for the "specialised" repair work at the beginning of the contract	PC Sum	-	100 000.00
		.02	Attendance and profit	%	100 000.00	
			Manica Building			
			Additional structural tests needed by engineer for the repairs of the Manica Building	PC Sum	-	100 000.00
			Attendance and profit	%	100 000.00	
TOTAL SCHEDULE 1 : GENERAL - CARRIED TO SUMMARY:						

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BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN **BLACK INK**

SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING RELATED WORK

CIVIL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	200.00	STRUCTURAL AND BUILDING				
	201.00	ROOFS: CLADDING AND SHEETING				
BA.01	201.01	Supply and install cladding and sheeting:				
	.01	0.6mm thick galvanised IBR or equivalent approved sheeting with existing chromadek silicone polyester finish on one side and existing chromadek finish on the other side in:				
	.01	Roof covering with pitches exceeding 15°, fixed to timber or steel purlins	m ²	400.0		
BA.03	201.02	Carefully remove existing cladding and sheeting:				
	.01	Existing galvanised sheet metal roof covering removed from timber or steel purlins or grits	m ²	440.0		
BA.06	201.03	Supply and install sundry items, etc:				
	.01	0.8mm thick galvanised sheet iron flashings with existing chromadek silicone polyester finish to one side of sundry items to IBR or concealed fixing roof sheeting complete as detailed in BA 03.01:				
	.01	Ridge flashing	m	190.0		
	.02	Side wall flashing	m	272.0		
	.03	Gable flashing	m	150.0		
	.04	Valley flashing	m	45.0		
BA.08	201.04	Supply and install rainwater goods:				
	.01	0.8mm Thick galvanised sheeting with existing chromadek silicone polyester finish to one side in:				
	.01	125 x 100 mm self supporting box/gutter	m	260.0		
	.02	150 x 100 mm self supporting box/gutter	m	260.0		
Carried forward						

Brought forward							
BA.08	201.04	.01	.03	125 x 100 mm down pipe	m	320.0	
			.04	150 x 100 mm down pipe	m	310.0	
BA.09	201.05	Carefully remove existing rainwater goods:					
		.01		Eaves gutters	m	392.0	
		.02		Down pipes	m	342.0	
	201.06	Rehabilitation:					
BA.15		.01		Prepare existing galvanised or previously painted roof sheeting and paint with a polyurethane coating system as per technical specification BA 03.02	m ²	2500.0	
		.02		Replace missing or broken roof tiles similar to existing	No	200.0	
BC.02.01	201.07	Waterproofing of concrete roofs:					
		.01		Items measured by square metre:			
		.01		Pure acrylic emulsion waterproofing paint with polyester membrane or glass-fibre tissue waterproofing sealing system	m ²	180.0	
	202.00	<u>ROOFS: CARPENTRY AND JOINERY</u>					
BB.04	202.01	Remove existing joinery items by length:					
		.01		Roof timbers	m	151.0	
		.02		Fascia and barge boards	m	280.0	
BB.01	202.02	Supply and install new items:					
		.01		225 x 10 mm thick pressed fibre cement fascia, including painting, etc.	m	230.0	
		.02		225 x 10 mm thick pressed fibre cement barge board, including painting, etc.	m	230.0	
		.03		75 x 50 mm SAP purlins	m	125.0	
		.04		38 x 114 mm wrought sloping SAP rafters	m	350.0	
		.05		38 x 114 mm wrought sloping SAP wall plates	m	6.0	
		.06		38 x 114 mm wrought sloping SAP timber beams	m	9.0	
Carried forward							

Brought forward							
BB.04	202.02	.07	38 x 114 mm wrought sloping SAP timber webs and braces	m	20.0		
		.08	New Granite existing Rustenburg counter tops up to 600mm wide	m	5.0		
		.09	Gypsum board with metal H-profile jointing strips:				
		.01	6,4 mm ceilings	m ²	325.0		
		.10	Fibre cement with metal H-profile jointing strips:				
		.01	6 mm ceilings	m ²	285.0		
		.11	Gypsum cornices:				
		.01	76 mm gypsum covered cornices	m	226.0		
		.12	Roof insulation:				
		.01	54mm thick existing bubble fibre insulation or similar approved	m ²	850.0		
		.13	Mineral fibre acoustic suspended ceiling tiles (masonite sound stop orbit special profile or equal approved) on and including concealed galvanised mild steel tees and strap hangers:				
		.01	600 mm x 1200 mm x 15 mm thick pre-painted tiles in patchwork	No	150.0		
		BB.04	202.03	Alterations and repairs to existing structures:			
.01	Remove:						
.01	Soft board, plaster board or fibre cement ceiling boards including cornices, cover and jointing strips			m ²	300.0		
.02	76 mm gypsum covered cornices			m	279.0		
.02	Re-align and refix:						
.01	Soft board, plaster board or fibre cement ceiling boards including cornices, cover and jointing strips			m ²	310.0		
.02	76 mm gypsum covered cornices			m	280.0		
Carried forward							

Brought forward				
SABS 1200 DA 8.3	203.00	<u>WALLS</u>		
	203.01	Earthworks (small works):		
	.01	Excavate for restricted foundation, footings and trenches in all materials and use for backfill or embankment or dispose	m ³	300.0
	.02	Break up, hack off and remove existing concrete	m ³	45.0
	.03	Importing, placing and compacting approved G6 material in layers of 150mm from commercial sources or from borrow pits to 95% MOD AASHTO density	m ³	45.0
SABS 1200 G 8.4 8.4.3	204.00	<u>STRUCTURAL CONCRETE</u>		
	204.01	Strength concrete:		
	.01	Class 20 MPa concrete in aprons including rough formwork	m ³	13.0
	.02	Class 25 MPa concrete in floors	m ³	22.0
	.04	Class 25 MPa concrete in walls	m ³	14.0
SABS 1200 G 8.2.5	205.00	<u>STRUCTURAL FORMWORK</u>		
	205.01	Rough form work:		
	.01	Wall below ground	m ²	10.0
	205.02	Smooth form work:		
	.01	Smooth vertical walls inside	m ²	15.0
8.2.5	205.03	Narrow widths not exceeding 300mm:		
	.01	Floors, etc.	m	120.0
Carried forward				

Brought forward					
SABS 1200 H	206.00	STRUCTURAL REINFORCEMENT			
	206.01	High-tensile steel welded mesh and steel bars:			
	.01	Ref No 193 mesh in concrete	m ²	120.0	
	.02	Ref No 245 mesh in concrete	m ²	120.0	
	.03	Y12 high tensile steel bars	m	49.0	
SABS 1200 H	207.00	STRUCTURAL STEELWORK			
8.3.1	207.01	Supply and fabrication of steelwork:			
	.01	Jointing by bolting:			
	.01	I-section columns with flat section base plates and end plates	t	2.0	
	.02	I-section rafters with flat section end plates, etc.	t	2.0	
	.03	Cold rolled lipped channel purlins with angle section fixing cleats	t	2.0	
	.04	Angle section bracing with flat section connection plates	t	1.0	
SABS 1200 H	207.02	Delivery to site:			
	.01	Normal delivery:			
	.01	Columns, rafters, purlins and braces for carport structures	t	7.0	
SABS 1200 H	207.03	Erection to site:			
	.01	Columns, rafters, purlins and braces for carport structures complete	t	7.0	
	.02	M16 anchor bolts 300mm deep	No	100.0	
	207.04	Holding-down bolts:			
	.01	M16 x holding-down bolt with 150 x 320 x 10mm holded plate	No	100.0	
	.02	M16 x long holding-down bolt on 8mm thick cleath	No	100.0	
	.03	M12 x holding-down bolt with 80 x 400 x 8mm holded plate	No	100.0	
Carried forward					

Brought forward					
BD.01	208.00	BUILDING WORK			
	208.01	Doors and windows:			
	.01	Steel door frame:			
	.01	1,6 mm thick pressed steel door frame for door size 813 mm x 2032 mm high suitable for 230 mm wall	No	8.0	
	.02	Steel door:			
	.01	1.6mm thick existing chromadek steel roll-up door with frame and locking device for 2400 mm x 2135 mm high opening in 230 mm walls	No	9.0	
	.03	Steel window frames:			
	.01	Steel top hung window, opening outwards, E Type NE7, with burglar bars, window size 654mm x 1022 mm wide	No	8.0	
	.02	Natural anodized purpose made projected out aluminium window for opening size 1260 high x 1490 wide	No	4.0	
	.04	Steel combination doors and frames:			
.01	Galvanised steel industrial roll-a-door with frames and direct drive operation for 3750 mm x 3750 mm high opening, including gear box, drive shaft, bevelled gear anchor plate, spring, canop cover, rachet and fixing lugs	No	2.0		
.05	Steel garage doors and frames:				
.01	Existing chromadek steel roll-up door with frame and locking device for 2400 mm x 2135 mm high opening in 230 mm walls	No	1.0		
Carried forward					

Brought forward					
BD.03	208.02	Joinery: .01 Items measured by number: .01 Solid laminated door, 40 mm thick x 813 mm wide x 2032 mm high with meranti veneer both sides .02 Semi-solid core flush panel door, 40 mm thick x 813 mm wide x 2032 mm high with meranti veneer facing both sides .03 Framed, ledged and braced batten flash back hardwood door, 40 mm thick x 813 mm wide x 2032 mm high with splayed weather board .04 Solid laminated door, 40 mm thick x 1512 mm wide x 2032 mm high with meranti veneer both sides .05 Semi-solid cupboard door, 40 mm thick x 610 mm wide x 2032 mm high with meranti veneer to both sides	No	8.0	
			No	7.0	
			No	9.0	
			No	5.0	
			No	12.0	
Carried forward					

Brought forward						
BD.04	208.03	Ironmongery, steelwork, glass, wall finishings, etc:				
		.01	Items measured by number:			
		.01	Standard brass peg and stay to steel windows	No	35.0	
		.02	Standard brass sliding stay to steel windows	No	28.0	
		.03	Residential type steel window handle	No	35.0	
		.04	Window handle for aluminium windows	No	25.0	
		.05	100 mm brass barrel bolt	No	15.0	
		.06	Cupboard pull handles with push button lock and two keys	No	42.0	
		.07	Cupboard pull handles	No	18.0	
		.08	Four lever mortice lockset with one pair handles chrome type B3081, two keys, back plates and striking plate	No	26.0	
		.09	Four lever mortice lockset with one pair anodized aluminium handles type B3084, two keys, back plates and striking plate	No	22.0	
		.10	Four lever mortice lockset with one pair anodized aluminium handles and back plate type B3085, two keys, back plates and striking plate	No	16.0	
		.11	Cylinder lever lockset with one pair anodized aluminium handles type B3084, two keys, back plates and striking plate	No	8.0	
		.12	Indicator bolt with one pair anodized aluminium handles type B3085, display, back plates and striking plate	No	20.0	
		.13	Facility indicator bolt for disabled person facilities with one pair anodized aluminium handles type B3634, display, back plates and striking plate	No	4.0	
.14	Indicator bolt for type B3632 similar to existing with display, back plates and striking plate	No	12.0			
Carried forward						

Brought forward									
BD.04	208.03	.01	.15	Rim cylinder night latch with two keys and striking plate	No	20.0			
			.16	Anodized aluminium door handles type B3081	No	8.0			
			.17	Anodized aluminium door handles type B3084, including back plate	No	3.0			
			.18	Anodized aluminium door handles type B3085, including back plate	No	3.0			
			.19	6mm thick mirror glass 450mm x 600mm wide	No	14.0			
			.20	15 mm roller ball catch with striking plate	No	3.0			
			.21	Stainless steel soap dish type B2789	No	21.0			
			.22	Striking plate for single door	No	25.0			
			.23	White glazed ceramic toilet roll holder	No	16.0			
			.24	Stainless steel single toilet tissue holder	No	14.0			
			.25	Aluminium weather strips for single doors	No	12.0			
			.26	19 mm diameter chromium plated towel or hanging rail 1200 mm long including end brackets	No	22.0			
			.27	380 mm x 610 mm high bathroom cabinet with mirror, two doors, handles and one shelf	No	14.0			
			.28	150mm natural anodized aluminium disabled person sign type B2312 or similar approved	No	3.0			
			.29	150mm natural anodized aluminium male sign type B2313 or similar approved	No	5.0			
			.30	150mm natural anodized aluminium female sign type B2314 or similar approved	No	2.0			
			.31	Standard arm door closer, with adjustable closing speed, adjustable hydraulic latch action, suitable for doors up 1100mm	No	12.0			
			.32	Aluminium Disabled door kicker plate	No	4.0			
			Carried forward						

Brought forward						
BD.04	208.03	.01	.33	Four lever mortice lockset with one pair handles chrome type B2088, two keys, back plates and striking plate	No	55.0
			.34	Four lever mortice lockset with one pair anodized aluminium handles type B2085, two keys, back plates and striking plate	No	55.0
			.35	Four lever mortice lockset with one pair anodized aluminium handles type B2086, two keys, back plates and striking plate	No	32.0
			.36	Cylinder lever lockset with one pair anodized aluminum handles type B2085, two keys, back plates and striking plate.	No	21.0
			.37	Indicator bolt with one pair anodized aluminium handles type B2085, display, back plates and striking plate	No	12.0
			.38	Facility indicator bolt for disabled person facilities with one pair anodized aluminium handles type B2581, display, back plates and striking plate	No	12.0
			.39	Garage door lock, including two keys	No	14.0
			.40	Standard CP door handles similar to existing	No	6.0
			.41	Anodized aluminium door handles type B2085	No	2.0
			.42	Anodized aluminium door handles type B2086	No	4.0
			.43	Washing line with 2 fully galvanised posts and stays, 5m apart and 4 plastic coated washing lines complete with straining bolts concrete base, etc.	No	14.0
			.44	Aluminum sliding shower door "PIVOT" with range of up 1050mm wide x 1800mm high	No	6.0
			.45	Galvanised inter-link handrail systems, complete with stachions and bend by Mentis or similar approved	m	30
			.46	Stainless steel inter-link handrail systems, complete with stachions and bend by Mentis or similar approved	m	30
Carried forward						

Brought forward					
BD.04	208.04	Window blinds:			
		.01	Fabric vertical blinds as approved by the Engineer for the window frames:		
		.01	Windows size 1245mm high x 1511mm wide	No	5.0
		.02	Windows size 1540mm high x 1511mm wide	No	2.0
		.03	Windows size 1540mm high x 1022mm wide	No	3.0
		.04	Windows size 1245mm high x 2000mm wide	No	3.0
		.05	Windows size 1540mm high x 2000mm wide	No	2.0
		.02	35mm horizontal aluminium blinds as approved by the Engineer for		
		.01	Window size 1000mm high x 600mm wide	No	4.0
		.02	Window size 1000mm high x 900mm wide	No	5.0
		.03	Window size 1000mm high x 1800mm wide	No	8.0
		.04	Window size 1300mm high x 1800mm wide	No	8.0
		.05	Window size 1245mm high x 1511mm wide	No	2.0
		.06	Window size 1540mm high x 1511mm wide	No	2.0
	.07	Window size 1800mm high x 1800mm wide	No	3.0	
	208.05	Disabled person facilities:			
	.01	32mm diameter stainless steel grab bars for disabled person facilities:			
.01	General purpose stainless steel grab rail 90° angled (Type G13) with an outside diameter of 32 mm fixed onto wall as to support 1 kN at any point of the bar	No	3.0		
.02	Horizontal stainless steel grab rail with an outside diameter of 32 mm fixed over WC cistern onto wall as to support 1 kN at any point of the bar	No	2.0		
.03	Vertical stainless steel grab rail with an outside diameter of 32 mm fixed onto door as to support 1 kN at any point of the bar	No	2.0		
208.06	Manhole cover grid and trench Covers:				
.01	Galvanised mentis rectagrid, with pressure lock, manhole cover to fit over 2100 x 2100mm manhole in 50mm x 50mm galvanised equal leg angle section frame	No	3.0		
.02	Galvanised mentis rectagrid, in 50mm x 50mm galvanised equal leg angle section frame	m	5.0		
Carried forward					

Brought forward					
208.07	Swivel flag pole:				
.01	Natural anodized aluminium swivel flag pole 8850mm long with two support poles each 1200mm long	No			
208.08	Various items:				
.01	Items measured by linear metre:				
.01	Silicone sealant in 6 mm contact joint between sanitary fittings and wall finishes	m	136.0		
.02	Polyurethane sealant in 12 mm expansion joint in face brick walls	m	96.0		
.03	Putty in patchwork to steel sashes	m	112.0		
.04	Regular duty double curtain track including gliders, hangers, brackets, stopped ends, etc.	m	108.0		
.05	Plastic coated washing line	m	45.0		
.06	120 mm x 10 mm thick PEI Class 5 porcelain window cills as approved by Engineer	m	75.0		
.07	230mm wide pre-cast lintel	m	25.0		
.08	120mm wide fibre cement window sill	m	60.0		
.09	External cement plaster in beam filling	m	88.0		
.02	Items measured by area:				
.01	6mm thick white glazed wall tiles to existing painted or plastered walls as approved by the Engineer	m ²	132.0		
.02	4 mm clear float glass to steel sashes with putty	m ²	35.0		
.03	4 mm obscure float glass to steel sashes with putty	m ²	25.0		
.04	4 mm obscure glass to steel sashes with putty	m ²	10.0		
.05	115 mm thick brick walls	m ²	12.0		
.06	230 mm thick brick walls	m ²	15.0		
.07	230mm thick face brick walls buff satin - FBS or similar approved	m ²	8.0		
.08	Internal cement plaster to walls	m ²	432.0		
.09	External cement plaster to walls	m ²	375.0		
.10	6mm clear float laminated glass	m ²	20.0		
.11	300mm x 600 mm "Chocolate Mat" porcelain floor tiles	m ²	120.0		
Carried forward					

Brought forward							
BD.05	208.08	.02	.12	300mm x 600mm "Chocolate Polished" porcelain floor tiles	m ²	150.0	
			.13	115mm thick face brick walls similar to existing	m ²	10.0	
	208.09	Corrective work to existing structures:					
		.01	Repair and refix:				
			.01	Single doors	No	25.0	
			.02	Double doors	No	6.0	
			.03	Windows	No	16.0	
			.04	Door frames	No	18.0	
			.05	Aluminium sliding windows	No	6.4	
			.06	Tip up single garage door including servicing opening mechanisms, locks, etc.	No	7.2	
			.07	Shower door including replacing broken or missing roller guide wheels	No	8.8	
			.08	Industrial galvanised roller doors, including guides, gears, shafts and drive	No	2.0	
			.09	Single garage door including servicing opening mechanisms locks, etc.	No	2.0	
		.02	Remove, repair and refix:				
			.01	Timber single or double door	No	18.0	
			.02	Peg and stay to steel window	No	16.0	
			.03	Sliding stay to steel window	No	16.0	
			.04	Window handle to steel window	No	43.0	
			.05	Cupboard locksets	No	38.0	
			.06	Mortice lockset with handles	No	42.0	
		.07	All types of locksets with handles	No	2.0		
		.08	All types of door handles	No	9.0		
		.09	Mirror glass 450mm x 600mm wide	No	9.0		
		.10	15 mm roller ball catch with striking plate	No	2.0		
		.11	Soap dish	No	9.0		
		.12	Striking plates	No	18.0		
		.13	Toilet tissue holders	No	9.0		
		.14	Weather strips for single doors	No	11.0		
		.15	Towel or hanging rail including end brackets	No	20.0		
		.16	Bathroom cabinets	No	9.0		
		.17	Standard arm door closers	No	15.0		
Carried forward							

Brought forward						
BD.05	208.09	.03	Break out/hack up/demolish and remove:			
		.01	Concrete strip footings	m ³	6.0	
		.02	115mm brick wall	m ²	8.0	
		.03	230mm brick wall	m ²	6.0	
		.04	External plaster to walls	m ²	370.0	
		.05	Internal plaster to walls	m ²	264.0	
		.06	6mm thick white glazed wall tiles to existing painted or plastered walls as approved by the Engineer	m ²	319.0	
		.07	Damaged sections of putty in steel sashes	m	40.0	
		.08	6 mm clear float laminated glass to aluminium windows	m ²	6.0	
		.09	4 mm clear float glass to steel sashes with putty	m ²	18.0	
		.10	4 mm obscure glass to steel sashes with putty	m ²	10.0	
		.11	152mm x 152mm x 5mm glazed ceramic wall tiles including cement dagha bed	m ²	20.0	
		.04	Take out and remove windows and doors from brickwork and prepare openings for and build in new windows, door frames, etc., including making good finishes and reveals to match existing (new windows, doors and frames elsewhere):			
		.01	1,6 mm thick pressed steel door frame for door size 813 mm x 2032 mm high suitable for 230 mm wall	No	5.0	
		.02	Tip up garage door with frame size 2400 mm x 2135 mm high from 230 mm wall	No	3.0	
		.03	650mm x 1500mm wide steel window frame	No	5.0	
		.04	650mm x 505mm wide steel window frame	No	8.0	
		.05	1815mm x 2950mm wide steel window frame	No	4.0	
		.06	1270mm x 1975mm wide steel window frame	No	10.0	
		.07	Industrial roll up door with frame size 3750 mm high from 230 mm wall	No	1.0	
		.08	Garage door with frame size 2400 mm x 2135 mm high from 230 mm wall	No	2.0	
Carried forward						

Brought forward								
BD.05	208.09	.04	.09	1260mm x 1490mm wide steel window frame	No	1.0		
			.10	960mm x 1200mm wide steel window frame	No	4.0		
			.11	960mm x 2035mm wide steel window frame	No	5.0		
			.12	1260mm x 1200mm wide steel window frame	No	5.0		
			.05	Clean existing surfaces:				
			.01	White glazed tiles to walls including cleaning and refilling/grouting of joints	m ²	355.0		
			.06	Repair and seal:				
			.01	Crack in plastered wall with plaster	m	95.0		
			.02	Joints in concrete walls with non-shrink grout not exceeding 20mm wide x 20mm deep	m	45.0		
			.03	Concrete structures with non-shrink grout including removal and re-installation of concrete beams on concrete walls not exceeding 150mm wide x 20mm deep	m	6.0		
			209.00	FLOORS				
		BE.01	209.01	Floor screeds:				
.01	35 mm thick granolithic screed finish			m ²	45.0			
BE.02	209.02	Joinery:						
		.01	Items measured by linear metre:					
		.01	19 mm x 76 mm hardwood skirting with quadrant bead	m	137.0			
		.02	35 mm x 150 mm hardwood wall skirting in face brick walls	m	300.0			
		.03	2.5 mm thick semi-flexible vinyl stair nosing	m	25.0			
BE.03	209.03	Floor tiling and finishes, etc:						
		.01	Items measured by area:					
		.01	75 mm x 10 mm thick PEI Class 4/5 Clay/Porcelain floor tiles as approved by Engineer	m ²	69.0			
Carried forward								

Brought forward						
BE.03	209.03	.01	.02	375 micron damp proofing under solid floors	m ²	54.0
			.03	250 micron damp proofing under solid floors or concrete slabs	m ²	45.0
			.04	300 mm x 300 mm x 8 mm thick, acid resistant, PEI Class 4, Ceramic floor tiles as approved by Engineer	m ²	243.0
			.05	500 mm x 500 mm x 10 mm thick, PEI Class 4/5 Porcelain, floor tiles as approved by Engineer	m ²	300.0
			.06	500mm x 500mm diagonal tiles manufactured from 100% stain proof miracle fibre (polypropylene)	m ²	260.0
			.07	405 mm x 405 mm thick PEI Class 4/5 Clay floor tiles as approved by Engineer	m ²	175.0
			.08	40mm x 40mm x 6mm thick PEI Class 4/5 Mosaic floor tiles as approved by Engineer	m ²	5.0
			.09	Existing pavelite or equal approved skim coat to receive vinyl floor titles	m ²	145.0
			.10	8 mm thick mosaic floor tiles as approved by Engineer	m ²	12.0
			.11	300 mm x 600 mm "Chocolate Mat" porcelain floor tiles	m ²	230.0
			.12	300 mm x 300 mm "Ivory Polished" porcelain floor tiles	m ²	50.0
			BE.04	209.04	.02	Items measured by litre
.01	The cleaning acid floor wash agent applied to existing floor tiles as approved by Engineer	ℓ				90.0
.02	Existing keycote and cement bonding shurry applied to existing floor tiles as approved by Engineer	ℓ				30.0
Alterations and repairs to existing structures:						
BE.04	209.04	.01	Remove:			
			.01	Vinyl floor tiles or sheeting	m ²	210.0
			.02	Hardwood skirting with quadrant bead	m	84.0
			.03	Existing clay floor-tiles	m ²	40.0
			.02	Cleaning and sealing of floor surfaces:		
.01	Vinyl floor tiles as per technical specification BE 06.01.01 for cleaning and sealing of vinyl floor tiles	m ²		450.0		
Carried forward						

Brought forward				
BH.01	210.00	FITTINGS		
BH.02	210.01	Steelwork and joinery:		
	.01	Items measured by number:		
	.01	Cupboard ironmongery 0.8mm thick steel baked enamel with 32mm postform composite laminate tops SANS approved:		
	.01	Hinge for kitchen cupboard door	No	40.0
	.02	Kitchen cupboard pull handles	No	38.0
	.03	Base double bowl sink and unit size 1800 mm x 533 mm x 865 mm high with three doors and one shelf	No	4.0
	.04	Base unit size 1800 mm x 533 mm x 865 mm high with three doors, four drawers and one shelf	No	3.0
	.05	Wall unit size 1500 mm x 533 mm x 865 mm high with three doors, and one shelf	No	3.0
	.02	Items measured by linear metre:		
	.01	32 mm chipboard with postform composite laminate finish on one side and profiled edges where so described:		
	.01	Work top 600 mm wide with profiled front edge and fitted on top of kitchen cupboard floor unit	m	16.0
	.02	32 mm hardwood meranti shelves and profiled edges where so described:	m	48.0
	.01	Work top 500 mm wide with profiled front edge and fitted on top of kitchen cupboard floor unit	m	32.0
	.02	Work top 1000 mm wide with profiled front edge and fitted on top of kitchen cupboard floor unit	m	5.0
	.03	32 mm x 1,2 mm existing formica veneered edge strips	m	5.0
BH.03	210.02	Alterations and repairs to existing fittings:		
	.01	Service, repair and refix kitchen cupboards as per technical specification BH 03.01.02:		
	.01	Kitchen cupboard door	No	17.0
	.02	Kitchen cupboard drawer including sliders	No	34.0
	.02	Removal of existing steel or wooden kitchen cupboards:		
	.01	Sink, base or wall unit up to 2000mm long	No	5.0
	.02	Existing counter tops up to 600mm wide	m	21.0
Carried forward				

Brought forward					
	211.00	<u>PAIN T WORK</u>			
BJ.01	211.01	Paint to new unpainted surfaces:			
	.01	Steel surfaces:			
	.01	High gloss enamel paint:			
	.01	I-section columns and rafters	m ²	20.0	
	.02	Lipped channel purlins	m ²	15.0	
	.03	Angle section bracing	m ²	12.0	
BJ.02	211.02	Paint to previously painted surfaces:			
	.01	Concrete surfaces:			
	.01	Alkali resistant solvent based (modified alkyd) stoep paint:			
	.01	Floors	m ²	180.0	
	.02	Window sills, etc.	m ²	45.0	
	.02	Plaster surfaces:			
	.01	Interior quality pure acrylic emulsion paint with smooth sheen appeal:			
	.01	Walls	m ²	3800.0	
	.02	Exterior quality pure acrylic emulsion paint with teflon:			
	.01	Walls and piers	m ²	5000.0	
	.03	Protective and decorative solvent based polyurethane alkyd semi-gloss non-drip enamel paint:			
	.01	Walls	m ²	100.0	
	.02	Ceilings	m ²	340.0	
	.03	Fibre cement surfaces:			
	.01	Exterior quality pure acrylic emulsion paint with teflon:			
	.01	Ceilings and cornices	m ²	890.0	
Carried forward					

Brought forward						
BJ.02	211.02	.03	.02	Exterior quality pure acrylic emulsion paint with teflon:		
			.01	Fascias and barge boards	m ²	125.0
		.04	Soft board surfaces:			
			.01	Interior quality super acrylic copolymer PVA paint:		
		.01	.01	Ceilings and cornices	m ²	185.0
			.02	Protective and decorative solvent based polyurethane alkyd semi- gloss non-drip enamel paint:		
		.01	.01	Ceilings and cornices	m ²	134.0
			Steel surfaces:			
		.01	.01	Protective and decorative solvent based polyurethane alkyd semi- gloss non-drip enamel paint:		
			.01	Residential type glazed windows	m ²	20.0
		.02	.02	Window burglar proofing or mentis expanded metal grid to steel frame in burglar proofing	m ²	14.0
			.03	Doors	m ²	145.0
		.04	.04	Door frames	m ²	65.0
			.05	Security gates	m ²	34.0
		.06	.06	Rails, posts, pipes, steel structures etc. not exceeding 50 mm diameter	m	87.0
			.07	Rails, posts, pipes, steel structures etc. exceeding 50 mm dia. not exceeding 110 mm dia.	m	67.0
		.08	.08	Steel structures	m ²	65.0
			.09	Gutters	m	20.0
		.10	.10	Down pipes	m	15.0
			Aluminium paint:			
		.01	.01	Washing line posts not exceeding 100 mm dia.	m	245.0
			Alkali resistant solvent based (modified alkyd) stoep paint:			
		.01	.01	Manhole covers	m ²	78.0
Carried forward						

Brought forward					
BJ.02	211.02	.06	Wood surfaces:		
		.01	Protective and decorative solvent based polyurethane alkyd semi-gloss non-drip enamel paint:		
		.01	Doors	m ²	45.0
		.02	Cupboards, counters, shelving, etc.	m ²	40.0
		.03	Skirtings and quadrant beads not exceeding 150 mm girth	m	45.0
		.02	Water resistant polyurethane clear matt varnish:		
		.01	Doors	m ²	10.0
		.02	Skirtings and quadrant beads not exceeding 150 mm girth	m	10.0
		.03	Ultra violet light resistant exterior solvent based varnish:		
		.01	Doors, etc.	m ²	12.0
	212.00		CARPENTRY AND JOINERY		
BB.04	212.01		Remove existing joinery items by length:		
		.01	Roof timbers	m	35.0
		.02	Fascia and barge boards	m	50.0
BB.01	212.02		Supply and install new items measured by length:		
		.01	225 x 10mm thick pressed fibre cement fascia, including painting, etc.	m	80.0
		.02	225 x 10mm thick pressed fibre cement barge board, including painting, etc.	m	20.0
		.03	75 x 50 m SAP purlins	m	25.0
		.04	38 x 114 mm wrought sloping SAP rafters	m	15.0
		.05	38 x 114 mm wrought sloping SAP wall plates	m	15.0
		.06	38 x 114 mm wrought sloping SAP timber beams	m	25.0
		.07	38 x 114 mm wrought sloping SAP timber webs and braces	m	18.0
		.08	New Granite "Rustenburg" counter tops up to 600mm wide	m	80.0
Carried forward					

Brought forward					
BB.08	212.03	Painting of existing members in overhangs:			
	.01	Members with creosote	m	50.0	
	.02	Members with paint	m	50.0	
BB.09	212.04	Miscellaneous items:			
	.01	Items measured by area:			
	.01	Pure acrylic emulsion waterproofing paint with polyester membrane or glass-fibre tissue waterproofing sealing system	m ²	15.0	
BB.01	213.00	Dry wall panelling:			
	.01	Supply, delivery and installation of 12 mm thick plywood wall panelling, jointing and cover strips similar to existing	m ²	50	
	.02	Supply, delivery and installation of 12 mm thick hardwood floor panelling, jointing and cover strips similar to existing	m ²	50	
	.03	Fibre-cement panels			
	.01	6 mm panel boards	m ²	50	
	214.00	Retrofitting New Kitchen			
	.01	Retrofitting new kitchen where complete installation is required			
	.01	Strip, removal and dispose. Prepare surfaces to receive new joinery material	PC Sum	-	10 000.00
	.02	Charge required by Contractor on sub item .01	%	10000	
	.02	Install new kitchen as per design by engineer.	PC Sum	-	10 000.00
	.01	Charge required by Contractor on sub item .02	%	10000	
	215.00	<u>REPAIR WORK TO MANICA BUILDING</u>			
		Provisional Sum for the repair work to damaged building	PC Sum		150 000.00
		Charge required by Contractor on sub item above	%	150 000	
TOTAL : SCHEDULE 2.1 : INSTALLATION C1: STRUCTURAL AND BUILDING RELATED WORK - CARRIED TO SUMMARY:					

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN **BLACK INK**

SCHEDULE NO 2.2: INSTALLATION C2: PLUMBING, DRAINAGE AND WET SERVICES RELATED WORK

CIVIL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
PAA 05.01.02 PAA 05.02 PAA.03	300.00	<u>PLUMBING, DRAINAGE AND WET SERVICES</u>				
	301.00	<u>DETAIL WORK</u>				
	301.01	Isolation, stripping, dismantling and removal of existing brassware, sanitary ware and piping:				
	.01	Water closets (WC):				
	.01	Vitreous china WC pan (cistern type)	No	8.000		
	.02	Vitreous china WC cistern	No	20.000		
	.03	Flushing mechanisms	No	15.000		
	.04	Tailpipe connections to WC, including shut of valve	No	16.000		
	.05	Pan connector (100mm dia)	No	15.000		
	.06	Toilet seat and cover	No	26.000		
	.07	Toilet flus value	No	26.000		
	.02	Wash hand basins (WHB):				
	.01	Vitreous china wall-mounted wash hand basin	No	20.000		
	.02	15 mm ø pillar taps and mixers	No	30.000		
	.03	15 mm ø pipe connections to pillar taps	No	17.000		
	.04	Rubber flexi P-trap or CP bottle trap	No	36.000		
	.03	Showers:				
	.01	CP Shower heads	No	25.000		
	.02	Under-tile stop cocks	No	15.000		
	.03	Shower gratings	No	15.000		
	.04	Plastic shower pan	No.	2.000		
Carried forward						

Brought forward						
PAA.03	301.01	.04	Baths:			
		.01	15mm or 20mm bath taps	No	10.000	
		.02	Rubber flexi P-trap or CP bottle trap	No	15.000	
		.05	Sinks and wash troughs:			
		.01	15mm or 22mm wall mounted taps	No	35.000	
		.02	15mm or 22mm extension	No	21.000	
		.03	15mm wall mounted sink mixer	No	25.000	
		.04	Steel enamel or fibre glass bath tub	No.	3.000	
		.06	Urinals:			
		.01	Built-in or wall hung urinal	No	15.000	
		.02	Under wall stop tap or existing flushmaster	No	15.000	
		.03	Rubber flexi p-trap or CP bottle trap	No	12.000	
		.04	CP urinal spreader and tail piece	No	11.000	
		.05	Existing junior flush valve	No	14.000	
.07	External:					
		.01	20mm dia. RB hose bip tap	No	10.000	
PAA.04	301.02	Isolation, stripping, dismantling and removal of existing geyser installations:				
		.01	Isolate strip and remove domestic geyser (100 to 250 litres - electric)	No	50.000	
PAA.18	301.03	Re-installation of existing geyser installations at location indicated by the Engineer including pipe work including replacement of fittings, servicing and pipe work, pipe work not exceeding 10m from previous location:				
		.01	Re-install domestic geyser (100 to 250 litres - electric)	No	35.000	
Carried forward						

Brought forward						
PAA.05	301.04	Supply and installation of sanitary ware and brassware:				
		.01	Water closets (WC):			
		.01	Vitreous china WC washdown pan with enlarged pedestal (360mm x 405mm)	No	12.000	
		.02	Vitreous china WC pan - white paraplegic low level suite	No	2.000	
		.03	Vitreous china WC cistern - white 9 litres complete with lid and fittings	No	12.000	
		.04	Wall and floor mounted shrouded WC pan Grade 304 (18/10) Stainless Steel 1.2 mm gauge with pressed flushing rim and integral Stainless Steel 110 'P' Trap and back entry flush pipe inlet of 38 mm. Fixed to wall and floor with eleven anchor bolts	No	11.000	
		.05	3/4 " (19 mm) Standard existing flushmaster toilet valve, exposed back entry type CP, integral vacuum breaker, non hold open feature, with wall plate bent flush pipe and rubber pipe connector and seal	No	6.000	
		.06	1-1/4" (32 mm) Standard existing flushmaster flush valves, exposed type top entry with integral vacuum breaker, connector and wall flange. Comprises flush valve, straight flush pipe and flush pipe connector with chromed cover	No	8.000	
		.07	Top entry flush pipe and flush pipe connector for existing standard flush master	No	10.000	
		.08	Compression pan connector for existing standard flushmaster	No	5.000	
PAA.05	301.04	.01	.09	100 mm ø PVC pan connector	No	5.000
			.10	15 mm ø CP ball-o-stop valve with CP flexi tail pipe to WC cistern	No	5.000
			.11	Heavy duty white buckalite type toilet seat and cover with CP hinge and spindle	No	3.000
			.12	Vitreous china WC cistern -white existing vaal 9 litres, with side flush lever for disabled facilities -code 710631	No	6.000
Carried forward						

Brought forward								
PAA.05	301.04	.02	Wash hand basins (WHB):					
		.01	Vitreous china 520 x 415mm rounded wall mounted wash hand basin - white	No	15.000			
		.02	Flexi rubber P-trap	No	18.000			
		.03	CP Bottle trap with 75mm deep re-seal and adjustable telescopic pipe	No	16.000			
		.04	15 mm ø CP pillar taps SANS 226 Type 1 (BS 5412), JASWIC Listed	No	18.000			
		.05	15 mm ø CP pillar taps Square type, SANS 226 Type 2 (BS 5412), JASWIC Listed	No	20.000			
		.06	15 mm ø CP pillar taps with raised nose and elbow action, 1/4" (6 mm) turn ceramic disc head part and indicator SANS 226 Type 2 (BS 5412), JASWIC Listed	No	48.000			
		.07	15 mm ø CP basin mixer - one hole, with cast swivel outlet, plug, stay, basin waste, mounting kit and angle valves SANS 226 Type 2 (BS 5412), JASWIC Listed	No	25.000			
		.08	15 mm ø flexi pipe tailpipe connections to pillar taps including 15mm CP ball-o-stop valve	No	25.000			
		.09	Plug and chain for WHB	No	45.000			
		.10	Double concrete wash basin complete with pedestals	No	3.000			
		.03	Sinks and wash troughs:					
		.01	CP wall-mounted sink mixer 15 mm ø - SANS 226 Type 1 (BS 5412), JASWIC Listed	No	15.000			
		.02	20mm CP wall-mounted hose bip tap - SANS 226 Type 1 (BS 5412), JASWIC Listed	No	12.000			
		.03	20mm RB wall-mounted hose bip tap - SANS 226 Type 1 (BS 1010), JASWIC Listed	No	10.000			
		.04	20mm CP extension pieces	No	12.000			
		.05	Flexi rubber P-trap	No	20.000			
		.06	15 mm BSP male brass drinking fountain pillarcock with adjustable nozzle flow control, hygienic protective plate	No	5.000			
		Carried forward						

Brought forward						
	.04	Showers:				
	.01	15mm CP shower rose 50mm ϕ with ball joint connector	No	25.000		
	.02	15 mm ϕ under-tile stop-cocks - SANS 226 Type 1 (BS 5412), JASWIC Listed	No	15.000		
	.03	CP shower grating	No	35.000		
	.04	15mm CP shower arm with fascia plate and male iron connection	No	30.000		
	.05	Plastic shower pan	No.	2		
	.05	Baths:				
	.01	Rubber flexi bath-trap	No	43.000		
	.02	22mm dia. 75mm long CP extension piece with sliding wall flange	No	48.000		
	.03	20 mm ϕ CP pillar taps SANS 226 Type 1 (BS 5412), JASWIC Listed	No	25.000		
	.04	20 mm ϕ CP wall mounted taps SANS 226 Type 1 (BS 5412), JASWIC Listed	No	15.000		
	.05	3/4" (19mm) bath/shower diverter mixer, CP, wall type with concealed connections adjustable from 138mm to 218mm. SABS226 Type 1 (BS5412), JASWIC listed.	No	20.000		
	.06	3/4" (19mm) handshower attachment, CP, including 1200mm flexible hose and CP hand shower fitting	No	25.000		
	.07	1800 mm x 830 mm x 478 mm deep steel enamel bath tub - white or similar approved	No.	5		
	.06	Urinal:				
	.01	Vitreous china wall hung urinal with top inlet including fittings.	No	12.000		
	.02	3/4" (19mm) junior urinal existing flushmaster valve, CP, exposed type with integral ball-o-stop valve and wall plate	No	12.000		
	.03	Bottle trap with 75mm deep re-seal and adjustable telescopic pipe	No	11.000		
	.04	CP urinal spreader and tail piece	No	11.000		
Carried forward						

Brought forward							
		.07	External:				
		.01	20mm hose bip tap, rough brass, with BSP hose union - SANS 226 Type 2 (BS 1010), JASWIC Listed	No	9.000		
PAA.06	301.05	Supply and installation of above ground sanitary drainage piping installation:					
		.01	uPVC soil and waste pipes:				
		.01	50 mm ø pipe fixed to walls and soffits	m	22.000		
		.02	110 mm ø pipe soil pipe fixed to wall and soffits	m	15.000		
		.02	uPVC soil and waste pipe fittings:				
		.01	50 mm dia. plain bend 87.5°	No	30.000		
		.02	50 mm dia. access bend 87.5°	No	36.000		
		.03	50mm dia. plain bend 135°	No	36.000		
		.04	50mm dia. access bend 135°	No	30.000		
		.05	50mm junction plain 87.5°	No	25.000		
		.06	50mm junction access heel 87.5°	No	40.000		
		.07	110mm dia. plain bend 135°	No	78.000		
		.08	110mm dia. access bend 135°	No	75.000		
		.09	110mm dia. access bend 95°	No	58.000		
		.10	110mm dia. plain bend 95°	No	40.000		
		.11	110mm vent horn bend access heel 95°	No	58.000		
		.12	110mm junction single access heel 95°	No	40.000		
PAA.06	301.06	Supply and installation of underground sanitary drainage installation:					
		.01	Pipe trench excavations, bedding and backfilling:				
(LI)		.01	Excavate in all materials for pipe trenches to depth of 1100 mm x 600 mm wide	m ³	20.000		
(LI)		.02	Supply and installation of pipe bedding for flexible pipes of compacted selected granular material as well as compacted selected fill material by importation from commercial sources or from borrow pits to 95% MOD AASHTO density	m ³	22.000		
Carried forward							

Brought forward					
(L)		.03	Backfilling and compacting to 93% modified AASHTO density with selected material	m ³	22.000
		.04	Supply and installation of pipe bedding 400mm thick river sand	m ³	25.000
PAA.06	301.06	.02	uPVC solid wall sewer pipes Class 34 - 300 kPa to SANS 791 specifications:		
		.01	110 mm dia.	m	25.000
		.02	160 mm dia.	m	30.000
		.03	uPVC soil and waste pipe fittings:		
		.01	110 mm \emptyset plain bend 87,5°	No	20.000
		.02	110 mm \emptyset plain bend 135°	No	30.000
		.03	110 mm \emptyset square double junction	No	20.000
		.04	110 mm \emptyset 135° junction	No	18.000
		.05	110 mm \emptyset 90° junction	No	20.000
		.04	Cleaning eyes:		
		.01	100 mm \emptyset inline cleaning eye, constructed complete with square inspection eye cast iron cover and frame Type 14A (SANS 558) daylight opening size 295 x 295mm and 500 x 500 x 75mm thick concrete encasement	No	12.000
PAA.07	301.07		Supply and installation of domestic water piping installation:		
		.01	Copper piping Class 1 SANS 460 with capillary soldered type joints for cold-water piping installed in voids inclusive of bracketing:		
		.01	22 mm \emptyset including fittings	m	38.000
		.02	15 mm \emptyset including fittings	m	30.000
		.02	Copper piping Class 1 SANS 460 with capillary soldered type joints for hot-water piping installed in voids including bracketing, lagging and cladding:		
		.01	22 mm \emptyset including fittings	m	35.000
		.02	15 mm \emptyset including fittings	m	45.000
		.03	Copper piping Class 1 SANS 460 with capillary soldered type joints for hot and cold-water piping chased in walls including wrapping of pipes with builders paper, chasing and reinstatement of chased surfaces:		
		.01	22 mm \emptyset including fittings	m	25.000
		.02	15 mm \emptyset including fittings	m	24.000
Carried forward					

Brought forward						
PAA.07	301.07	.04	Supply and installation of Class 6 pressure HDPE piping, including fittings, jointing and testing:			
		.01	20 mm ø HDPE pipe, including fittings	m	30.000	
		.02	32 mm ø HDPE pipe, including fittings	m	30.000	
		.05	Replace 20 mm ø shut-off ball-o-stop valve	No	25.000	
		.06	Replace additional geyser accessories:			
		.01	20 mm ø pressure-reducing valve, including two gate valves and non-return valve set at 400 kPa	No	12.000	
		.07	Water meter stations installed including strainer and one ball-o-stop shut-off valve with copper piping Class 0 SANS 460 pipe connection 600mm above ground including 500 x 500 concrete 20MPa base:			
		.01	20 mm ø socketed brass water meter	No	5.000	
		.02	32 mm ø water meter	No	3.000	
		PAA.08	301.08	Supply and installation of domestic geyser installations including shut-off valves, strainers, non-return valves, expansion relief valve, safety valve, drain piping and electrical connection:		
.01	SANS151 dual 100 litre, 3 kW 600kPa approved geyser			No	8.000	
.02	SANS151 dual 150litre, 3 kW 600kPa approved geyser			No	8.000	
	SANS151 dual 200litre, 3 kW 600kPa approved geyser			No	1.000	
PAA.10	301.09	Servicing, cleaning and repair of sanitary ware:				
		.01	Water closets (WC):			
		.01	Repair WC cistern flushing mechanism with repair kit	No	25.000	
		.02	Replace cistern type flushing mechanism with new	No	25.000	
PAA.11	301.10	Servicing, overhauling and cleaning of brassware:				
		.01	Replace washers on brassware with washer kits:			
		.01	15 mm ø CP pillar taps	No	30.000	
		.02	20 mm ø CP pillar taps	No	30.000	
		.03	15 mm ø CP wall-mounted taps	No	25.000	
		.04	20 mm ø CP wall-mounted taps	No	25.000	
		.05	20 mm ø brass hose bib taps	No	26.000	
.06	15 mm CP sink mixers	No	25.000			
Carried forward						

Brought forward						
PAA.11	301.10	.01	.07	22mm exposed existing junior flush valve	No	28.000
			.08	22mm under wall stop taps	No	25.000
			.09	22mm basin mixer	No	22.000
			.10	25 mm existing junior flush master, including replacing flush master kits	No	25.000
PAA.12	301.11	Servicing, cleaning and repair of domestic water and drainage pipe installations:				
		.01	Servicing and repair of drainage installations:			
			.01	Unblock and clean pipe work including fittings, 50 mm ø pipe	m	20.000
			.02	Unblock and clean pipe work including fittings 100 mm ø pipe	m	8.000
			.03	Replace damaged gully with pre-cast concrete gully	No	14.000
			.04	Replace broken or damaged gully P-traps	No	12.000
			.05	Replace missing or broken round cast iron gully gratings 100mm - 300mm diameter	No	14.000
			.06	Replace missing or broken square cast iron gully gratings 250mm x 250mm wide	No	5.000
			.07	Replace missing or broken vent valve for 50mm air vent	No	25.000
			.08	Replace missing or broken vent valve for 110mm air vent	No	32.000
			.09	Replace missing or broken cast iron inspection eye cover and frame only SANS 558 Type 14A in 500 x 500 mm x 75 mm thick concrete encasement	No	9.000
	.10	Replace missing or broken round cast iron gully grating 100mm-300mm diameter	No	42.000		
PAA.13	301.12	Servicing, cleaning and repair of domestic geysers, including replacement of element, thermostat, safety valve and vacuum breakers and rectifying of pipe work where necessary:				
		.01	100 litre electric geyser		No	4.000
		.02	150 litre electric geyser		No	15.000
		.03	200 litre electric geyser		No	3.000
Carried forward						

Brought forward					
CF.01.03	301.13	Manhole covers and grid inlets:			
		.01 Replacement of manhole covers, grid inlets, etc.:			
		.01 SANS 558 Type 2A - heavy duty class circular manhole covers and (square base) frame, solid top type:			
		.01 Maximum dimension up to and including 300mm	No	7.000	
		.02 Maximum dimension 301 mm to 600 mm	No	5.000	
		.02 SANS 558 Type 4A - medium duty class circular manhole covers and frame, single steel type:			
CF.01.03	301.14	Manhole covers and grid inlets:			
		.01 Manholes and inspection chambers:			
		.01 New pre-cast manhole up to 1.2m deep, including pre-cast cover and frame	No	5.000	
		.02 New pre-cast manhole from 1.2m up to 2.4m deep, including pre-cast cover and frame	No	5.000	
EG 07.01	301.15	Cleaning out, inspect and repair septic tanks:			
		.01 Cleaning out septic tanks and dispose of contents approximately 70km off-site and provide certificate of disposal	m ³	23.000	
	.02 Cleaning out of septic tanks and dispose of contents approximately 110km off-site and provide certificate of disposal	m ³	10.000		
	301.16	Supply and install a prefabricated septic tank approved according to SANS 0400 - PP10 & 52566. including excavation and backfilling with selected material and all necessary soil pipe connections:			
		.01 3600 litres septic tank system	No	1.000	
		.02 5400 litres septic tank system	No	1.000	
Carried forward					

Brought forward					
EG 07.04	301.17	French drains constructed according to SANS 10400-PP10:			
		.01 Soak test	No	4.000	
SABS 1200 DA 8.3	302.00	<u>EARTHWORKS</u>			
	302.01	Small works:			
8.3.2		.01 Excavate trenches in all materials and use for backfill or embankment or dispose	m ³	8.000	
		.02 Extra over item 01 above for:			
		.01 Intermediate excavation	m ³	8.000	
		.02 Hard rock excavation	m ³	8.000	
		.03 Importing and placing of approved 65-125mm rock fill from commercial sources or from borrow pits to 95% MOD AASHTO density	m ³	5.000	
		.04 PVC-u slotted subsoil drainage pipes complete with integral sockets:			
		.01 110 mm dia	m ³	36.000	
SANS 1200DB	303.00	<u>EXTERNAL WATER RETICULATION: EXCAVATIONS</u>			
8.3.2(a)	303.01	Excavate in all materials for trenches, backfill, compact, and dispose of surplus/unsuitable material, for the following pipe diameters for total trench depths:			
		.01 Not exceeding 1m deep x 600mm wide	m	22.000	
		.02 Extra-over item .01 above for:			
		.01 Intermediate excavation	m ³	24.000	
		.02 Hard rock excavation	m ³	25.000	
		.03 Excavation ancillaries:			
		.01 Compaction in road reserves	m ³	25.000	
		.04 Re-instate road surfaces complete with all courses:			
		.01 Gravel on shoulders	m ²	20.000	
		.02 Concrete block paving	m ²	20.000	
Carried forward					

Brought forward					
SANS 1200LB 8.2.1	303.02	Provision of bedding from trench excavations:			
		.01 300mm x 600mm bedding	m ³	22.000	
	304.00	<u>PIPES AND FITTINGS</u>			
SANS 1200L 8.2.1	304.01	Supply, lay and bed pipes complete with couplings, including testing:			
		.01 32mm dia. HDPE pipe Class 10, jointed with existing plasson high compression fittings	m	28.000	
		.02 63mm dia. HDPE pipe Class 10, jointed with existing plasson high compression fittings	m	30.000	
		.03 75mm dia. UPVC pipe Class 12, with mechanical rubber ring	m	30.000	
		.04 110mm dia. UPVC pipe Class 12, with mechanical rubber ring	m	25.000	
SANS 1200L 8.2.2	304.02	Extra over for supplying, laying and bedding of fittings complete with couplings as per pipe and fittings schedule:			
		.01 32mm dia. polypropylene, high-grade copolymer high compression adaptor for GMS	No	35.000	
		.02 32mm dia polypropylene, high-grade copolymer high compression couplings	No	25.000	
		.03 32mm dia polypropylene, high-grade copolymer high compression elbows	No	30.000	
		.04 64mm dia. polypropylene, high-grade copolymer high compression adaptor for GMS	No	20.000	
		.05 64mm dia polypropylene, high-grade copolymer high compression couplings	No	20.000	
		.06 64mm dia polypropylene, high-grade copolymer high compression elbows	No	22.000	
		.07 63mm x 32mm x 63mm dia polypropylene, high-grade copolymer high compression reducing tee	No	20.000	
		.08 75mm dia Class16 CI bends for uPVC pipes of all degrees	No	19.000	
		.09 110mm dia Class16 CI bends for uPVC pipes of all degrees	No	20.000	
	.10 75mm dia Class 16 uPVC bends of all degrees	No	20.000		
Carried forward					

Brought forward						
SANS 1200L 8.2.2	304.02	.11	110mm dia Class16 uPVC bends of all degrees	No	20.000	
		.12	75mm dia Class 16 UPVS tees of all degrees	No	25.000	
		.13	110mm dia Class16 uPVC tees of all degrees	No	25.000	
		.14	75mm-63mm dia Class 16 uPVC reducing tees of all degrees	No	25.000	
		.15	110mm - 75mm dia Class16 uPVC reducing tees of all degrees	No	20.000	
SANS 1200L 8.2.5	304.03	Supply and place pipes, fittings and specials as per pipe and				
		.01	Megaflex DHD 60 industrial garden hose with 10 years design life, 4000kPa max pressure, blue stripe, according to SABS 645-1970 type 2, per 30 metre roll	No	12.000	
	304.04	Supply solar powered geysers (approved by Engineer):				
		.01	Supply and installation of solar powered geyser installation, can be used in frost-free locations, inclusive of solar storage tank(s), solar collector panel/s, all brackets and fittings, shut off valves, strainers, drip tray, non return valves, expansion relief valve, safety valve, drain DiDino and electrical connection .01 Close coupled unit pitched roof installation - 150 litre, 2kW, 400kPa approved geyser	No	1.000	
	305.00	<u>REPAIR WORK TO MANICA BUILDING</u>				
			Provisional Sum for the repair work to damaged building	PC Sum		150 000.00
			Charge required by Contractor on sub item above	%	150 000	
TOTAL : SCHEDULE NO 2.2: INSTALLATION C2: PLUMBING, DRAINAGE AND WET SERVICES - CARRIED TO SUMMARY:						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN **BLACK INK**

SCHEDULE NO 2.3: INSTALLATION C3: FENCING, CLEANING AND SITE KEEPING RELATED WORK

CIVIL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	400.00	<u>FENCING, CLEANING AND SITE KEEPING</u>				
	401.00	<u>SOLID WASTE MANAGEMENT</u>				
CG.05	401.01	Supply of waste bins:				
	.01	Square black 240 litre waste bins including wheels	No	25		
	.02	105 litre swing steel bin size 475mm Ø x 800mm high	No	5		
	.03	60 litre wall mounted steel litter bin	No	10		
	.04	Round black 90 litre waste bin	No	10		
SANS 1200C	402.00	<u>SITE MAINTENANCE</u>				
	402.01	Removal and grubbing				
8.2.2	.01	Removal and grubbing of large trees and tree stumps of girth:				
	.01	Over 1 m and up to and including 2 m	No	10		
	.02	Over 2 m and up to and including 3 m	No	15		
	.03	Removal of undesirable vegetation	km	17.5		
	402.02	Providing, planting and establishing Trees and shrubs				
	.01	Trees and Shrubs as approved by Engineer	No	10		
CJ.05	403.00	<u>SUPPLY OF EQUIPMENT FOR ABLUTIONS</u>				
CJ.05.01	.01	Stainless steel hand dryer unit with blower output of 450 watt @ 20 000 rpm similar or equal to existing accelerator	No	6		
CJ.05.02	.02	Auto digital aerosol dispenser with stainless steel cover	No	5		
CJ.05.03	.03	Stainless steel toilet paper dispensing units, capable of holding two toilet paper rolls per unit	No	9		
CJ.05.04	.04	Stainless steel she bins	No	20		
CJ.05.05	.05	Stainless steel hand soap dispenser	No	12		
CJ.05.06	.06	Stainless steel urinal sanitizer	No	13		
Carried forward						

Brought forward					
	404.00	3m HIGH PERIMETER FENCE - WELDED MESH, TUBULAR STEEL POSTS, WITH 730mm CONCERTINA RAZOR WIRE			
	404.01	Fire break:			
CC.01 (L)	.01	Clearing of growth along fire break on fence route 2.5 m wide both sides	m	5200	
CC.02	404.02	Supply and erection of new fencing material to replace old material:			
	.01	Welded mesh:			
	.01	3m diamond mesh	m	750	
	.02	Tubular posts:			
	.01	3.0m high fence	No	60	
	.02	110 mm tubular posts with additional 600 mm double overhang at 45° and with concrete footing for 3.0m high fence	No	33	
	.03	65mm dia. stay for 3.0m post	No	22	
	.04	4mm thick fully galvanized straining wire	m	3000	
	.05	730mm fully galvanised concertina razor wire	m	500	
	.06	Gates:			
	.01	Double gate of height 3m	No	4	
	405.00	1.8m HIGH PERIMETER FENCE - RAZOR WIRE, TUBULAR STEEL POSTS, WITH 45° SINGLE OVERHANG			
	405.01	Clearing fence line:			
CC.01 (L)	.01	Clearing of growth along fence route 2.5 m wide both sides	m	750	
CC.02	405.02	Supply and erection of new fencing material to replace old material:			
	.01	Razor Mesh:			
	.01	1.8 m high razor mesh	m	150	
	.02	Replace damaged gully with pre-cast concrete Palisade	No	5	
Carried forward					

Brought forward					
CC.02	405.03	.02	Tubular posts:		
		.01	75 mm tubular posts with additional 600 mm single overhang at 45° and with concrete footing for 1.8m high fence	No	12
		.02	110 mm tubular posts with additional 600 mm single overhang at 45° and with concrete footing for 1.8m high fence	No	12
		.03	65mm dia. stay for 1.8m post	No	14
		.04	700mm fully galvanised flat wrap wire	m	60
	405.04		Redress, treating and painting of:		
		.01	Gates:		
CC.06 (LI)		.01	Double gate up to 6m wide	No	3
CC.05 (LI)		.02	Tubular posts:		
		.01	1.8 m high fence	No	34
	406.00		<u>1.8m PERIMETER FENCE - DIAMOND MESH. TUBULAR STEEL POSTS</u>		
CC.02	406.01		Supply and erection of new fencing material to replace old material:		
		.01	Diamond mesh:		
		.01	1.8m (2.5 mm 50mm x 50 mm) high diamond mesh	m	350
		.02	1,8 m (3.15 mm 25mm x 25 mm) high diamond mesh	m	15
		.02	Tubular posts:		
		.01	75mm tubular posts with additional 600 mm overhang at 45 degrees and with concrete footing for 1.8m high fence	No	22
		.02	110mm tubular posts with additional 600mm overhang at 45 degrees and with concrete footing for 1.8m high fence	No	16
		.03	65mm dia stay for 1.8m post	No	40
		.04	Straining wire	m	1200
		.05	Barbed wire	m	1200
		.06	Gates in 1.8m high fences:		
		.01	Double gate between 5.0m and 10.0m wide	No	2
Carried forward					

Brought forward					
	407.00	<u>3.0m PERIMETER FENCE - DIAMOND MESH. TUBULAR STEEL POSTS</u>			
CC.02	407.01	Supply and erection of new fencing material to replace old material:			
	.01	Diamond mesh:			
	.01	3.0m diamond mesh	m	2500	
	.02	Tubular posts:			
	.01	75mm tubular posts with additional 600 mm overhang at 45 degrees and with concrete footing for 3.0m high fence	No	90	
	.02	110mm tubular posts with additional 600mm overhang at 45 degrees and with concrete footing for 3.0m high fence	No	50	
	.03	65mm dia stay for 3.0m post	No	60	
	.04	Straining wire	m	3600	
	.05	Barbed wire	m	1200	
	.06	Gates in 3.0m high fences			
	.01	Double gate between 5.0m and 10.0m wide	No	2	
SABS 1200 G 8.3 8.3.2	407.02	SCHEDULED ITEMS			
	.01	Excavate for restricted foundation, footings and trenches in all materials and for backfill for embankment or dispose	m ³	30	
	.02	Break up, hack off and remove existing concrete	m ³	23	
	.03	Importing, placing and compacting approved G6 material in layers of 150mm from commercial sources or from borrow pits to 95% MOD AASHTO density	m ³	30	
	408.00	<u>2.4m PERIMETER FENCE - DIAMOND MESH, TUBULAR STEEL POSTS</u>			
CC.02	408.01	Supply and erection of new fencing material to replace old material:			
	.01	Diamond mesh:			
	.01	2.4m diamond mesh	m	550	
	.02	Tubular posts:			
	.01	75mm tubular posts with additional 600 mm overhang at 45 degrees and with concrete footing for 2.4m high fence	No	20	
	.02	110mm tubular posts with additional 600mm overhang at 45 degrees and with concrete footing for 2.4m high fence	No	21	
	.03	65mm dia stay for 2.4m post	No	20	
Carried forward					

Brought forward					
CC.02	408.01	.04	Straining wire	m	1650
		.05	Barbed wire	m	1200
		.06	Gates in 2.4m high fences:		
		.01	Double gate between 5.0m and 10.0m wide	No	1
CC.02	409.00	<u>2.3 m PRECAST CONCRETE PALISADE, CONCRETE POSTS</u>			
	409.01	Supply and erection of new fencing material to replace old material:			
		.01	2,3m high precast concrete palisade fence posts similar to existing undamaged posts	No	23
		.02	2,3m high precast concrete palisade fence palisades similar to existing undamaged palisades	No	65
		.03	2,3m high precast concrete palisade fence cross supports similar to existing undamaged cross supports	No	45
CC.02	410.00	<u>1.8 m PRECAST WALL CONCRETE POSTS</u>			
	410.01	Supply and erection of new fencing material to replace old material:			
		.01	1.8m precast wall posts similar to existing undamaged wall posts	No	32
		.02	1.8m precast wall units similar to existing undamaged wall units	No	70
	411.00	<u>RESIDENTIAL FENCE - 1,2 m DIAMOND MESH, TUBULAR STEEL POSTS AND STANDARDS</u>			
CC.01	411.01	Fence line:			
		.01	Cleaning of growth along fence route	m	20
CC.02	411.02	Supply and erection of new fencing material to replace old material:			
		.01	Diamond mesh:		
		.01	1,2 m diamond mesh fence	m	600
		.02	110mm tubular post with concrete footing for 1.2m high fence	No	32
		.03	65mm dia. stay for 1,2 m post	No	32
		.04	Y-standards for 1,2 m high fence	No	40
		.05	4mm thick fully galvanized straining wire	m	1800
		.06	Gates:		
		.01	In 1,2 m high fences:		
		.01	Single and double gates less than 1,5 m wide	No	8
		.02	Single and double gates between 1,5 m and 5,0 m wide	No	13
Carried forward					

Brought forward					
CC.02	412.00	<u>3,0 m HIGH SECURITY FENCE (HOTDIPPED GALVANISED IN ACCORDANCE WITH (SO 1461)</u>			
	412.01	.01	Posts		
		.01	3750 mm long x 100 mm x 70 mm x 8 mm angle iron posts, predrilled holes for fixing panels, including 2922 mm x 70 mm x 6 mm flat iron section predrilled holes for fixing mesh to posts using stainless steel M8 x 40 mm countersunk flushlocks bolts 9 per coverplate	No	40
		.02	Toprails		
		.01	2996 mm x 40 mm x 40 mm x 3 mm angle iron predrilled holes for fixing rails to posts and for fixing top section of mesh to rail. Toprail to be fitted with 32 mm x 2 mm serrated comb, fillet welded 10 mm at every 10 mm centres, including bolts, shear nuts and washers M8 x 30 mm stainless steel cupsquare bolts to fixed rails to posts and M8 x 40mm stainless steel cupsquare bolts to fixed top section of mesh to rails. Minimum coating of toprails 55 microns minimum coating of serrated comb. 55 microns	No	40
		.03	Bottomrail:		
		.01	2996 mm x 40 mm x 40 mm x 3 mm angle iron predrilled holes for fixing rails to posts and for fixing top section of mesh to rail, including bolts, shear nuts and washers M8 x 40 mm stainless steel cupsquare bolts to fixed bottom section of mesh to rails Minimum coating of bottomrail 55 microns	No	40
		.04	Panels - 356 double line wire and single skin mesh:		
		.01	Heavy high security welded panel fence, with rectangular mesh liner apertures 72.2 mm x 8.7 mm wire diameter 4 mm vertical wires are welded on both sides of the horizontal wires Width of panel 3050 mm Height of panel 2 995 m Tensile strength 600 - 900 mm ² Weld strength 60 -80% Weight 10 000 kg/m ² Coating: Calfan Class A Coated in accordance with SANS 10244-2-2003	No	40
		.05	Overhang extension:		
		.01	405 mm overhang extension with 3 strands of existing motto 2,5 mm double stranded aluzinc barbed wire and 405 mm diameter galvanised barbed tape concertina razor coil	m	40
		.06	Concrete footing		
		.01	Supply and install a 20 Mpa/19mm stone concrete footing size 300 mm wide x 200 mm deep complete with framework	m ³	20
Carried forward					

Brought forward					
	412.02	Supply and erection of new fencing material to replace old material:			
	.01	New fence Installation complete (all panels, posts, wiring and structural work) from site residential area around to the waste water treatment area	PC sum	-	250 000.00
	.02	Charge required by Contractor on sub item .01 above	%	250 000.00	
	412.03	Redress, treating and painting of:			
CC.06 (L)	.01	Gates:			
	.01	Double gate up to 3m wide	No	15	
	.02	Single gate up to 1.5m wide	No	30	
CC.05 (L)	.02	Tubular posts:			
	.01	1.2 m high fence	No	80	
CC.03	413.00	<u>REPAIR, RE-FIXING AND PAINTING OF FENCES</u>			
	.01	Repair wire and mesh fences less than 1,3m high	m	600	
	.02	Repair wire and mesh fences between 1,3m and 2,0m high	m	1200	
	.03	Repair wire and mesh fences between 2.0m and 3,0m high	m	1500	
CC.06	414.00	<u>REPAIR, RE-FIXING, PAINTING AND ALIGNING OF GATES</u>			
	.01	Repair, re-fix and align single or double gates 1.2m high and up to 3.0m wide	No	30	
	.02	Repair, re-fix and align single or double gates 3.0m high and up to 15m wide	No	15	
SABS 1200 G 8.4	415.00	<u>CONCRETE (STRUCTURAL)</u>			
8.4.3	415.01	Supply concrete at strength:			
	.01	Class 25 Mpa concrete in strip footings	m ³	30	
	.02	Class 25 Mpa in concrete walls	m ³	17	
8.3.1	415.02	Supply and fabrication of steelwork:			
	.01	Jointing by with 6mm fillet welds:			
	.01	Square section column guides with 500 x 500 x 8mm flat section base plates and end cap plates	t	2	
	.02	Square-section frame work in existing sliding gates	t	2	
Carried forward					

Brought forward					
8.3.2.0	415.03	Delivery to site:			
		.01 Normal delivery:			
		.01 Columns, rafters, purlins and braces for carport structures complete	t	2	
8.3.3	415.04	Erection on site:			
		.01 Steel framework and guides for existing steel sliding gates	t	2	
8.3.12	415.05	Additional Items:			
(e)		.01 Dismantling and removal of existing steel sliding gates	No	35	
(e)		.02 Dismantling and removal existing steel sliding gate guides	No	30	
(e)		.03 Dismantling and removal of existing steel panels	No	20	
(f)		.04 Re-erection of existing steel sliding gates	No	19	
(f)		.05 Re-erection of existing steel sliding gate guides	No	28	
(f)		.06 Re-erections of existing steel panels	No	28	
(g)		.07 Tying in to existing steel sliding gates	No	23	
(g)		.08 Tying in to existing steel sliding gate guides	No	28	
(g)		.09 Tying in to existing steel panels	No	19	
		.10 Replace 150mm sliding gate wheels	No	25	
		.11 Replace sliding gate guide wheels	No	28	
		.12 Replace electrical gate motor:			
		.01 Electric D3 motor for 5 m gate, installed complete	No.	2	
		.02 Electric D5 motor for 5 m gate, installed complete	No.	2	
		.03 Replace PC-board for an electrical gate motor	No.	2	
		.04 Supply one button remote control for electrical gate	No.	10	
		.05 Supply and deliver industrial 0.75kW, 1400 rpm, 380 V AC gate motor complete with sensors, limit switches, five remote control units (transmitter and receivers), base plate, 28 m long heavy duty 25 mm x 25 mm gear rack for a 28 m long and 3 m high gate. The industrial motor to be capable of opening and closing a gate with a mass of up to 5000 kg	No.	3	
	416.00	<u>REPAIR WORK TO MANICA BUILDING</u>			
		Provisional Sum for the repair work to damaged building	PC Sum		50 000.00
		Charge required by Contractor on sub item above	%	50 000	
TOTAL - SCHEDULE NO 2.3: INSTALLATION C3: FENCING, CLEANING AND SITE KEEPING RELATED WORK - CARRIED TO SUMMARY:					

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN **BLACK INK**

SCHEDULE NO 2.4: INSTALLATION C4: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER RELATED WORK NETWORKS RELATED WORK

**CIVIL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	500.00	<u>BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER</u>				
	501.00	<u>BOREHOLES</u>				
	.01	<u>Drilling of a new complete borehole inclusive of all infrastructure at river bed</u>	PC Sum	-		250 000.00
	.02	Charge required by Contractor on sub item above	%	250 000.00		
	502.00	<u>CORRECTIVE MAINTENANCE TO EXISTING BOREHOLES</u>				
DC.05	502.01	Rehabilitation of existing boreholes:	m	120		
DC.02.01	.01	Supply and install casing 165mm dia.	m	25		
DC.02.02	.02	Supply and install casing shoe	No	4		
DC.02.04	.03	Supply and install perforated casing 165mm dia.	m	75		
DA	502.02	Testing borehole capacity:				
DA.01	.01	Pump testing of boreholes	No	6		
DA.01.01	.02	Extra over for item 501.02.01:				
	.01	Ground water sampling	No	18		
	.02	Compilation of borehole report	No	18		
	.03	Removal of existing pumping equipment	No	5		
	.04	Reinstallation of existing pumping equipment	No	5		
DA.03.05	502.03	Decommissioning and removal of submersible pumping equipment:				
	.01	Borehole submersible pump and pipe work	No	2		
DA.03.03	502.04	Reconditioning of pumping equipment:				
	.01	Borehole submersible pump	No	6		
DA.03.02	502.05	Commissioning of submersible pumping equipment:				
	.01	Borehole submersible pump and pipe work	No	6		
Carried forward						

Brought forward					
FN11.06	502.06	Supply, installation, testing and commissioning of MCC boards or other electricity boards:			
	.01	Motor control centre to operate at least a 3 kW submersible pump with a pressure switch for automatic mode and manual operation on demand. Fitted on two 65mm diameter GMS support poles @ 1.5m. Refer to technical specification FN 08.05 & FN 08.05.01	No	4	
FN11.07	502.07	Decommission, recondition, test and commission MCC boards or other electricity boards:			
	.01	Motor control centre for borehole pump	No	6	
DA.06.06	502.08	Supply, deliver and install new borehole enclosure complete with roof and floor	No	2	
DA.04.01	502.09	Supply and delivery of submersible borehole pumps:			
	.01	Borehole submersible pump capable of pumping 5ℓ/second and maximum 140m total head	No	6	
	503.00	<u>BOREHOLE PIPE WORK</u>			
SANS 1200 L 8.2.5	503.01	Supply and install pipes, valves, fittings and specials:			
	.01	25mm ball valve with plastic coated plated steel lever and 2" (50mm) female connections	No	10	
	.02	25mm double orifice air valve / pump protector with bias mechanism	No	10	
	.03	20mm ball valve with plastic coated plated steel lever and 2" (50mm) female connections	No	5	
	.04	20mm pressure gauge 0-1000 kPa with large scale and stainless steel housing	No	15	
SANS 1200 L 8.2.5	503.02	.05 80mm dia. flanged bulk water meter, flow rates between 0.15 m ³ /h and 100 m ³ /h, 6 figure display and epoxy powder coated body and cover for sizes 40mm to 125mm, pressure of 16 bar	No	8	
	.06	80mm dia. flanged resilient seal gate valve with wheel handle	No	6	
	.07	80mm dia. standard cast iron flange adaptor from 80mm GMS to 75mm HDPE	No	25	
Carried forward					

Brought forward					
SANS 1200 L 8.2.5	503.03	Supply and install pipes, valves, fittings and specials as per borehole pipe and fittings schedule:			
	.01	Pipe fitting 1: Borehole base plate	No	25	
	.02	Pipe fitting 2: Flanged T with couplings	No	20	
	.03	Pipe fitting 3: Flanged 1m section	No	20	
	.04	Pipe fitting 4: Flanged elbow	No	18	
SANS 1200 L 8.2.1	503.04	Supply, lay and bed pipes complete with couplings, including testing:			
	.01	32mm dia. HDPE PE100 Class 10 pipe, jointed with existing plasson high compression fittings	m	30	
	.02	75mm dia. HDPE PE100 Class 10 pipe, jointed with existing plasson high compression fittings	m	85	
SANS 1200DB	504.00	<u>EXCAVATIONS</u>			
8.3.2(a)	504.01	Excavate in all materials for trenches, backfill, compact, and dispose of surplus/unsuitable material, for the following pipe diameters for total trench depths:			
	.01	Not exceeding 1m deep x 600mm wide	m	35	
8.3.2(b)	.02	Extra-over item 504.01.01 for:			
	.01	Intermediate excavation	m ³	24	
	.02	Hard rock excavation	m ³	20	
	.03	Excavation ancillaries			
	.01	Compaction in road reserves	m ³	24	
8.3.2(b)	.04	Re-instate road surfaces complete with all courses			
	.01	Gravel on shoulders	m ²	250	
	.02	Asphalt of 30mm thickness in roadway	m ²	250	
SANS 1200LB	504.02	Provision of bedding from trench excavations:			
8.2.1	.01	300mm x 600mm bedding of selected granular material	m ³	24	
SANS 1200LB	504.03	Supply only of bedding from borrow pits:			
8.2.2.2	.01	300mm x 600mm bedding of selected granular material	m ³	20	
Carried forward					

Brought forward					
	505.00	<u>BULK WATER SUPPLY</u>			
EK 07.05	505.01	Decommission and remove gate valves, non-return valves, air release valves and sluice gates:			
	.01	50mm double orifice air release valve	No	15	
	.02	50mm non-return valve	No	25	
	.03	80mm non-return valve	No	15	
	.04	110mm hydraulic float control valve	No	30	
	.05	110mm water meter	No	30	
	.06	50mm gate valve	No	20	
	.07	80mm gate valve	No	25	
	.08	100mm gate valve	No	25	
	.09	150mm gate valve	No	25	
EK 07.03	505.02	Service gate valves, non-return valves, air release valves and sluice gates:			
	.01	50mm double orifice air release valve	No	15	
	.02	50mm non-return valve	No	25	
	.03	80mm non-return valve	No	15	
	.04	110mm hydraulic float control valve	No	5	
	.05	110mm water meter	No	5	
	.06	50mm gate valve	No	20	
	.07	80mm gate valve	No	10	
	.08	100mm gate valve	No	5	
	.09	150mm gate valve	No	10	
EK 07.01	505.03	Supply and delivery of gate valves, non-return valves, air release valves and sluice gates:			
	.01	50mm double orifice air release valve	No	5	
	.02	50mm non-return valve	No	5	
	.03	50mm flanged resilient seal gate valve	No	5	
Carried forward					

Brought forward					
EK 07.02	505.04	Installation, testing and commissioning of gate valves, non-return valves, air release valves and sluice gates:			
	.01	50mm double orifice air release valve	No	5	
	.02	50mm non-return valve	No	5	
	.03	80mm non-return valve	No	5	
	.04	110mm hydraulic float control valve	No	5	
	.05	110mm water meter	No	5	
	.06	50mm gate valve	No	5	
	.07	80mm gate valve	No	5	
	.08	100mm gate valve	No	5	
	.09	150mm gate valve	No	5	
CE.05.02	505.05	Cleaning of existing manholes, chambers and other structures:			
	.01	Main valve chambers 1.2m x 1.2m x 2.5m deep	No	15	
CE.05.04	505.06	Repair of structures:			
	.01	Service manhole cover opening mechanisms on pumping main valve chambers	No	35	
	505.07	Supply and install valve box cover:			
	.01	50 mm dia water meter	No	10	
	.02	80 mm dia water meter	No	10	
	506.00	<u>CHLORINATION</u>			
DL.01	506.01	Supply and delivery of chlorination systems as described in DL.04.02:			
	.01	Dosing pump (6 bar, 2.7ℓ/h) with PVC head and electronic control panel and wall bracket to mount pump with installation kit including injection nozzle, suction foot valve, 10m dosing hose and pressure relief valve	No	2	
	.02	315ℓ chemical supply tank on 600 mm x 600 mm x 300mm raised platform including plumbing into supply tank and drain within 10m	No	2	
	.03	Signal cable with plug for connecting into pump from water meter and electrical wiring with reed switch pulse sensor	No	2	
Carried forward					

Brought forward					
DL.02	506.02	Installation, testing and commissioning of chlorination systems:			
	.01	Complete system with dosing pump, tank and all fittings and	No	2	
	507.00	<u>OPERATING AND MAINTENANCE MANUALS</u>			
SB.01	507.01	Compile and supply a complete set of operating and maintenance manuals:			
	.01	Bulk water supply system including boreholes: Update existing O & M manual	Sum	1	
	508.00	<u>WATER DISTRIBUTION NETWORKS</u>			
CE.01	508.01	Water distribution pipelines:			
	.01	Repair of existing pipelines:			
	.01	Distribution pipes	m	80	
	.02	House connections	m	40	
	.03	Irrigation pipes	m	80	
	.02	Provision of materials for repair of existing:			
	.01	uPVC class 12 pressure pipes to SANS 966 with integral "LYNG" mechanical rubber ring joints:			
	.01	75 mm dia.	m	60	
	.02	110 mm dia.	m	50	
	.03	160 mm dia.	m	30	
	.02	Galvanised mild steel (GMS) medium duty quality pipes to SANS 62 with flanged couplings. Normalised pipes:			
	.01	20 mm dia.	m	20	
	.02	50 mm dia.	m	30	
	.03	80 mm dia.	m	40	
	.03	HDPE - PE100 Class 10 pressure pipes, ISO 4427:			
	.01	32 mm dia.	m	20	
	.02	50 mm dia.	m	30	
Carried forward					

Brought forward								
CE.01	508.01	.02	.04	Saddles with standard drilling and 25 mm BSP tapping for connections to supply lines:				
			.01	110 mm dia.	No	8		
			.02	160 mm dia.	No	12		
		.05		Standard bends of all degrees and all types completely fitted in pipes of all types with inside diameters of:				
			.01	Between 39 mm and 55 mm	No	10		
			.02	Between 55 mm and 76 mm	No	10		
			.03	Between 76 mm and 99 mm	No	10		
			.04	Between 99 mm and 130 mm	No	10		
			.05	Between 130 mm and 180 mm	No	10		
		.06		Standard equal tees, reducing tees (largest connection pipe determine payment classification) and cross pieces of all types completely fitted in pipes of all types with inside diameters of:				
			.01	Between 39 mm and 55 mm	No	5		
			.02	Between 55 mm and 76 mm	No	5		
			.03	Between 76 mm and 99 mm	No	20		
			.04	Between 99 mm and 130 mm	No	5		
		.07		Standard reducers (largest connection pipe determine payment classification) of all types completely fitted in pipes of all types with inside diameters of:				
			.01	Between 55 mm and 76 mm	No	10		
			.02	Between 76 mm and 99 mm	No	10		
			.03	Between 99 mm and 130 mm	No	10		
		.08		Standard couplings, repair couplings, flange adapters and other adapters (to connect different types of pipes and fittings) of all types completely fitted in pipes of all types with inside diameters of:				
			.01	Between 76 mm and 99 mm	No	5		
			.02	Between 99 mm and 130 mm	No	5		
			.03	Between 130 mm and 180 mm	No	5		
Carried forward								

Brought forward							
CE.01	508.01	.02	.09	Sprinklers, completely fitted:			
			.01	Micro sprinklers with supports and complete with connection to supply pipe	No	20	
			.02	Rotational retractable type	No	20	
CE.01.03		.03		Replacement of manhole covers, grid inlets, etc:			
		.01		SANS 558 Type 8B - Medium duty class size 600 x 600mm square manhole cover and frame, double sealed type	No	20	
		.02		SANS 558 Type 9A - Light duty class size 600 x 600mm square manhole cover and frame, single sealed type	No	20	
		.03		SANS 558 Type 9E - Light duty class size 900 x 600mm rectangular manhole cover and frame, single sealed type	No	4	
	509.00			<u>RECOVERED PLASTIC / STEEL TANKS</u>			
SANS 1200 C 8.2.1	509.01			Site clearance and grubbing:			
		.01		Clear and grub	m ²	10	
8.3.2 (a)	509.02			Excavation:			
		.01		Excavate in all materials and use for backfill:			
		.01		Foundation for tank	m ³	10	
		.02		Excavate in all materials and dispose of within 1 km from site	m ³	20	
8.3.2 (a)	509.03	.03		Importation of materials:			
		.01		Extra over for importation of G5 material from borrow pit within 10 km from site	m ³	20	
SANS 1200G 8.2.1	509.04			Formwork:			
		.01		Vertical, rough	m ²	10	
	509.05			Reinforcement:			
8.3.1		.01		High tensile steel	kg	100	
8.3.2		.02		Mesh 245	kg	100	
8.4.3	509.06			Structural concrete:			
		.01		Class 25 Mpa, 25mm concrete :			
		.01		Foundation for elevated tank	m ³	10	
PCI.02	509.07			Lightning protection for storage tank:			
		.01		Recovered plastic/steel tanks and stand	Sum	1	
Carried forward							

Brought forward					
PCI.03	509.08	Sterilization of storage tank:			
	.01	Recovered plastic/steel tank	No	1	
PCI.04	509.09	Testing for water tightness of storage tank:			
	.01	Recovered plastic/steel tank	No	1	
PCI.06	509.10	Installation of hydraulic operated floater control valve:			
	.01	50mm angle type	No	1	
	509.11	Decommission and remove existing plastic water tanks and steel structure and keep safe on site	Sum	1	
	509.12	Move and re-install existing plastic/steel water tanks and steel structure at residential area	Sum	1	
	510.00	<u>REPAIR ELEVATED STORAGE TANK</u>			
DH 09.10	.01	Decommissioning and stripping of elevated concrete tower tower	Sum	1	
DH 09.11	.02	Supply and installation of new valves	Sum	1	
DH 09.12	.03	Supply and installation of new or refurbished stairs and ladders	Sum	1	
	511.00	<u>SUPPLY, SERVICE AND FIX PERSONAL REVERSE OSMOSIS (RO) UNITS WITH PIPES, FITTINGS</u>			
	511.01	Supply and installation of RO units:			
DH09.14	.01	Remove, service and re-install existing personal RO units	No	12.00	
DH09.15	.02	Supply, installation and commissioning of new personal RO units	No	10.00	
DH09.16	.03	Supply deliver and store of spare filter units membranes and service kits	No	12.00	
DH09.13	.04	Provide full service of (RO) units according to manufacturer's specifications. (Bi-Annual)	PC Sum	-	100 000.00
	.05	Charge required by Contractor on sub item .05 above	%	100 000.00	
	512.00	<u>DRINKING FOUNTAINS</u>			
PAA.05	.01	Supply and install drinking fountain complete with base, fibreglass basin and drinking fountain pillarcock with adjustable flow nozzle	No	1.00	
PAA.05	.02	15mm BSP male brass drinking fountain pillarcock, with adjustable nozzle flow control, hygienic protective plate	No	1.00	
PAA.05	.03	Demand pushbutton bib tap with a flow straightener	No	1.00	
Carried forward					

Brought forward					
DH 07	513.00	<u>TRAINING OF OPERATORS</u>			
	.01	Training of operators for the maintenance of Water Treatment Works	No	4.00	
EZ.07	514.00	<u>SWIMMING POOL REPAIR WORK</u>			
	.01	Resurfacing	m ²	100	
	.02	Repair of surface cracks	m	10	
	.03	Relining of existing concrete / marble / fibre class pools	m ²	100	
DH 09.06	515.00	<u>SUPPLY AND DELIVERY OF WATER TREATMENT CHEMICALS & EQUIPMENT</u>			
	.01	Chlorine (in 25Kgs or in 25Ls)	No	80	
	.02	Potassium permanganate (in 25Kgs)	No	30	
	.03	Ultrafloc U3500 or similar (25Ls)	No	30	
	.04	Pressurised chemical tanks (250L)	No	3	
	516.00	<u>WATER TREATMENT PLANT SLOW SAND FILTERS</u>			
	.01	Remove and dispose of filter sand	m ³	50	
	.02	Supply, deliver and place filter sand to existing filter media	m ³	50	
	.03	Replace complete sand filter housing unit, complete with all fittings and pipe work	Sum	1	
TOTAL - SCHEDULE NO 2.4: INSTALLATION C4: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS RELATED WORK - CARRIED TO SUMMARY:					

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**SCHEDULE NO 2.5: INSTALLATION C5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS
RELATED WORK****CIVIL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	600.00	<u>WASTEWATER TREATMENT WORKS AND SEWER NETWORKS</u> Pumping out, cleaning and reconditioning of wastewater tanks and related infrastructure as described in EB 08.01.01				
		.01 Clean out buffer tank complete, remove all artificial solids and burn as described in "Specification EA to EG": The raw sewer sump/buffer tank of +- 50 m ³ will be pumped out by means of the existing raw sewer pumps. The inlet works will be blocked at the first inlet manhole. The sumps will be cleaned by means of high pressure washing and all items and sludge will be removed, dried out and disposed of at an approved and authorised dumping site. Existing steel members will be replaced with stainless steel and brackets will be repaired and protected from corrosion with an approved product suitable to withstand wastewater corrosive conditions.	No.	2		
		.02 Clean out aerobic reactor tank complete, remove all artificial solids and burn as described in "Specification EA to EG": The aerobic reactor tank of +-120 m ³ will be pumped out by means of installing a temporary pump and pumping all effluent to the buffer tank or dry beds until dry. The aerobic reactor tank will be cleaned by means of high pressure washing and all items and sludge will be removed, dried out and disposed of at an approved and authorised dumping site.	No.	2		
		.03 Clean out clarifiers complete, dispose all artificial solids and burn as described in "Specification EA to EG": Draining out sludge from clarifier. Cleaning and reconditioning by means pumping the sludge to the dry beds, washing the chamber with a high pressure washer and disposing of the dried out matter at an approved and authorised dumping site	No.	2		
Carried forward						

Brought forward				
	601.00	<u>RAW SEWER PUMP SYSTEM</u>		
EB.08	601.01	Pumping out, cleaning and reconditioning of waste water pump sumps and related infrastructure as described in EB 07.01.01	No	6
EB.09	601.02	Reconditioning of MCC Boards as described in EB 07.02	No	3
EB.03	601.03	Decommissioning and removal of pumping equipment:		
	.01	Pump and motor	No	6
	.02	Aerator (roots blower) complete with motor	No	2
EB.04	601.04	Reconditioning of pumping equipment:		
	.01	Pump and motor	No	4
	.02	Aerator (roots blower) complete with motor	No	2
EB.02	601.05	Installation, testing and commissioning of pumping equipment:		
	.01	Pump and motor	No	6
	.02	Aerator (roots blower) complete with motor	No	2
EB.07	601.06	Replace, test and commissioning of float level switches or other level probes	No	12
	602.00	<u>FLOW MEASURING EQUIPMENT</u>		
EA.13	602.01	Decommissioning, servicing, testing, re-commissioning and calibration of existing flow measuring equipment:		
	.01	Ultrasonic open channel flow meter with transducer and totalizer, including all cables, fixtures and appurtenances	No	2
	.02	Existing Krohne Electromagnetic flow meters – existing Optiflux 2000 Sensor	No	2
Carried forward				

Brought forward					
BK.03.04.04	603.00	<u>CONCRETE REPAIR</u>			
	603.01	Repair concrete:			
	.01	Scabble surface removing all loose and suspect material taking care not to damage the existing reinforcing	m ²	30	
	.02	Apply a 20mm thick approved single-component polymer modified, cementitious repair mortar to existing concrete wastewater retaining structures	m ²	30	
BK.03.05	604.00	<u>EXPANSION JOINT REMEDIAL PROCEDURE</u>			
	604.01	Repair expansion joint:			
	.01	Remove all loose and defective joint material and clean around affected area to prepare the surface for the new material by means of, grinding followed by brooming and vacuuming	m	150	
	.02	High performance joint and crack sealing system, consisting of an elastomeric, 200mm wide x 2mm thick, sealing strip and hixotropic epoxy adhesive	m	200	
BK.03	605.00	<u>MOVEMENT JOINTS</u>			
	605.01	Joint sealer:			
	.01	Single component fast curing polyurethane joint sealer suitable for wastewater retaining structures	m	150	
Carried forward					

Brought forward						
	606.00	<u>RAS PUMPS</u>				
EB.08	606.01	Pumping out, cleaning and reconditioning of waste water pump sumps and related infrastructure as described in EB 07.01.02	No	2		
EB.09	606.02	Reconditioning of MCC boards as described in EB.07.02	No	2		
EB.03	606.03	Decommissioning and removal of pumping equipment:				
	.01	Pump and motor	No	2		
EB.04	606.04	Reconditioning of pumping equipment:				
	.01	Pump and motor	No	2		
EB.02	606.05	Installation, testing and commissioning of pumping equipment:				
	.01	Pump and motor	No	2		
EB.07	606.06	Replace, test and commissioning of float level switches or other level probes	No	2		
	607.00	<u>SLUDGE PUMP SYSTEM</u>				
EB.08	607.01	Pumping out, cleaning and reconditioning of waste water pump sumps and related infrastructure as described in EB 07.01.03	No	2		
EB.03	607.02	Decommissioning and removal of pumping equipment:				
	.01	Existing sludge pumps	No	2		
EB.01	607.03	Supply and delivery of pumping equipment:				
	.01	Electrically operated submersible sewerage pump (Submersible Pump Robot RW 201000) with vortex impeller including the duck foot bend and guide rails fixed to sump floor and overhead mountings for sludge recycle and withdrawal with the following: Delivery = 4 ℓ/s (maximum delivery of 8 ℓ/s) Total head = 5.5 metre Motor spec = 2.1 kW at 1450 rpm Discharge diameter = 50 mm Suction diameter = 50 mm	No	4		
Carried forward						

Brought forward						
EB.02	607.04	Installation, testing and commissioning of pumping equipment:				
	.01	Pumps and motors	No	2		
EB.09	607.05	Reconditioning of MCC boards as described in EB.07.02 to accommodate pump	No	4		
EB.07	607.06	Replace, test and commissioning of float level switches or other level probes	No	4		
	608.00	<u>VALVES</u>				
EK 07.05	608.01	Decommission and remove gate valves, non-return valves air release valves and sluice gates:				
	.01	50mm double orifice air release valve	No	5		
EK 07.05	.02	80mm non-return valve	No	2		
	.03	80mm gate valve	No	2		
	.04	100mm gate valve	No	2		
EK 07.03	608.02	Service gate valves, non-return valves air release valves and sluice gates:				
	.01	50mm double orifice air release valve	No	2		
	.02	80mm non-return valve	No	2		
	.03	80mm gate valve	No	2		
	.04	100mm gate valve	No	2		
Carried forward						

Brought forward					
EK 07.02	608.03	Installation, testing and commissioning of gate valves, non-return valves air release valves and sluice gates:			
	.01	50mm double orifice air release valve	No	5	
	.02	80mm non-return valve	No	5	
	.03	80mm gate valve	No	5	
	.04	100mm gate valve	No	5	
	609.00	<u>WWTW OPERATIONS, REPAIR AND SERVICING</u>			
SB.01	609.01	Compile and supply a complete set of Operating and Maintenance manuals:			
	.01	Wastewater treatment works: Update existing O & M manual	Sum	1	
SC.03	609.02	Commissioning and testing of the installation:			
	.01	Entire wastewater treatment works system and supporting networks:	Sum	1	
EA.01	.01	Service flow meter	Sum	1	
EA.02	.02	Supply and delivery of Data Logger	No.	1	
EA.03	.03	Supply and Installation, testing and commission of screenings draining plate	No	2	
EA.04	.04	Decommissioning and removal of Rag Catcher	Sum	1	
EA.05	.05	Supply and Installation of a new Rag-Catcher	Sum	1	
EM.05.01	.06	Pump out of sludge into a suitable waste containment vehicle for transportation	m ³	1 000	
EM.05.02	.07	Disposing of sludge at a registered commercial source on the instruction of the Engineer/Department's representatives and provide certificate	m ³ -km	20 000	
Carried forward					

Brought forward						
DH 07	610.00	Chlorine Dosing Equipment				
	.01	Supply and deliver, 1.6kg Chlorine floaters	No.	150		
	611.00	<u>TRAINING OF OPERATORS</u>				
	.01	Training of operators for the maintenance of Waste Water Treatment Works	No	4.00		
	612.00	Sewer Sump Room - Centrifugal Pumps				
	.01	Provide full service of Pump units according to manufacturer's specifications. (Annual)	PC Sum	-		100 000.00
	.02	Charge required by Contractor on sub item above	%	100 000.00		
		Repair to existing Reed beds				
	.01	Repair to reed beds	PC Sum	-		100 000.00
	.02	Charge required by Contractor on sub item above	%	100 000.00		
TOTAL - SCHEDULE NO 2.5: INSTALLATION C5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS RELATED WORK - CARRIED TO SUMMARY:						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002A1

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE NO 2.6: INSTALLATION C6: ROADS AND STORM WATER DRAINAGE RELATED WORK

CIVIL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	700.00	ROADS AND STORM WATER DRAINAGE				
CA.01	700.01	Repair of gravel wearing course and gravel shoulders:				
	.01	Ripping, redistributing and compacting to a density of 93% of modified AASHTO with 4% cement stabilization	m ³	150		
	.02	Importing, placing and compacting material from commercial sources to a density of 93% of modified AASHTO	m ³	150		
	.03	Grading only	m ³	450		
	.04	Overhaul on surplus material	m ³ -km	450		
	.05	Backfilling and reinstatement of pavement layers:				
	.01	Selected layers compacted to 93% of modified AASHTO density with 4% cement stabilization.	m ³	20		
	.02	Cement stabilized subbase layers compacted to 95% of modified AASHTO density with 4% cement stabilization.	m ³	10		
	.03	Cement stabilized base layers compacted to 97% modified AASHTO density	m ³	10		
	.06	Cast in situ concrete and formwork in edge beams, intermediate beams and kerbing:				
	.01	Class 30 Mpa concrete	m ³	35		
	.07	Steel reinforcement in edge beams, intermediate beams and kerbing:				
	.01	Mild steel bars	t	1		
	.02	High-tensile steel bars	t	1		
CA.05	.08	Concrete block paving:				
	.01	SABS approved 80mm, Class 35 Mpa interlocking grey concrete paving block for areas carrying mainly heavy vehicle traffic	m ²	1 800		
Carried forward						

Brought forward							
CA.05	700.01	.08	.02	SABS approved 80mm, Class 35 Mpa interlocking grey concrete paving blocks for areas carrying pedestrian traffic only	m ²	250	
CA.06	700.02	Repair of existing concrete block paving:					
		.01		80 mm interlocking paving blocks	m ²	4 500	
		.02		Concrete paver blocks gray (200mm x 100mm x 60 mm thick)	m ²	60	
		.03		Break out, hack off and remove existing concrete edge beams and storm water structures	m ³	50	
CA.06	700.03	Repair of kerbing:					
		.01		Patching of kerbs	m	450	
		.02		Reinstalling pre-cast kerbs	m	135	
		.03		Replacing of kerbs			
		.01		Barrier kerbs similar to existing undamaged barrier kerbs	m	25	
		.02		Semi-mountable kerbs similar to existing undamaged semi-mountable kerbs	m	10	
	701.00	<u>EXISTING ROADS AT THE RESIDENTIAL AREA</u>					
		<u>BITUMINOUS PAVEMENTS</u>					
	701.01	Pavement layers and asphalt surface repair:					
CA.03.01		.01		Excavation in existing pavements for patching	m ³	25	
COLTO 16.01		.02		Overhaul on material hauled in excess of 1,0 km (ordinary overhaul)	m ³ -km	35	
COLTO 38.08		.03		Sawing or cutting asphalt or cemented pavement layers:			
		.01		Cutting asphalt using a mechanical sawing machine	m	125	
CA.03.02		.04		Backfilling of excavations for patching with:			
		.01		Cement-stabilized gravel excavated from the existing pavement (areas up to and including 10 m ²)	m ³	25	
		.02		Cement-stabilized gravel excavated from the existing pavement (areas larger than 10 m ² up to and including 50 m ²)	m ³	40	
		.03		Asphalt surfacing (continuously graded medium; transport measured under overhaul)	t	5	
Carried forward							

Brought forward					
CA.04	701.02	Surface treatment of surfaced roads:			
	.01	Trimming the edges and edge breaks of the existing surfacing	m	35	
	.02	Pothole repair using hot-mix continuously graded asphalt (transport measured under overhaul)	t	6	
	.03	Repairing edge breaks using hot-mix continuously graded	t	6	
CA.04.06	701.03	Cleaning of cracks with compressed air	km	2	
CA.04.07	701.04	Applying bituminous binders and herbicides for sealing cracks:			
	.01	Anionic stable-grade emulsion mixed with synthetic modifiers	ℓ	300	
	.02	Coarse grade slurry mixed in concrete mixer and applied by hand	m ³	12	
	701.05	Single seals:			
COLTO 44.01	.01	Single seals (grade 1 aggregate) using 9,5 mm aggregate (80/100 pen grade bitumen @ 1,0 ℓ/m ²)	m ²	450	
COLTO 44.02	.02	Bituminous binder variations:			
	.01	Road grade B8 (80/100 pen grade) bitumen	ℓ	250	
COLTO 44.03	.03	Aggregate variations:			
	.01	9,5 mm aggregate	m ³	3	
COLTO 44.04	.04	Application of fog spray:			
	.01	30% spray-grade emulsion	ℓ	250	
COLTO 44.05	.05	Pre-coating the aggregate at a rate of 12 litre/m ³ (bitumen-based pre-coating fluid)	m ³	20	
COLTO 48.03	701.06	Slurry seal:			
	.01	Texture correction slurry applied by hand (COLTO Table 4302/12)	m ³	10	
Carried forward					

Brought forward					
	702.00	<u>CONCRETE BLOCK PAVEMENTS AT THE RESIDENTIAL AREA</u>			
CA.05.01	702.01	Remove concrete paving blocks:			
	.01	Discard paving blocks	m ²	80	
	.02	Stockpile and re-use paving blocks	m ²	100	
CA.05.04	702.02	Cast in situ concrete and formwork in edge beams, intermediate beams and kerbing:			
	.01	Class 30 Mpa concrete	m ³	25	
CA.05.05	702.03	Breaking up and removing concrete edge beams, intermediate beams, etc.	m ³	12	
CA.05.06	702.04	Steel reinforcement in edge beams, intermediate beams and kerbing:			
	.01	Mild steel bars	t	1	
CA.05.07	702.05	Concrete block paving:			
	.01	Class, type and thickness similar to existing pavement for areas carrying heavy vehicular traffic (80 mm interlocking paving blocks (grey) on 20 mm bedding sand)	m ²	250	
	.02	Re-use stockpiled block paving (80 mm interlocking paving blocks on 20 mm bedding sand)	m ²	100	
CA.05.01	702.06	Repair of existing concrete block paving:			
	.01	Removal of existing concrete block paving from site	m ²	30	
	.02	Stockpile and re-use paving blocks	m ²	50	
CA.06	702.07	Repair of kerbing:			
	.01	Patching of kerbs	m	220	
	.02	Reinstalling pre-cast kerbs	m	50	
	.03	Replacing of kerbs:			
	.01	Barrier kerbs similar to existing undamaged barrier kerbs	m	150	
Carried forward					

Brought forward					
	703.00	<u>GRAVEL SHOULDERS AND WEARING COURSE AT THE RESIDENTIAL AREA</u>			
CA.01.02	703.01	Gravel shoulders constructed from gravel from commercial sources:			
	.01	Compacted to 93% of modified AASHTO density (150 mm compacted layer thickness) with 4% cement stabilization.	m ³	22	
COLTO 16.01	.02	Overhaul on material hauled in excess of 1,0 km (ordinary overhaul)	m ³ -km	20	
	704.00	<u>ANCILLARY ITEMS</u>			
CA.06	704.01	Repair of kerbing:			
	.01	Patching of kerbs	m	125	
	.02	Replacing of kerbs:			
	.01	Barrier kerbs similar to existing undamaged barrier kerbs	m	225	
	.02	Semi-mountable kerbs (SANS Fig.7)	m	200	
	.03	Removal of kerbs	m	500	
	705.00	<u>ROAD TRAFFIC SIGNS AND ROAD MARKINGS</u>			
CA.07	705.01	Erection and repair of road traffic signs and traffic-control devices:			
	.01	Erection or reinstatement of road sign boards:			
	.01	Area not exceeding 2 m ²	m ²	55	
CA.07	.02	Supply and installation of sign boards:			
	.01	1.2mm thick non reflective, full colour, signs with baked silicone polyester enamel paint consisting 4 - 6 micron (DFT) primer and 18 - 22 micron (DFT) final coat mounted in buildings or to entrances of buildings	m ²	80	
	.02	1.4mm thick non reflective, full colour, signs with baked silicone polyester enamel paint consisting 4 - 6 micron (DFT) primer and 18 - 22 micron (DFT) final coat mounted on frames in open areas	m ²	80	
	.03	1.4mm thick pre-painted galvanised steel road signs less than 1.5m ²	m ²	80	
Carried forward					

Brought forward					
CA.07	705.01	.03	Road sign supports (overhead road sign structures excluded):		
		.01	Steel tubing of 76 mm diameter and 3 mm wall thickness	m	250
		.02	Galvanized D-profile steel tubing of 3 mm wall thickness	m	300
		.04	Excavation and backfilling for road sign supports	m ³	200
		.05	Extra over item 705.01.04 for cement-treated soil backfill	m ³	200
		.06	Hazard plates (600 x 150 mm)	No	350
		.07	Repair of road sign faces	m ²	45
CA.08	705.02	Road markings:			
		.01	Retro-reflective road-marking paint:		
		.01	Longitudinal lines:		
		.01	White lines (broken or unbroken) - 100 mm width	m	1 050
		.02	Yellow lines (broken or unbroken) - 100 mm width	m	700
		.02	Transverse lines and other markings:		
		.01	Broken or unbroken lines, white, red or yellow	m ²	180
		.02	Lettering and symbols, white, red or yellow, repainting existing markings	m ²	225
		.03	Traffic island markings, white or yellow repainting existing markings	m ²	175
		.02	Setting out and pre-marking of lines (excluding traffic island markings, lettering and symbols)	km	4
CB.02.02	705.03	Cleaning of prefabricated culverts:			
		.01	Cleaning of prefabricated culvert and inlet and outlet structures (average depth of material removed is more than 100 mm):		
		.01	Prefabricated concrete pipes and portal culverts with maximum cross sectional dimension of:		
		.01	Up to and including 500 mm	m ³	350
Carried forward					

Brought forward					
706.00	<u>CONSTRUCTION OF A RETAINING WALL AT THE PEDESTRIAN BRIDGE AND OPERATIONAL AREA</u>				
706.01	Clear Site:				
.01	Clear and grub site	m ²	520		
.02	Remove and grub large trees and tree stumps of girth over 1 m and up to 2m	No	25		
.03	Take down existing fence and remove from site	m	145		
706.02	Excavation				
.01	Excavate in all materials and use for backfill or spoil along embankment	m ³	100		
.02	Fill material from excavations against gabions and compact to 93% Mod AASHTO density with 4% cement stabilization.	m ³	55		
706.03	Gabions:				
.01	Surface preparation for bedding of gabions	m ²	220		
.02	Supply dump rock for gabion cages	m ³	200		
.03	Supply gabion cages (2 m x 1 m x 1 m)	No	185		
.04	Supply gabion cages (2 m x 0.5 m x 0.5 m)	No	65		
.05	Construct gabions using 2,7 mm galvanised wire mesh with mesh size 80 x 100 mm using 100 mm to 250 mm rock size	m ³			
.06	Construct gabions of section 0,5 m x 0,5 m for walls	m ³	70		
.07	Construct gabions of section 1,0 m x 1,0 m for walls	m ³	180		
706.04	Pitching:				
.01	Ordinary pitching of thickness at least 200mm on slope of bank	m ³	210		
.02	Carting away of excess material from site	m ³	30		
Carried forward					

Brought forward					
SABS 1200 DA 8.3	707.00	<u>EARTHWORKS</u>			
8.3.2	707.01	Small works:			
	.01	Excavate for restricted foundation, footings and trenches in all materials and use for backfill or embankment or dispose	m ³	80	
	.02	Break up, hack off and remove existing concrete	m ³	30	
8.3.4	.03	Importing, placing and compacting approved G6 material in layers of 150mm from commercial sources or from borrow pits to 95% MOD AASHTO density	m ³	50	
	.04	Extra over item 707.01.01 above for:			
	.01	Intermediate excavation	m ³	15	
	.02	Hard rock excavation	m ³	10	
CB.01	708.00	<u>STORMWATER DRAINAGE</u>			
	708.01	Replacement of manhole cover, grid inlets, etc:			
	.01	SABS 558 Type 4 - covers, grids, etc.			
	.01	Maximum dimension up to including 300mm	No	4	
	.02	Maximum dimension 300 mm to 600 mm	No	3	
	.02	SABS 558 Type 4 - frames only for cover, grids, etc.			
	.01	Maximum dimension up to including 300mm	No	5	
	.02	Maximum dimension 301 mm to 600 mm	No	8	
	.03	SABS 558 Type 2A - covers, grids, etc.:			
	.01	Maximum demension up to including 300mm	No	2	
	.02	Maximum demnsion 301 mm to 600 mm	No	4	
	.03	Maximum demension 601 mm to 900 mm	No	3	
	.04	SABS 558 Type 2A - frames only for covers, grids, etc.:			
	.01	Maximum demension up to including 300mm	No	5	
	.02	Maximum demension 301 mm to 600 mm	No	6	
	.03	Maximum demension 601 mm to 900 mm	No	4	
	.04	Stormwater grid inlet and frame 1 700 mm x 2200 mm, installed in existing concrete stormwater channel	No	3	
Carried forward					

Brought forward					
CB .02	709.00	<u>CLEANING OF PREFABRICATED CULVERTS</u>			
	709.01	Cleaning of prefabricated culverts and inlet structures:			
	.01	At average depth of material removed up to 100mm			
	.02	Cleaning of prefabricated concrete pipes and portal culverts with maximum cross sectional dimension of:			
	.01	Up to and including 500 mm	m	30	
	.02	501 mm to 750 mm	m	20	
CB.03	710.00	<u>CONCRETE CONSTRUCTION AND REPAIR</u>			
	.01	Excavation in:			
	.01	Soft Material	m ³	15	
	.02	Hand Material	m ³	8	
	.02	Cast in situ concrete:			
	.01	Class 20 concrete	m ³	9	
	.02	Class 30 concrete	m ³	8	
	.03	Backfill below channels	m ³	10	
	.03	Steel reinforcement:			
	.01	Welded steel mech ref. 193	kg	45	
	.04	Demolition and removal of damaged existing structures:			
	.01	Plain concrete	m ³	2	
	.02	Reinforced concrete	m ³	2	
	.05	Overhaul on material for haul in excess of 1,0 km:			
	.01	Excavated material to spoil	m ³ .km	8	
	.02	Existing structures demolished	m ³ .km	5	
CB .04	711.00	<u>CLEANING OF CONCRETE DRAINS AND CHANNELS</u>			
	.01	Remove of dispose of material from:			
	.01	Drains and channels within the following invert with ranges:			
	.01	Less than 1,0 m	m	100	
	.02	1,0 m up to and including 2,0 m	m	20	
	.02	Overhaul on material for haul in excess of 1.0 km	m ³ .km	15	
Carried forward					

Brought forward						
CB .06	712.00	<u>REPAIR AND CONSTRUCTION TO EXISTING BRICKWORK INLET STRUCTURES</u>				
		.01 Demolition and removal of existing structures	m ³	3		
		.02 Repair of brickwork inlet structures	No	6		
		.03 Reconstruction of brickwork inlet structures	No	4		
CK .06	713.00	<u>PATENTED EARTH RETAINING STRUCTURES</u>				
		713.01 Repair work to existing structure:				
		.01 Repairs to existing precast concrete block retaining walls	m ²	15		
		713.02 New construction:				
		.01 Supply and install precast concrete blocks similar existing enviro blocks	m ²	20		
		.02 Concrete bases for earth retaining systems (20 Mpa concrete)	m ²	3		
		SANS 1200CK 8.2.5	714.00	<u>STONE-PITCHING</u>		
				.01 Pitching (light)	m ²	20
				.02 Pitching (medium)	m ²	10
			715.00	<u>BOOM POLES</u>		
	715.01 High security traffic barrier consisting of extruded aluminium tubing powder coated in white with red reflective tape including boom break away system and lockable cabinet powder coated in white with red reflective tape capable of opening during power failures:					
	.01 Up to 7 m in width	No		2		
	.02 3 - 5 m aluminum boom poles	No		4		
		.03 5 - 6 m aluminum boom poles	No	3		
Carried forward						

Brought forward					
716.00	Retractable spike barrier strip				
.01	3.5m retractable spike barrier strip, complete with detection sensors, mechanical motors and emergency override switch	No.	1		
.02	4.0m retractable spike barrier strip, complete with detection sensors, mechanical motors and emergency override switch	No.	1		
717.00	Traffic robot				
.01	Robot head red and green led with mounting brackets complete with wiring harness and control	No.	1		
718.00	Impact Crash Cushions				
.01	Crash cushions complete with mounting rails, guard rails, reflectors and impact cushions. Barrier to withstand speeds from 40km/h up to 120km/h	No.	1		
719.00	Concrete traffic barrier structure:				
.01	Supply, deliver and install 3 m Jersey barrier complete with fastening bolts and plates	No.	15		
720.00	Speed reducing structure:				
.01	Supply, deliver and install Flat-topped solid rubber speed bumps, installed complete	No.	35		
721.00	Guardrails on timber posts:				
.01	New galvanised sections	m	50		
.02	Extra over Item 705.02 for horizontally curved guardrails factory bent to a radius of less than 150 m	m	50		
.03	End Units:				
.04	.01 End Wings	No.	10		
.04	Reflector Plates	No.	30		
722.00	REPAIR WORK TO MANICA BUILDING				
	Provisional Sum for the repair work to damaged building	PC Sum			150 000.00
	Charge required by Contractor on sub item above	%	150 000		
TOTAL - SCHEDULE NO 2.6: INSTALLATION C6: ROADS AND STORM WATER RELATED WORK - CARRIED TO SUMMARY:					



DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SUMMARY OF BILL OF QUANTITIES: CIVIL REPAIR WORK

		Summary
SCHEDULE NO 1: GENERAL	R	
SCHEDULE NO 2.1: INSTALLATION C1: STRUCTURAL AND BUILDING RELATED WORK	R	
SCHEDULE NO 2.2: INSTALLATION C2: PLUMBING, DRAINAGE AND WET SERVICES RELATED WORK	R	
SCHEDULE NO 2.3: INSTALLATION C3: FENCING, CLEANING AND SITE KEEPING RELATED WORK	R	
SCHEDULE NO 2.4: INSTALLATION C4: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER RELATED WORK NETWORKS RELATED WORK	R	
SCHEDULE NO 2.5: INSTALLATION C5: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS	R	
SCHEDULE NO 2.6: INSTALLATION C6: ROADS AND STORM WATER DRAINAGE RELATED WORK	R	
TOTAL OF BILL OF QUANTITIES - CIVIL REPAIR WORK CARRIED TO CALCULATION OF TENDER SUM	R	

SIGNED ON BEHALF OF TENDERER:

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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ELECTRICAL INSTALLATIONS**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK****SCHEDULE NO 8 : INSTALLATION E1: GENERAL REPAIR WORK : TOOLS & SPARES****ELECTRICAL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
AB06.04(a)	1	<u>TOOLS AND SPARES</u>				
	1.1	Tools				
	1.1.1	Square Perano DB key	No	6		
	1.1.2	Triangular Perano DB key	No	6		
	1.1.3	Distribution kiosk key	No	6		
	1.2	Lamps				
	1.2.1	21W Dulux EL ECO Lamps (E27 BC)	No	60		
	1.2.2	21W Dulux EL ECO Lamps (E27 ES)	No	60		
	1.2.3	9W CF Lamps	No	60		
	1.2.4	2D 16 W Lamps	No	60		
	1.2.5	2TC 9W Lamps	No	60		
	1.2.6	18W T-CD Lamps	No	60		
	1.2.7	26W T-CD Lamps	No	60		
	1.2.8	36W Fluorescent Lamps	No	120		
	1.2.9	58W Fluorescent Lamps	No	120		
	1.2.10	70W HPS Lamps	No	35		
	1.2.11	80W MV Lamps	No	1		
	1.2.12	125W MV Lamps	No	30		
	1.2.13	250W HPS Lamps	No	30		
	1.2.14	400W HPS Lamps	No	30		
	1.3	Repair, replace and service hydroboils:				
	.01	Hydroboil element	No.	6		
	.02	Replace hydroboil which cannot be repaired or serviced	No.	5		
TOTAL SCHEDULE NO 8 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL			R			

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ELECTRICAL INSTALLATIONS**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK****SCHEDULE NO 9 : INSTALLATION E2 : IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS**

						ELECTRICAL REPAIR WORK
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	1.	<u>DISTRIBUTION BOARDS</u>				
AB.01.01	1.1	Service distribution board				
	.01	Main distribution board: Sub Station No1	No	1		
	.02	Sub distribution boards: Main Building (BB1)	No	6		
	.03	Sub distribution board: Ablution Block (BB2)	No	1		
	.04	Sub distribution board: HRM Building (BB3)	No	1		
	.05	Sub distribution board: SAPS Building (BB4)	No	1		
	.06	Sub distribution board: Sub Station No1 (BB5)	No	1		
	.07	Sub distribution board: Agriculture Building (BB8)	No	2		
AB.01.02	1.2	Replace distribution board				
	.01	Sub distribution boards: DB UPS Main Building, 600x400mm	No	2		
AB.01.13	1.3	Supply and install SABS approved circuit breakers				
	.01	10-40A, 5kA single pole	No	10		
	.02	45-63A, 5kA single pole	No	10		
	.03	10-40A, 5kA double pole	No	10		
	.04	10-40A, 5kA triple pole	No	5		
	.05	45-63A, 5kA triple pole	No	5		
	.06	80A 5kA, triple pole	No	2		
	.07	125A 25kA, triple pole	No	2		
	.08	250A 25kA, triple pole	No	1		
	CARRIED FORWARD					

SCHEDULE NO 9 : INSTALLATION E2:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.14	1.4	Supply and install SABS approved isolators				
	.01	20-40A 5kA double pole	No	24		
	.02	63A, 5kA double pole	No	24		
AB.01.15	1.5	Supply and install Merlin Gerin contactors				
	.01	15A, 3 pole	No	5		
	.02	30A, 3 pole	No	2		
	.03	80A, 4 pole	No	4		
AB.01.16	1.6	Supply and install Heinemann SAT-R-Clip in timer	No	4		
AB.01.17	1.7	Supply and install SABS approved earth leakage units				
	.01	63A double pole	No	4		
	.02	63A triple pole	No	1		
AB.01.18	1.8	Supply and install 0-30A HRC fuses	No	1		
AB.01.19	1.9	Supply and install surge arrestors				
	.01	Phoenix FLT 60-400	No	1		
	.02	Dehn VGA 280	No	1		
	.03	Dehn Blitsductor	No	10		
AB.01.06	1.10	Provide padlock	No	10		
AB.01.20	1.11	Procure wire marking kit				
	.01	Grafolplast Trasp 012C-03 PVC marking kit	No	1		
	2.	<u>LOW VOLTAGE CABLE INSTALLATIONS</u>				
AB.01.03	2.1	Replace cabling				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	m	150		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	m	60		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	m	40		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	m	30		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	m	250		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	m	60		
		CARRIED FORWARD				

SCHEDULE NO 9 : INSTALLATION E2:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.05	2.2	Termination of low voltage cable				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	8		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	8		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	6		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	12		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	8		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	6		
AB.01.05	2.3	Jointing of cables				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	2		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	2		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	2		
AB.01.11	2.4	Supply and install earth continuity conductor				
	.01	70 mm ² BCEW	m	120		
	.02	16 mm ² BCEW	m	120		
	.03	10 mm ² BCEW	m	120		
	.04	6 mm ² BCEW	m	60		
	.05	2,5 mm ² BCEW	m	60		
AB.01.12	2.5	Terminate earth continuity conductor				
	.01	70 mm ² BCEW	No	12		
	.02	25 mm ² BCEW	No	12		
	.03	16 mm ² BCEW	No	12		
	.04	10 mm ² BCEW	No	12		
	.05	6 mm ² BCEW	No	12		
	.06	2,5 mm ² BCEW	No	12		
		CARRIED FORWARD				

SCHEDULE NO 9 : INSTALLATION E2:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	3.	<u>WIRING</u>				
AB.01.04	3.1	Replace wiring				
	.01	6 mm ² PVC	m	800		
	.02	4 mm ² PVC	m	2 000		
	.03	2.5 mm ² PVC	m	900		
	.04	2.5 mm ² BCEW	m	3 480		
	4.	<u>CABLE TRENCH AND ACCESSORIES</u>				
AB.01.07	4.1	Excavate in all materials for trenches, backfill, compact and dispose of surplus material.	m ³	75		
AB.01.08	4.2	Supply and install cable sleeves				
	.01	110 mm ø	m	20		
	.02	32 mm ø	m	20		
AB.01.09	4.3	Supply and install plastic warning tape	m	160		
	5.	<u>LIGHTING INSTALLATION</u>				
AB.02.01	5.1	Re-lamp luminaire				
	.01	58W Fluorescent	No	95		
	.02	36W Fluorescent	No	140		
	.03	PL9W Lamp	No	64		
	.04	2D 16W Lamp	No	1		
	.05	18W T-CD Lamp	No	60		
	.06	26W T-CD Lamp	No	1		
	.07	Dulux Eco 21W/E27	No	35		
AB.02.02	5.2	Service luminaire				
	.01	Type A	No	52		
	.02	Type B	No	135		
	.03	Type B1	No	10		
	.04	Type D	No	58		
		CARRIED FORWARD				

SCHEDULE NO 9 : INSTALLATION E2:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
AB.02.03	5.3	.05 Type F .06 Type G .07 Type H .08 Type R .09 Type AD Replace existing luminaire with more energy efficient luminaires of similar appearance	No	80 18 1 1 1		
AB.02.06	5.4	.01 Type A .02 Type B .03 Type B1 .04 Type D .05 Type F .06 Type G .07 Type H .08 Type T Replace luminaire diffuser or lens	No	56 61 2 50 2 2 2 14		
AB.02.07	5.5	.01 Type D .02 Type F .03 Type G .04 Type H .05 Type I Service light switch	No	16 40 4 2 2 80		
AB.02.04	5.6	Replace light switch .01 16A, single lever, one way Crabtree .02 16A, two lever, one way Crabtree .03 16A, single lever, one way IP55 rotary type	No	40 20 4		
		CARRIED FORWARD				

SCHEDULE NO 9 : INSTALLATION E2:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.05	5.7	Replace photocell				
	.01	National plug-in type	No	6		
	.02	National 16A unit with bracket	No	6		
	5.8	Supply and install - 5 - Speed 3 blade ceiling fans	No	28		
	6.	POWER OUTLETS				
AB.03.01	6.1	Service socket outlet				
	.01	16A, single SSO, Crabtree	No	250		
	.02	16A, double SSO, Crabtree	No	250		
	.03	16A, single SSO, IP 55	No	16		
	.04	32A, 3Ø Legrand Type 592 11	No	12		
AB.03.01	6.2	Replace socket outlet				
	.01	16A, single SSO Crabtree	No	60		
	.02	16A, double SSO Crabtree	No	25		
	.03	16A, single SSO IP 55	No	5		
AB.03.02	6.3	Service isolator				
	.01	60A 3 pole	No	12		
	.02	30A 3 pole	No	20		
	.03	20A 2 pole	No	10		
AB.03.02	6.4	Replace isolators				
	.01	60A 3 pole	No	6		
	.02	30A 3 pole	No	6		
	.03	20A 2 pole	No	6		
AB.03.06	6.5	Provide connection for fixed equipment via galvanized sprague and 3 x 6 mm ² wiring eg. Stove	No	5		
AB.03.06	6.6	Provide connection for fixed equipment via galvanized sprague and 4 x 6 mm ² wiring eg. cold room compressors kitchen equipment, etc.	No	5		
AB.03.01	6.7	Supply and install 30W Insect Killer	No	8		
AB.03.03	6.8	Replace plug tops				
	.01	3-pin single phase	No	20		
	.02	5-pin CEE-form	No	4		
		CARRIED FORWARD				

SCHEDULE NO 9 : INSTALLATION E2:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	7.	<u>WIRE WAYS, CONDUITS AND ACCESSORIES</u>				
AB.03.04	7.1	Replace conduit				
	.01	20 mm Ø PVC	m	600		
	.02	25 mm Ø PVC	m	20		
	.03	20 mm Ø Galvanised steel	m	200		
	.04	25 mm Ø Galvanised steel	m	30		
	.05	25 mm Ø Hospital saddles	No	95		
	.06	20 mm Ø Hospital saddles	No	30		
AB.03.05	7.2	Replace wiring channel				
	.01	O-line OL 9000, 127 x 76 mm	m	100		
	.02	O-line OL 5000, 100 x 76 mm	m	100		
	.03	Legrand white PVC 76 x 41 mm	m	40		
AB.03.09	7.3	Replace power skirting				
	.01	3 tier powder coated galvanised steel	m	80		
	.02	3 tier white Legrand PVC	m	6		
AB.03.10	7.4	Supply and install Pratley boxes				
	.01	83 mm Ø - back entry	No	12		
AB.03.11	7.5	Supply and install draw boxes				
	.01	50 x 100 mm galvanised steel	No	6		
	.02	100 x 100 mm galvanised steel	No	12		
	.03	50 x 100 PVC	No	8		
	.04	100 x 100 PVC	No	15		
AB.03.12	7.6	Supply and install draw box cover				
	.01	50 x 100 mm galvanised steel	No	6		
	.02	100 x 100 mm galvanised steel	No	4		
	8.	<u>EARTHING AND BONDING</u>				
AB.04.01	8.1	Provide earthing and bonding				
	.01	Immigrations and Customs	No	1		
	.02	HRM SAPS	No	1		
	.03	Substation No1	No	1		
	.04	Agricultural/ Police Charge Office	No	1		
		CARRIED FORWARD				

SCHEDULE NO 9 : INSTALLATION E2:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.04.02	8.2	Earthing inspection, testing and certification by a specialist contractor				
	.01	Immigrations and Customs	No	1		
	.02	HRM SAPS	No	1		
	.03	Substation No1	No	1		
	.04	Agricultural/ Police Charge Office	No	1		
	.05	Public Toilets	No	1		
	.06	SAPS Logistics	No	1		
	9.	<u>LIGHTNING PROTECTION</u>				
AB.04.03	9.1	Supply and install earth electrodes				
	.01	16 mm ϕ 1,2 m long Cu	No	38		
AB.04.04	9.2	Provide cadweld joint to 70 mm ² cable	No	38		
AB.04.05	9.3	Earth building roof structure	No	150		
AB.04.02	9.4	Testing and Certification as per SANS	Lump sum	4		
		CARRIED FORWARD				

SCHEDULE NO 9 : INSTALLATION E2:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	10.	<u>FIRE DETECTION INSTALLATION</u>				
	10.1	Service, testing and commissioning of Fire Detection System in Main Building and Sub	Lump Sum	2		
		<u>Tools and Spares</u>				
	.01	Site audit reporting	Sum	1		
	.02	Fire panel	No	4		
	.03	Smoke detectors	No	72		
	.04	Addressable Manual call point	No	12		
	.05	Sounder Strobe	No	14		
		Replace, supply, install and testing of fire detection devices and cabling				
	.01	Twisted pair fire retardant cabling	m	1 000		
	.02	Fire panel	No	4		
	.03	Smoke detectors	No	15		
	.04	Addressable Manual call point	Sum	4		
	.05	Sounder Strobe	No	4		
	11.	<u>OPTICAL BEAM DETECTION</u>				
		<u>Supply, installation and testing:</u>				
	.01	Transmitter head (5-120mm) and Mirror	No	3		
	.02	Low Level Controller with LCD display with power supply	No	3		
	.03	TH30 cabling	m	6		
	.04	Power Supply	No	3		
	.05	Interface Equipment	No	3		
	.06	Testing, Commissioning and certification	Sum	1		
TOTAL SCHEDULE NO 9 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL			R			

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ELECTRICAL INSTALLATIONS**NB** TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK**SCHEDULE NO 10 : INSTALLATION E3 : CUSTOMS EXPORT RAMP, IMPORT RAMP AND OFFICES, CLEARING AGENTS, SUB NO2, PUBLIC ABLUTION BUILDINGS
ELECTRICAL SERVICES RELATED REPAIR WORKS**

						ELECTRICAL REPAIR WORK
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
AB.01.01	1.	<u>DISTRIBUTION BOARDS</u>				
	1.1	Service distribution board				
	.01	Sub distribution board: Customs Export Ramp (HB1)	No	2		
	.02	Sub distribution board: Customs Export Office (HB2)	No	3		
	.03	Sub distribution board: Customs Import Ramp (HB3)	No	2		
	.04	Sub distribution board: Sewerage Pump Station (HB4)	No	1		
	.05	Sub distribution board: Clearing Agents Building (HB5)	No	2		
	.06	Sub distribution board: Sub Station Building No2 (HB6)	No	1		
AB.01.02	1.2	Replace distribution board				
	.01	Main distribution board: DB Main Substation No2	No	1		
	.02	Sub distribution boards: DB UPS Custom Export Office	No	2		
AB.01.13	1.3	Supply and install SABS approved circuit breakers				
	.01	10-40A, 5kA single pole	No	15		
	.02	45-63A, 5kA single pole	No	15		
	.03	10-40A, 5kA double pole	No	15		
	.04	10-40A, 5kA triple pole	No	6		
	.05	45-63A, 5kA triple pole	No	18		
	.06	80A 5kA, triple pole	No	12		
	.07	125A 25kA, triple pole	No	6		
.08	200A 25kA, triple pole	No	6			
CARRIED FORWARD						

SCHEDULE NO 10 : INSTALLATION E3:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.13	1.4	Supply and install SABS approved isolators				
	.01	20-40A 5kA double pole	No	6		
	.02	63A - 100A, 5kA double pole	No	8		
	.03	150A, 25kA triple pole	No	4		
AB.01.15	1.5	Supply and install Merlin Gerin contactors				
	.01	15A, 3 pole	No	2		
	.02	60A, 3 pole	No	3		
	.03	100A, 4 pole	No	1		
AB.01.16	1.6	Supply and install Heinemann SAT-R-Clip in timer	No	1		
AB.01.17	1.7	Supply and install SABS approved earth leakage units				
	.01	63A double pole	No	6		
	.02	63A triple pole	No	2		
AB.01.18	1.8	Supply and install 0-30A HRC fuses	No	2		
AB.01.19	1.9	Supply and install surge arrestors				
	.01	Phoenix FLT 60-400	No	1		
	.02	Dehn VGA 280	No	1		
	.03	Dehn Blitsductor	No	3		
AB.01.06	1.10	Provide padlock	No	11		
AB.01.20	1.11	Procure wire marking kit				
	.01	Grafoplast Trasp 012C-03 PVC marking kit	No	1		
	2.	<u>LOW VOLTAGE CABLE INSTALLATIONS</u>				
AB.01.03	2.1	Replace cabling				
	.01	35 mm ² x 4-core PVC/SWA/PVC CU	m	285		
	.02	16 mm ² x 4-core PVC/SWA/PVC CU	m	200		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	m	120		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	m	30		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	m	20		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	m	10		
		CARRIED FORWARD				

SCHEDULE NO 10 : INSTALLATION E3:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.03	2.2	Termination of low voltage cable				
	.01	35 mm ² x 4-core PVC/SWA/PVC CU	No	4		
	.02	16 mm ² x 4-core PVC/SWA/PVC CU	No	4		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	6		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	4		
AB.01.05	2.3	Jointing of cables				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	2		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	2		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	2		
AB.01.11	2.4	Supply and install earth continuity conductor				
	.01	70 mm ² BCEW	m	200		
	.02	16 mm ² BCEW	m	285		
	.03	10 mm ² BCEW	m	200		
	.04	6 mm ² BCEW	m	1		
	.05	2,5 mm ² BCEW	m	1		
AB.01.12	2.5	Terminate earth continuity conductor				
	.01	70 mm ² BCEW	No	4		
	.02	25 mm ² BCEW	No	4		
	.03	16 mm ² BCEW	No	4		
	.04	10 mm ² BCEW	No	4		
	.05	6 mm ² BCEW	No	4		
	.06	2,5 mm ² BCEW	No	4		
		CARRIED FORWARD				

SCHEDULE NO 10 : INSTALLATION E3:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.04	3.	<u>WIRING</u>				
	3.1	Replace wiring				
	.01	6 mm ² PVC	m	300		
	.02	4 mm ² PVC	m	2 400		
	.03	2.5 mm ² PVC	m	2 800		
	.04	2.5 mm ² BCEW	m	6 240		
AB.01.07	4.	<u>CABLE TRENCH AND ACCESSORIES</u>				
	4.1	Excavate in all materials for trenches, backfill, compact and dispose of surplus material.	m ³	96		
AB.01.08	4.2	Supply and install cable sleeves				
	.01	110 mm ø	m	20		
	.02	32 mm ø	m	20		
AB.01.09	4.3	Supply and install plastic warning tape	m	400		
AB.02.01	5.	<u>LIGHTING INSTALLATION</u>				
	5.1	Re-lamp luminaire				
	.01	58W Fluorescent	No	62		
	.02	36W Fluorescent	No	140		
	.03	PL9W Lamp	No	68		
	.04	2D 16W Lamp	No	1		
	.05	18W T-CD Lamp	No	40		
	.06	26W T-CD Lamp	No	12		
	.07	Dulux Eco 21W/E27	No	74		
AB.02.02	5.2	Service luminaire				
	.01	Type A	No	136		
	.02	Type B	No	78		
	.03	Type A1	No	12		
	.04	Type C	No	48		
		CARRIED FORWARD				

SCHEDULE NO 10 : INSTALLATION E3:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.03	5.3	.05 Type E .06 Type F .07 Type N .08 Type R .09 Type V .10 Type W Replace existing luminaire with more energy efficient luminaires of similar appearance	No	2 36 18 2 18 8		
AB.02.06	5.4	.01 Type A .02 Type B .03 Type A1 .04 Type C .05 Type E .06 Type F .07 Type N .08 Type V Replace luminaire diffuser or lens	No	28 28 12 36 1 36 34 26		
AB.02.07	5.5	.01 Type C .02 Type N .03 Type S .04 Type V .05 Type W Service light switch	No	20 20 4 14 12 58		
AB.02.04	5.6	.01 16A, single lever, one way Crabtree .02 16A, two lever, one way Crabtree .03 16A, single lever, one way IP55 rotary type Replace light switch	No	34 28 6		
CARRIED FORWARD						

SCHEDULE NO 10 : INSTALLATION E3:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.05	5.7	Replace photocell				
	.01	National plug-in type	No	3		
	.02	National 16A unit with bracket	No	1		
	6.	<u>POWER OUTLETS</u>				
AB.03.01	6.1	Service socket outlet				
	.01	16A, single SSO, Crabtree	No	166		
	.02	16A, double SSO, Crabtree	No	110		
	.03	16A, single SSO, IP 55	No	16		
	.04	32A, 3Ø Legrand Type 592 11	No	6		
AB.03.01	6.2	Replace socket outlet				
	.01	16A, single SSO Crabtree	No	40		
	.02	16A, double SSO Crabtree	No	30		
	.03	16A, single SSO IP 55	No	12		
AB.03.02	6.3	Service isolator				
	.01	60A 3 pole	No	4		
	.02	30A 3 pole	No	20		
	.03	20A 2 pole	No	34		
AB.03.02	6.4	Replace isolators				
	.01	60A 3 pole	No	8		
	.02	30A 3 pole	No	12		
	.03	20A 2 pole	No	6		
AB.03.06	6.5	Provide connection for fixed equipment via galvanized sprague and 3 x 6 mm ² wiring eg. Stove	No	5		
AB.03.06	6.6	Provide connection for fixed equipment via galvanized sprague and 4 x 6 mm ² wiring eg. cold room compressors kitchen equipment, etc.	No	5		
AB.03.01	6.7	Supply and install 30W Insect Killer	No	6		
AB.03.03	6.8	Replace plug tops				
	.01	3-pin single phase	No	20		
	.02	5-pin CEE-form	No	4		
	CARRIED FORWARD					

SCHEDULE NO 10 : INSTALLATION E3:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	7.	<u>WIRE WAYS, CONDUITS AND ACCESSORIES</u>				
AB.03.04	7.1	Replace conduit				
	.01	20 mm Ø PVC	m	200		
	.02	25 mm Ø PVC	m	200		
	.03	20 mm Ø Galvanised steel	m	200		
	.04	25 mm Ø Galvanised steel	m	30		
	.05	25 mm Ø Hospital saddles	No	95		
	.06	20 mm Ø Hospital saddles	No	200		
AB.03.05	7.2	Replace wiring channel				
	.01	O-line OL 9000, 127 x 76 mm	m	40		
	.02	O-line OL 5000, 100 x 76 mm	m	1		
	.03	Legrand white PVC 76 x 41 mm	m	30		
AB.03.09	7.3	Replace power skirting				
	.01	3 tier powder coated galvanised steel	m	50		
	.02	3 tier white Legrand PVC	m	15		
AB.03.10	7.4	Supply and install Pratley boxes				
	.01	83 mm Ø - back entry	No	3		
AB.03.11	7.5	Supply and install draw boxes				
	.01	50 x 100 mm galvanised steel	No	2		
	.02	100 x 100 mm galvanised steel	No	2		
	.03	50 x 100 PVC	No	2		
	.04	100 x 100 PVC	No	2		
AB.03.12	7.6	Supply and install draw box cover				
	.01	50 x 100 mm galvanised steel	No	1		
	.02	100 x 100 mm galvanised steel	No	1		
	8.	<u>EARTHING AND BONDING</u>				
AB.04.01	8.1	Provide earthing and bonding to all installations				
	.01	Customs Export Ramp	No	1		
	.02	Substation No2	No	1		
	.03	Clearing Agents Building	No	1		
	CARRIED FORWARD					

SCHEDULE NO 10 : INSTALLATION E3:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.04.02	8.2	Earthing inspection, testing and certification by a specialist contractor				
	.01	Customs Export Ramp	No	1		
	.02	Substation No2	No	1		
	.03	Clearing Agents Building	No	1		
	.04	Import Ramp and Offices	No	1		
	.05	Public Ablution	No	1		
	9.	<u>LIGHTNING PROTECTION</u>				
AB.04.03	9.1	Supply and install earth electrodes				
	.01	16 mm ø 1,2 m long Cu	No	25		
AB.04.04	9.2	Provide cadweld joint to 70 mm² cable	No	25		
AB.04.05	9.3	Earth building roof structure	No	100		
AB.04.02	9.4	Testing and Certification as per SANS	Lump sum	6		
	10.	<u>FIRE DETECTION INSTALLATION</u>				
	10.1	Service, testing and commissioning of Fire Detection System in Main Building	Lump Sum	1		
	11.	<u>Tools and Spares</u>				
	.01	Site audit reporting	SUM	1		
	.02	Fire panel	No	4		
	.03	Smoke detectors	No	72		
	.04	Addressable Manual call point	No	12		
	.05	Sounder	No	14		
		Replace, supply, install and testing of fire detection devices and cabling				
	.01	Twisted pair fire retardant cabling	m	1 000		
	.02	Fire panel	No	4		
	.03	Smoke detectors	No	15		
	.04	Addressable Manual call point	SUM	4		
	.05	Sounder Strobe	No	4		
	CARRIED FORWARD					

SCHEDULE NO 10 : INSTALLATION E3:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
		Brought forward				
		<u>OPTICAL BEAM DETECTION</u>				
		<u>Supply, installation and testing:</u>				
		.01 Transmitter head (5-120mm) and Mirror	No	3		
		.02 Low Level Controller with LCD display with power supply	No	3		
		.03 TH30 cabling	m	6		
		.04 Power Supply	No	3		
		.05 Interface Equipment	No	3		
		.06 Testing, Commissioning and certification	Sum	1		
AB.01	11.	<u>REPAIR WORK TO MANICA BUILDING</u>				
	11.1	.01 Provisional Sum for the repair work to damaged building	PC Sum			150 000.00
		.02 Charge required by Contractor on sub item above	%	150 000		
TOTAL SCHEDULE NO 10 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL						R

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

ELECTRICAL INSTALLATIONS**NB** TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK**SCHEDULE NO 11 : INSTALLATION E4 : LIGHT VEHICLE INSPECTION, CONTROL POINT AND PUBLIC TOILETS - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS**

						ELECTRICAL REPAIR WORK
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	1.	<u>DISTRIBUTION BOARDS</u>				
AB.01.01	1.1	Service distribution board				
	.01	Sub distribution board: Light Vehicle Inspection (IB1)	No	2		
	.02	Sub distribution board: Control Building (IB2)	No	2		
	.03	Sub distribution board: Public Ablutions (IB3)	No	1		
	.04	Sub distribution board: Duty Free Shop	No	1		
AB.01.13	1.2	Supply and install SABS approved circuit breakers				
	.01	10-40A, 5kA single pole	No	3		
	.02	45-63A, 5kA single pole	No	3		
	.03	10-40A, 5kA double pole	No	3		
	.04	10-40A, 5kA triple pole	No	22		
	.05	45-63A, 5kA triple pole	No	12		
	.06	80A 5kA, triple pole	No	6		
	CARRIED FORWARD					

SCHEDULE NO 11 : INSTALLATION E4:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.14	1.3	Supply and install SABS approved isolators				
	.01	20-40A 5kA double pole	No	6		
	.02	63A, 5kA double pole	No	8		
AB.01.15	1.4	Supply and install Merlin Gerin contactors				
	.01	15A, 3 pole	No	2		
	.02	30A, 3 pole	No	2		
	.03	80A, 4 pole	No	1		
AB.01.16	1.5	Supply and install Heinemann SAT-R-Clip in timer	No	1		
AB.01.17	1.6	Supply and install SABS approved earth leakage units				
	.01	63A double pole	No	2		
	.02	63A triple pole	No	1		
AB.01.18	1.7	Supply and install 0-30A HRC fuses	No	1		
AB.01.19	1.8	Supply and install surge arrestors				
	.01	Phoenix FLT 60-400	No	1		
	.02	Dehn VGA 280	No	1		
	.03	Dehn Blitsductor	No	1		
AB.01.06	1.9	Provide padlock	No	4		
AB.01.20	1.10	Procure wire marking kit				
	.01	Grafoplast Trasp 012C-03 PVC marking kit	No	0.3		
	2.	<u>LOW VOLTAGE CABLE INSTALLATIONS</u>				
AB.01.03	2.1	Replace cabling				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	m	100		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	m	10		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	m	10		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	m	5		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	m	150		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	m	30		
		CARRIED FORWARD				

SCHEDULE NO 11 : INSTALLATION E4:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.05	2.2	Termination of low voltage cable				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	1		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	12		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	6		
AB.01.05	2.3	Jointing of cables				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	1		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	1		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	2		
AB.01.11	2.4	Supply and install earth continuity conductor				
	.01	70 mm ² BCEW	m	120		
	.02	16 mm ² BCEW	m	20		
	.03	10 mm ² BCEW	m	20		
	.04	6 mm ² BCEW	m	10		
	.05	2,5 mm ² BCEW	m	30		
AB.01.12	2.5	Terminate earth continuity conductor				
	.01	70 mm ² BCEW	No	2		
	.02	25 mm ² BCEW	No	2		
	.03	16 mm ² BCEW	No	2		
	.04	10 mm ² BCEW	No	2		
	.05	6 mm ² BCEW	No	2		
	.06	2,5 mm ² BCEW	No	2		
		CARRIED FORWARD				

SCHEDULE NO 11 : INSTALLATION E4:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.04	3.	<u>WIRING</u>				
	3.1	Replace wiring				
	.01	6 mm ² PVC	m	200		
	.02	4 mm ² PVC	m	400		
	.03	2.5 mm ² PVC	m	1200		
	.04	2.5 mm ² BCEW	m	1920		
AB.01.07	4.	<u>CABLE TRENCH AND ACCESSORIES</u>				
	4.1	Excavate in all materials for trenches, backfill, compact and dispose of surplus material.	m ³	65		
AB.01.08	4.2	Supply and install cable sleeves				
	.01	110 mm ø	m	20		
	.02	32 mm ø	m	20		
AB.01.09	4.3	Supply and install plastic warning tape	m	1		
AB.02.01	5.	<u>LIGHTING INSTALLATION</u>				
	5.1	Re-lamp luminaire				
	.01	58W Fluorescent	No	22		
	.02	36W Fluorescent	No	18		
	.03	PL9W Lamp	No	16		
	.04	2D 16W Lamp	No	1		
	.05	18W T-CD Lamp	No	6		
	.06	26W T-CD Lamp	No	1		
	.07	Dulux Eco 21W/E27	No	1		
AB.02.02	5.2	Service luminaire				
	.01	Type A	No	8		
	.02	Type B	No	10		
	.03	Type C	No	20		
	.04	Type D	No	4		
		CARRIED FORWARD				

SCHEDULE NO 11 : INSTALLATION E4:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.03	5.3	.05 Type F .06 Type V Replace existing luminaire with more energy efficient luminaires of similar appearance	No	12		
		.01 Type A	No	22		
		.02 Type B	No	16		
		.03 Type C	No	18		
		.04 Type D	No	1		
		.05 Type F	No	12		
		.06 Type V	No	4		
AB.02.06	5.4	Replace luminaire diffuser or lens				
		.01 Type D	No	1		
		.02 Type F	No	8		
		.03 Type V	No	4		
		.04 Type W	No	4		
AB.02.07	5.5	Service light switch	No	24		
AB.02.04	5.6	Replace light switch				
		.01 16A, single lever, one way Crabtree	No	12		
		.02 16A, two lever, one way Crabtree	No	4		
		.03 16A, single lever, one way IP55 rotary type	No	4		
		CARRIED FORWARD				

SCHEDULE NO 11 : INSTALLATION E4:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.05	5.7	Replace photocell				
	.01	National plug-in type	No	2		
	.02	National 16A unit with bracket	No	2		
	6.	POWER OUTLETS				
AB.03.01	6.1	Service socket outlet				
	.01	16A, single SSO, Crabtree	No	30		
	.02	16A, double SSO, Crabtree	No	30		
	.03	16A, single SSO, IP 55	No	6		
	.04	32A, 3Ø Legrand Type 592 11	No	2		
AB.03.01	6.2	Replace socket outlet				
	.01	16A, single SSO Crabtree	No	16		
	.02	16A, double SSO Crabtree	No	15		
	.03	16A, single SSO IP 55	No	4		
AB.03.02	6.3	Service isolator				
	.01	60A 3 pole	No	4		
	.02	30A 3 pole	No	4		
	.03	20A 2 pole	No	12		
AB.03.02	6.4	Replace isolators				
	.01	60A 3 pole	No	4		
	.02	30A 3 pole	No	2		
	.03	20A 2 pole	No	2		
AB.03.06	6.5	Provide connection for fixed equipment via galvanized sprague and 3 x 6 mm ² wiring eg. Stove	No	5		
AB.03.06	6.6	Provide connection for fixed equipment via galvanized sprague and 4 x 6 mm ² wiring eg. cold room compressors kitchen equipment, etc.	No	5		
AB.03.03	6.7	Replace plug tops				
	.01	3-pin single phase	No	6		
	.02	5-pin CEE-form	No	1		
		CARRIED FORWARD				

SCHEDULE NO 11 : INSTALLATION E4:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	7.	<u>WIRE WAYS, CONDUITS AND ACCESSORIES</u>				
AB.03.04	7.1	Replace conduit				
	.01	20 mm Ø PVC	m	20		
	.02	25 mm Ø PVC	m	20		
	.03	20 mm Ø Galvanised steel	m	80		
	.04	25 mm Ø Galvanised steel	m	30		
	.05	25 mm Ø Hospital saddles	No	20		
	.06	20 mm Ø Hospital saddles	No	40		
AB.03.05	7.2	Replace wiring channel				
	.01	O-line OL 9000, 127 x 76 mm	m	20		
	.02	O-line OL 5000, 100 x 76 mm	m	20		
	.03	Legrand white PVC 76 x 41 mm	m	15		
AB.03.09	7.3	Replace power skirting				
	.01	3 tier powder coated galvanised steel	m	20		
	.02	3 tier white Legrand PVC	m	10		
AB.03.10	7.4	Supply and install Pratley boxes				
	.01	83 mm ø - back entry	No	1		
AB.03.11	7.5	Supply and install draw boxes				
	.01	50 x 100 mm galvanised steel	No	1		
	.02	100 x 100 mm galvanised steel	No	1		
	.03	50 x 100 PVC	No	1		
	.04	100 x 100 PVC	No	1		
AB.03.12	7.6	Supply and install draw box cover				
	.01	50 x 100 mm galvanised steel	No	3		
	.02	100 x 100 mm galvanised steel	No	3		
	8.	<u>EARTHING AND BONDING</u>				
AB.04.01	8.1	Provide earthing and bonding				
	.01	Light Vehicle Inspection	No	1		
	.02	Control Point	No	1		
AB.04.02	8.2	Earthing inspection, testing and certification by a specialist contractor				
	.01	Light Vehicle Inspection	No	3		
		CARRIED FORWARD				

SCHEDULE NO 11 : INSTALLATION E4:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	9.	<u>LIGHTNING PROTECTION</u>				
AB.04.03	9.1	Supply and install earth electrodes				
	.01	16 mm ø 1,2 m long Cu	No	22		
AB.04.04	9.2	Provide cadweld joint to 70 mm ² cable	No	22		
AB.04.05	9.3	Earth building roof structure	No	20		
AB.04.02	9.4	Testing and Certification as per SANS	Lump sum	3		
TOTAL SCHEDULE NO 11 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL			R			

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

ELECTRICAL INSTALLATIONS**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK****SCHEDULE NO 12 : INSTALLATION E5 : SAPS BARRACKS, CELLS AND ADMIN OFFICES AND BULK WATER PURIFICATION BUILDING - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS**

						ELECTRICAL REPAIR WORK
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	1.	<u>DISTRIBUTION BOARDS</u>				
AB.01.01	1.1	Service distribution board				
	.01	Sub distribution board: SAPS Barracks (FB1)	No	3		
	.02	Sub distribution board: DB Kitchen Barracks (FB1)	No	1		
	.03	Sub distribution board: SAPS Offices (FB3)	No	1		
	.04	Sub distribution board: Swimming Pool (D)	No	1		
	.05	Sub distribution board: Bulk Water Building	No	3		
AB.01.02	1.2	Replace distribution board				
	.01	Sub distribution board: DB Bulk Water (1200 x 1000 mm)	No	1		
	.02	Sub distribution board: DB Cell Block (600 x 400 mm)	No	1		
AB.01.13	1.3	Supply and install SABS approved circuit breakers				
	.01	10-40A, 5kA single pole	No	24		
	.02	45-63A, 5kA single pole	No	16		
	.03	10-40A, 5kA double pole	No	7		
	.04	10-40A, 5kA triple pole	No	15		
	.05	45-63A, 5kA triple pole	No	12		
	.06	80A 5kA, triple pole	No	8		
		CARRIED FORWARD				

SCHEDULE NO 12 : INSTALLATION E5:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.14	1.4	Supply and install SABS approved isolators				
	.01	20-40A 5kA double pole	No	8		
	.02	63A, 5kA double pole	No	8		
AB.01.15	1.5	Supply and install Merlin Gerin contactors				
	.01	15A, 3 pole	No	4		
	.02	30A, 3 pole	No	4		
	.03	30A, 4 pole	No	4		
AB.01.16	1.6	Supply and install Heinemann SAT-R-Clip in timer	No	4		
AB.01.17	1.7	Supply and install SABS approved earth leakage units				
	.01	63A double pole	No	4		
	.02	63A triple pole	No	2		
AB.01.18	1.8	Supply and install 0-30A HRC fuses	No	3		
AB.01.19	1.9	Supply and install surge arrestors				
	.01	Phoenix FLT 60-400	No	1		
	.02	Dehn VGA 280	No	4		
	.03	Dehn Blitsductor	No	6		
AB.01.06	1.10	Provide padlock	No	5		
AB.01.20	1.11	Procure wire marking kit				
	.01	Grafoplast Trasp 012C-03 PVC marking kit	No	1		
	2.	<u>LOW VOLTAGE CABLE INSTALLATIONS</u>				
AB.01.03	2.1	Replace cabling				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	m	150		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	m	20		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	m	20		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	m	20		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	m	30		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	m	50		
		CARRIED FORWARD				

SCHEDULE NO 12 : INSTALLATION E5:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.05	2.2	Termination of low voltage cable				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	12		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	10		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	2		
AB.01.05	2.3	Jointing of cables				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	4		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	4		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	4		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	4		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	4		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	4		
AB.01.11	2.4	Supply and install earth continuity conductor				
	.01	70 mm ² BCEW	m	30		
	.02	16 mm ² BCEW	m	20		
	.03	10 mm ² BCEW	m	20		
	.04	6 mm ² BCEW	m	20		
	.05	2,5 mm ² BCEW	m	50		
AB.01.12	2.5	Terminate earth continuity conductor				
	.01	70 mm ² BCEW	No	2		
	.02	25 mm ² BCEW	No	2		
	.03	16 mm ² BCEW	No	2		
	.04	10 mm ² BCEW	No	2		
	.05	6 mm ² BCEW	No	2		
	.06	2,5 mm ² BCEW	No	2		
		CARRIED FORWARD				

SCHEDULE NO 12 : INSTALLATION E5:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.04	3.	<u>WIRING</u>				
	3.1	Replace wiring				
	.01	6 mm ² PVC	m	200		
	.02	4 mm ² PVC	m	200		
	.03	2.5 mm ² PVC	m	200		
	.04	2.5 mm ² BCEW	m	480		
AB.01.04	4.	<u>CABLE TRENCH AND ACCESSORIES</u>				
	4.1	Excavate in all materials for trenches, backfill, compact and dispose of surplus material.	m ³	45		
AB.01.04	4.2	Supply and install cable sleeves				
	.01	110 mm ø	m	20		
	.02	32 mm ø	m	20		
AB.01.04	4.3	Supply and install plastic warning tape	m	160		
AB.01.04	5.	<u>LIGHTING INSTALLATION</u>				
	5.1	Re-lamp luminaire				
	.01	58W Fluorescent	No	10		
	.02	36W Fluorescent	No	50		
	.03	PL9W Lamp	No	30		
	.04	2D 16W Lamp	No	1		
	.05	18W T-CD Lamp	No	30		
	.06	26W T-CD Lamp	No	1		
	.07	Dulux Eco 21W/E27	No	60		
AB.01.04	5.2	Service luminaire				
	.01	Type A	No	2		
	.02	Type B	No	28		
	.03	Type B1	No	14		
	.04	Type G	No	12		
		CARRIED FORWARD				

SCHEDULE NO 12 : INSTALLATION E5:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
AB.02.01	5.3	.05 Type J .06 Type L .07 Type M .08 Type N .09 Type R Replace existing luminaire with more energy efficient luminaires of similar appearance	No	24 18 36 38 4		
AB.02.01	5.4	.01 Type A .02 Type B .03 Type B1 .04 Type G .05 Type J .06 Type L .07 Type M .08 Type R Replace luminaire diffuser or lens	No	12 28 14 12 38 16 36 2		
AB.02.07	5.5	.01 Type J .02 Type L .03 Type M .04 Type R Service light switch	No	12 12 30 3 48		
AB.02.04	5.6	.01 16A, single lever, one way Crabtree .02 16A, two lever, one way Crabtree .03 16A, single lever, one way IP55 rotary type Replace light switch	No	20 10 4		
		CARRIED FORWARD				

SCHEDULE NO 12 : INSTALLATION E5:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.05	5.7	Replace photocell				
	.01	National plug-in type	No	2		
	.02	National 16A unit with bracket	No	2		
	6.	<u>POWER OUTLETS</u>				
AB.03.01	6.1	Service socket outlet				
	.01	16A, single SSO, Crabtree	No	34		
	.02	16A, double SSO, Crabtree	No	44		
	.03	16A, single SSO, IP 55	No	6		
	.04	32A, 3Ø Legrand Type 592 11	No	4		
AB.03.01	6.2	Replace socket outlet				
	.01	16A, single SSO Crabtree	No	26		
	.02	16A, double SSO Crabtree	No	32		
	.03	16A, single SSO IP 55	No	4		
AB.03.02	6.3	Service isolator				
	.01	60A 3 pole	No	4		
	.02	30A 3 pole	No	20		
	.03	20A 2 pole	No	18		
AB.03.02	6.4	Replace isolators				
	.01	60A 3 pole	No	6		
	.02	30A 3 pole	No	8		
	.03	20A 2 pole	No	4		
AB.03.06	6.5	Provide connection for fixed equipment via galvanized sprague and 3 x 6 mm ² wiring eg. Stove	No	6		
AB.03.06	6.6	Provide connection for fixed equipment via galvanized sprague and 4 x 6 mm ² wiring eg. cold room compressors kitchen equipment, etc.	No	6		
AB.03.03	6.8	Replace plug tops				
	.01	3-pin single phase	No	18		
	.02	5-pin CEE-form	No	4		
		CARRIED FORWARD				

SCHEDULE NO 12 : INSTALLATION E5:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	7.	<u>WIRE WAYS, CONDUITS AND ACCESSORIES</u>				
AB.03.04	7.1	Replace conduit				
	.01	20 mm Ø PVC	m	200		
	.02	25 mm Ø PVC	m	20		
	.03	20 mm Ø Galvanised steel	m	200		
	.04	25 mm Ø Galvanised steel	m	30		
	.05	25 mm Ø Hospital saddles	No	95		
	.06	20 mm Ø Hospital saddles	No	30		
AB.03.05	7.2	Replace wiring channel				
	.01	O-line OL 9000, 127 x 76 mm	m	40		
	.02	O-line OL 5000, 100 x 76 mm	m	40		
	.03	Legrand white PVC 76 x 41 mm	m	50		
AB.03.09	7.3	Replace power skirting				
	.01	3 tier powder coated galvanised steel	m	20		
	.02	3 tier white Legrand PVC	m	6		
AB.03.10	7.4	Supply and install Prattley boxes				
	.01	83 mm Ø - back entry	No	1		
AB.03.11	7.5	Supply and install draw boxes				
	.01	50 x 100 mm galvanised steel	No	12		
	.02	100 x 100 mm galvanised steel	No	10		
	.03	50 x 100 PVC	No	10		
	.04	100 x 100 PVC	No	10		
AB.03.12	7.6	Supply and install draw box cover				
	.01	50 x 100 mm galvanised steel	No	10		
	.02	100 x 100 mm galvanised steel	No	15		
	8.	<u>EARTHING AND BONDING</u>				
AB.04.01	8.1	Provide earthing and bonding				
	.01	SAPS Barracks	No	2		
	.02	Cells	No	1		
	.03	Bulk Water Purification Plant, including Reservoir	No	1		
		CARRIED FORWARD				

SCHEDULE NO 12 : INSTALLATION E5:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.04.02	8.2	Earthing inspection, testing and certification by a specialist contractor				
	.01	SAPS Barracks	No	2		
	.02	Cells	No	1		
	.03	Bulk Water Purification Plant, including Reservoir	No	1		
	.04	SAPS Admin Office	No	1		
	9.	<u>LIGHTNING PROTECTION</u>				
AB.04.02	9.1	Supply and install earth electrodes				
	.01	16 mm ϕ 1,2 m long Cu	No	22		
AB.04.04	9.2	Provide cadweld joint to 70 mm ² cable	No	22		
AB.04.05	9.3	Earth building roof structure	No	20		
AB.04.02	9.4	Testing and Certification as per SANS	Lump sum	3		
TOTAL SCHEDULE NO 12 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL			R			

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

ELECTRICAL INSTALLATIONS**NB** TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK**SCHEDULE NO 13 : INSTALLATION E6 : MAIN ENTRANCE CANOPY, LIGHT VEHICLE INSPECTION, PUBLIC INSPECTION AND PEDESTRIAN LUGGAGE SEARCH - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS****ELECTRICAL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	1.	<u>DISTRIBUTION BOARDS</u>				
AB.01.01	1.1	Service distribution board				
	.01	Sub distribution board: Main Entrance Gate/Canopy	No	2		
	.02	Sub distribution board: Light Vehicle inspection	No	1		
	.03	Sub distribution board: pedestrian Luggage search	No	1		
AB.01.02	1.2	Replace distribution board				
	.01	Sub distribution board: DB Public Inspection (600 x 400 mm)	No	1		
AB.01.13	1.3	Supply and install SABS approved circuit breakers				
	.01	10-40A, 5kA single pole	No	14		
	.02	45-63A, 5kA single pole	No	12		
	.03	10-40A, 5kA double pole	No	12		
	.04	10-40A, 5kA triple pole	No	2		
	.05	45-63A, 5kA triple pole	No	2		
	.06	80A 5kA, triple pole	No	3		
	CARRIED FORWARD					

SCHEDULE NO 13 : INSTALLATION E6:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.13	1.4	Supply and install SABS approved isolators				
	.01	20-40A 5kA double pole	No	4		
	.02	63A, 5kA double pole	No	6		
AB.01.15	1.5	Supply and install Merlin Gerin contactors				
	.01	15A, 3 pole	No	5		
	.02	30A, 3 pole	No	2		
	.03	30A, 4 pole	No	2		
AB.01.16	1.6	Supply and install Heinemann SAT-R-Clip in timer	No	3		
AB.01.17	1.7	Supply and install SABS approved earth leakage units				
	.01	63A double pole	No	3		
	.02	63A triple pole	No	6		
AB.01.18	1.8	Supply and install 0-30A HRC fuses	No	1		
AB.01.19	1.9	Supply and install surge arrestors				
	.01	Phoenix FLT 60-400	No	1		
	.02	Dehn VGA 280	No	1		
	.03	Dehn Blitsductor	No	1		
AB.01.06	1.10	Provide padlock	No	4		
AB.01.20	1.11	Procure wire marking kit				
	.01	Grafoplast Trasp 012C-03 PVC marking kit	No	1		
	2.	<u>LOW VOLTAGE CABLE INSTALLATIONS</u>				
AB.01.03	2.1	Replace cabling				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	m	10		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	m	100		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	m	10		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	m	20		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	m	20		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	m	500		
		CARRIED FORWARD				

SCHEDULE NO 13 : INSTALLATION E6:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.05	2.2	Termination of low voltage cable				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	2		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	2		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	2		
AB.01.11	2.3	Jointing of cables				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	4		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	1		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	1		
AB.01.11	2.4	Supply and install earth continuity conductor				
	.01	70 mm ² BCEW	m	10		
	.02	16 mm ² BCEW	m	10		
	.03	10 mm ² BCEW	m	10		
	.04	6 mm ² BCEW	m	10		
	.05	2,5 mm ² BCEW	m	10		
AB.01.12	2.5	Terminate earth continuity conductor				
	.01	70 mm ² BCEW	No	4		
	.02	25 mm ² BCEW	No	4		
	.03	16 mm ² BCEW	No	4		
	.04	10 mm ² BCEW	No	4		
	.05	6 mm ² BCEW	No	4		
	.06	2,5 mm ² BCEW	No	4		
		CARRIED FORWARD				

SCHEDULE NO 13 : INSTALLATION E6:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	3.	<u>WIRING</u>				
AB.01.04	3.1	Replace wiring				
	.01	6 mm ² PVC	m	200		
	.02	4 mm ² PVC	m	200		
	.03	2.5 mm ² PVC	m	900		
	.04	2.5 mm ² BCEW	m	1 320		
	4.	<u>CABLE TRENCH AND ACCESSORIES</u>				
AB.01.07	4.1	Excavate in all materials for trenches, backfill, compact and dispose of surplus material.	m ³	50		
AB.01.08	4.2	Supply and install cable sleeves				
	.01	110 mm ø	m	10		
	.02	32 mm ø	m	10		
AB.01.09	4.3	Supply and install plastic warning tape	m	20		
	5.	<u>LIGHTING INSTALLATION</u>				
AB.02.01	5.1	Re-lamp luminaire				
	.01	58W Fluorescent	No	18		
	.02	36W Fluorescent	No	48		
	.03	PL9W Lamp	No	18		
	.04	2D 16W Lamp	No	2		
	.05	18W T-CD Lamp	No	12		
	.06	26W T-CD Lamp	No	2		
	.07	Dulux Eco 21W/E27	No	12		
AB.02.02	5.2	Service luminaire				
	.01	Type B	No	26		
	.02	Type B1	No	12		
	.03	Type D	No	16		
	.04	Type F	No	12		
	CARRIED FORWARD					

SCHEDULE NO 13 : INSTALLATION E6:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.03	5.3	.05 Type L .06 Type W .07 Type V Replace existing luminaire with more energy efficient luminaires of similar appearance	No	14 4 16		
		.01 Type B .02 Type B1 .03 Type D .04 Type F .05 Type L .06 Type W .07 Type V	No	15 4 12 9 14 4 12		
AB.02.06	5.4	Replace luminaire diffuser or lens				
		.01 Type D .02 Type F .03 Type L .04 Type W .05 Type V	No	12 12 6 4 4		
AB.02.06	5.5	Service light switch	No	25		
AB.02.07	5.6	Replace light switch				
		.01 16A, single lever, one way Crabtree .02 16A, two lever, one way Crabtree .03 16A, single lever, one way IP55 rotary type	No	15 6 3		
		CARRIED FORWARD				

SCHEDULE NO 13 : INSTALLATION E6:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.05	5.7	Replace photocell				
	.01	National plug-in type	No	4		
	.02	National 16A unit with bracket	No	3		
	6.	POWER OUTLETS				
AB.03.01	6.1	Service socket outlet				
	.01	16A, single SSO, Crabtree	No	32		
	.02	16A, double SSO, Crabtree	No	30		
	.03	16A, single SSO, IP 55	No	6		
	.04	32A, 3Ø Legrand Type 592 11	No	5		
AB.03.01	6.2	Replace socket outlet				
	.01	16A, single SSO Crabtree	No	15		
	.02	16A, double SSO Crabtree	No	44		
	.03	16A, single SSO IP 55	No	12		
AB.03.02	6.3	Service isolator				
	.01	60A 3 pole	No	4		
	.02	30A 3 pole	No	4		
	.03	20A 2 pole	No	4		
AB.03.02	6.4	Replace isolators				
	.01	60A 3 pole	No	12		
	.02	30A 3 pole	No	6		
	.03	20A 2 pole	No	6		
AB.03.06	6.5	Provide connection for fixed equipment via galvanized sprague and 3 x 6 mm ² wiring eg. Stove	No	2		
AB.03.06	6.6	Provide connection for fixed equipment via galvanized sprague and 4 x 6 mm ² wiring eg. cold room compressors kitchen equipment, etc.	No	2		
AB.03.03	6.7	Replace plug tops				
	.01	3-pin single phase	No	20		
	.02	5-pin CEE-form	No	4		
		CARRIED FORWARD				

SCHEDULE NO 13 : INSTALLATION E6:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	7.	<u>WIRE WAYS, CONDUITS AND ACCESSORIES</u>				
AB.03.04	7.1	Replace conduit				
	.01	20 mm Ø PVC	m	20		
	.02	25 mm Ø PVC	m	20		
	.03	20 mm Ø Galvanised steel	m	150		
	.04	25 mm Ø Galvanised steel	m	30		
	.05	25 mm Ø Hospital saddles	No	95		
	.06	20 mm Ø Hospital saddles	No	60		
AB.03.05	7.2	Replace wiring channel				
	.01	O-line OL 9000, 127 x 76 mm	m	40		
	.02	O-line OL 5000, 100 x 76 mm	m	30		
	.03	Legrand white PVC 76 x 41 mm	m	10		
AB.03.09	7.3	Replace power skirting				
	.01	3 tier powder coated galvanised steel	m	40		
	.02	3 tier white Legrand PVC	m	20		
AB.03.10	7.4	Supply and install Pratley boxes				
	.01	83 mm Ø - back entry	No	4		
AB.03.12	7.5	Supply and install draw boxes				
	.01	50 x 100 mm galvanised steel	No	10		
	.02	100 x 100 mm galvanised steel	No	10		
	.03	50 x 100 PVC	No	2		
	.04	100 x 100 PVC	No	2		
AB.03.12	7.6	Supply and install draw box cover				
	.01	50 x 100 mm galvanised steel	No	10		
	.02	100 x 100 mm galvanised steel	No	15		
	8.	<u>EARTHING AND BONDING</u>				
AB.04.01	8.1	Provide earthing and bonding				
	.01	Main Entrance Canopy	No	1		
	.02	Public Inspection Canopy	No	1		
	.03	Pedestrian Luggage Search	No	1		
		CARRIED FORWARD				

SCHEDULE NO 13 : INSTALLATION E6:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.04.02	8.2	Earthing inspection, testing and certification by a specialist contractor				
	.01	Main Entrance Canopy	No	1		
	.02	Public Inspection Canopy	No	1		
	.03	Pedestrian Luggage Search	No	1		
	.04	Light Vehicle Inspection	No	1		
	9.	<u>LIGHTNING PROTECTION</u>				
AB.04.03	9.1	Supply and install earth electrodes				
	.01	16 mm ø 1,2 m long Cu	No	22		
AB.04.04	9.2	Provide cadweld joint to 70 mm ² cable	No	22		
AB.04.05	9.3	Earth building roof structure	No	50		
AB.04.02	9.4	Testing and Certification as per SANS	Lump sum	3		
TOTAL SCHEDULE NO 13 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL						R

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

ELECTRICAL INSTALLATIONS**NB** TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK**SCHEDULE NO 14 : INSTALLATION E7 : WASTE WATER TREATMENT PLANT & WATER PUMP SCHEME - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS**

						ELECTRICAL REPAIR WORK
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	1.	<u>DISTRIBUTION BOARDS</u>				
AB.01.01	1.1	Service distribution board				
	.01	Main distribution board: DB Main	No	1		
	.02	Sub distribution board: DB Sub	No	1		
AB.01.02	1.2	Replace distribution board				
	.01	Main distribution board: DB Pole Mounted (450 x 350 mm)	No	1		
AB.01.13	1.3	Supply and install SABS approved circuit breakers				
	.01	10-40A, 5kA single pole	No	18		
	.02	45-63A, 5kA single pole	No	12		
	.03	10-40A, 5kA double pole	No	4		
	.04	10-40A, 5kA triple pole	No	12		
	.05	45-63A, 5kA triple pole	No	4		
	.06	80A 5kA, triple pole	No	3		
	.07	100A 5kA, triple pole	No	3		
	.08	125A 25kA, triple pole	No	1		
	CARRIED FORWARD					

SCHEDULE NO 14 : INSTALLATION E7:							
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT	
		Brought forward					
AB.01.14	1.4	Supply and install SABS approved isolators					
	.01	20-40A 5kA double pole	No	2			
	.02	63A - 100A, 5kA double pole	No	6			
AB.01.15	1.5	Supply and install Merlin Gerin contactors					
	.01	15A, 3 pole	No	2			
	.02	30A, 3 pole	No	4			
	.03	30A, 4 pole	No	4			
AB.01.16	1.6	Supply and install Heinemann SAT-R-Clip in timer	No	3			
AB.01.17	1.7	Supply and install SABS approved earth leakage units					
	.01	63A double pole	No	1			
	.02	63A triple pole	No	2			
AB.01.18	1.8	Supply and install 0-30A HRC fuses	No	4			
AB.01.19	1.9	Supply and install surge arrestors					
	.01	Phoenix FLT 60-400	No	3			
	.02	Dehn VGA 280	No	4			
	.03	Dehn Blitzductor	No	4			
AB.01.06	1.10	Provide padlock	No	1			
AB.01.06	1.11	Procure wire marking kit					
	.01	Grafoplast Trasp 012C-03 PVC marking kit	No	1			
	2.	<u>LOW VOLTAGE CABLE INSTALLATION</u>					
AB.01.03	2.1	Replace cabling					
	.01	70 mm ² x 4-core PVC/SWA/PVC CU	m	450			
	.02	35 mm ² x 4-core PVC/SWA/PVC CU	m	150			
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	m	30			
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	m	20			
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	m	40			
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	m	10			
	CARRIED FORWARD						

SCHEDULE NO 14 : INSTALLATION E7:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.05	2.2	Termination of low voltage cable				
	.01	70 mm ² x 4-core PVC/SWA/PVC CU	No	12		
	.02	35 mm ² x 4-core PVC/SWA/PVC CU	No	2		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	2		
AB.01.05	2.3	Jointing of cables				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	6		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	3		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	3		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	1		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	1		
AB.01.11	2.4	Supply and install earth continuity conductor				
	.01	70 mm ² BCEW	m	30		
	.02	16 mm ² BCEW	m	30		
	.03	10 mm ² BCEW	m	30		
	.04	6 mm ² BCEW	m	30		
	.05	2,5 mm ² BCEW	m	30		
AB.01.12	2.5	Terminate earth continuity conductor				
	.01	70 mm ² BCEW	No	2		
	.02	25 mm ² BCEW	No	2		
	.03	16 mm ² BCEW	No	2		
	.04	10 mm ² BCEW	No	2		
	.05	6 mm ² BCEW	No	2		
	.06	2,5 mm ² BCEW	No	2		
		CARRIED FORWARD				

SCHEDULE NO 14 : INSTALLATION E7:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	3.	<u>WIRING</u>				
AB.01.04	3.1	Replace wiring				
	.01	6 mm ² PVC	m	100		
	.02	4 mm ² PVC	m	150		
	.03	2.5 mm ² PVC	m	60		
	.04	2.5 mm ² BCEW	m	30		
	4.	<u>CABLE TRENCH AND ACCESSORIES</u>				
AB.01.07	4.1	Excavate in all materials for trenches, backfill, compact and dispose of surplus material.	m ³	125		
AB.01.08	4.2	Supply and install cable sleeves				
	.01	110 mm ø	m	30		
	.02	32 mm ø	m	50		
AB.01.09	4.3	Supply and install plastic warning tape	m	500		
	5.	<u>LIGHTING INSTALLATION</u>				
AB.02.01	5.1	Re-lamp luminaire				
	.01	58W Fluorescent	No	4		
	.02	36W Fluorescent	No	4		
	.03	PL9W Lamp	No	8		
AB.02.02	5.2	Service luminaire				
	.01	Type A	No	2		
	.02	Type B	No	3		
		CARRIED FORWARD				

SCHEDULE NO 14 : INSTALLATION E7:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.03	5.3	Replace existing luminaire with more energy efficient luminaires of similar appearance				
	.01	Type A	No	12		
	.02	Type B	No	14		
	.03	Type B1	No	1		
	.04	Type D	No	1		
	.05	Type E	No	1		
	.06	Type L	No	6		
	.07	Type W	No	3		
AB.02.07	5.4	Service light switch	No	3		
AB.02.04	5.5	Replace light switch				
	.01	16A, single lever, one way Crabtree	No	2		
	.02	16A, two lever, one way Crabtree	No	2		
	.03	16A, single lever, one way IP55 rotary type	No	3		
		CARRIED FORWARD				

SCHEDULE NO 14 : INSTALLATION E7:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.05	5.6	Replace photocell				
	.01	National plug-in type	No	1		
	.02	National 16A unit with bracket	No	1		
	6.	POWER OUTLETS				
AB.03.01	6.1	Service socket outlet				
	.01	16A, single SSO, Crabtree	No	2		
	.02	16A, double SSO, Crabtree	No	4		
	.03	16A, single SSO, IP 55	No	2		
	.04	32A, 3Ø Legrand Type 592 11	No	4		
AB.03.01	6.2	Replace socket outlet				
	.01	16A, single SSO Crabtree	No	2		
	.02	16A, double SSO Crabtree	No	4		
	.03	16A, single SSO IP 55	No	2		
AB.03.02	6.3	Service isolator				
	.01	60A 3 pole	No	6		
	.02	30A 3 pole	No	3		
	.03	20A 2 pole	No	3		
AB.03.02	6.4	Replace isolators				
	.01	60A 3 pole	No	4		
	.02	30A 3 pole	No	4		
	.03	20A 2 pole	No	2		
AB.03.06	6.5	Provide connection for fixed equipment via galvanized sprague and 3 x 6 mm ² wiring eg. Stove	No	1		
AB.03.06	6.6	Provide connection for fixed equipment via galvanized sprague and 4 x 6 mm ² wiring eg. cold room compressors kitchen equipment, etc.	No	1		
		CARRIED FORWARD				

SCHEDULE NO 14 : INSTALLATION E7:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	7.	<u>WIRE WAYS, CONDUITS AND ACCESSORIES</u>				
AB.03.04	7.1	Replace conduit				
	.01	20 mm Ø PVC	m	200		
	.02	25 mm Ø PVC	m	50		
	.03	20 mm Ø Galvanised steel	m	200		
	.04	25 mm Ø Galvanised steel	m	10		
	.05	25 mm Ø Hospital saddles	No	10		
	.06	20 mm Ø Hospital saddles	No	30		
AB.03.05	7.2	Replace wiring channel				
	.01	O-line OL 9000, 127 x 76 mm	m	30		
	.02	O-line OL 5000, 100 x 76 mm	m	5		
	.03	Legrand white PVC 76 x 41 mm	m	10		
AB.03.09	7.3	Replace power skirting				
	.01	3 tier powder coated galvanised steel	m	50		
	.02	3 tier white Legrand PVC	m	2		
AB.03.10	7.4	Supply and install Pratley boxes				
	.01	83 mm ø - back entry	No	12		
AB.03.11	7.5	Supply and install draw boxes				
	.01	50 x 100 mm galvanised steel	No	12		
	.02	100 x 100 mm galvanised steel	No	6		
	.03	50 x 100 PVC	No	6		
	.04	100 x 100 PVC	No	6		
AB.03.12	7.6	Supply and install draw box cover				
	.01	50 x 100 mm galvanised steel	No	6		
	.02	100 x 100 mm galvanised steel	No	6		
	8.	<u>EARTHING AND BONDING</u>				
AB.04.01	8.1	Provide earthing and bonding				
	.01	Waste Water Treatment Plant	No	1		
AB.04.02	8.2	Earthing inspection, testing and certification by a specialist contractor				
	.01	Waste Water Treatment Plant	No	1		
	CARRIED FORWARD					

SCHEDULE NO 14 : INSTALLATION E7:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	9.	<u>LIGHTNING PROTECTION</u>				
AB.04.03	9.1	Supply and install earth electrodes				
		.01 16 mm ø 1,2 m long Cu	No	8		
AB.04.04	9.2	Provide cadweld joint to 70 mm² cable	No	8		
AB.04.05	9.3	Earth building roof structure	No	2		
AB.04.02	9.4	Testing and Certification as per SANS	Lump sum	1		
TOTAL SCHEDULE NO 14 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL						R

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

ELECTRICAL INSTALLATIONS**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK****SCHEDULE NO 15 : INSTALLATION E8 HOUSES IN TOWN : RESIDENTIAL HOUSES - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS**

						ELECTRICAL REPAIR WORK
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	1.	<u>DISTRIBUTION BOARDS</u>				
AB.01.01	1.1	Service distribution board				
	.01	Main distribution boards: Houses EH3	No	13		
	.02	Main distribution boards: Houses GH2	No	3		
	.03	Main distribution boards: Houses in Town	No	28		
	.04	Main distribution boards: Houses CH1	No	13		
	.05	Sub distribution board: Houses EH3	No	13		
	.06	Sub distribution board: Houses GH2	No	3		
	.07	Sub distribution board: Houses in Town	No	28		
	.08	Sub distribution board: Houses CH1	No	6		
AB.01.02	1.2	Replace distribution board				
	.01	Main distribution board: DB House (600 x 350)	No	12		
	.02	Sub distribution board: DB Garage (400 x 350)	No	12		
	.03	Metering distribution board (350 x 350)	No	12		
AB.01.13	1.3	Supply and install SABS approved circuit breakers				
	.01	10-40A, 5kA single pole	No	35		
	.02	45-63A, 5kA single pole	No	35		
	.03	10-40A, 5kA double pole	No	10		
	.04	45-63A, 5kA double pole	No	40		
	.05	80A 5kA, single pole	No	30		
CARRIED FORWARD						

SCHEDULE NO 15 : INSTALLATION E8:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.14	1.4	Supply and install SABS approved isolators				
	.01	20-40A 5kA double pole	No	12		
	.02	63A, 5kA double pole	No	12		
AB.01.15	1.5	Supply and install Merlin Gerin contactors				
	.01	15A, 3 pole	No	5		
	.02	30A, 3 pole	No	2		
	.03	30A, 4 pole	No	2		
AB.01.16	1.6	Supply and install Heinemann SAT-R-Clip in timer	No	1		
AB.01.17	1.7	Supply and install SABS approved earth leakage units				
	.01	63A double pole	No	22		
	.02	63A triple pole	No	4		
AB.01.18	1.8	Supply and install 0-30A HRC fuses	No	1		
AB.01.19	1.9	Supply and install surge arrestors				
	.01	Phoenix FLT 60-400	No	9		
	.02	Dehn VGA 280	No	6		
	.03	Dehn Blitzductor	No	57		
AB.01.06	1.10	Provide padlock	No	56		
AB.01.20	1.11	Procure wire marking kit				
	.01	Grafoplast Trasp 012C-03 PVC marking kit	No	3		
AB.01.03	2.	<u>LOW VOLTAGE CABLE INSTALLATION</u>				
	2.1	Replace cabling				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	m	600		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	m	500		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	m	800		
	.04	10 mm ² x 3-core PVC/SWA/PVC CU	m	350		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	m	400		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	m	100		
		CARRIED FORWARD				

SCHEDULE NO 15 : INSTALLATION E8:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.05	2.2	Termination of low voltage cable				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	8		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	8		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	6		
	.04	10 mm ² x 3-core PVC/SWA/PVC CU	No	32		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	36		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	30		
AB.01.05	2.3	Jointing of cables				
	.01	25 mm ² x 4-core PVC/SWA/PVC CU	No	4		
	.02	10 mm ² x 4-core PVC/SWA/PVC CU	No	6		
	.03	16 mm ² x 3-core PVC/SWA/PVC CU	No	6		
	.04	6 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.05	4 mm ² x 3-core PVC/SWA/PVC CU	No	2		
	.06	2,5 mm ² x 3-core PVC/SWA/PVC CU	No	2		
AB.01.11	2.4	Supply and install earth continuity conductor				
	.01	70 mm ² BCEW	m	120		
	.02	16 mm ² BCEW	m	120		
	.03	10 mm ² BCEW	m	120		
	.04	6 mm ² BCEW	m	10		
	.05	2,5 mm ² BCEW	m	10		
AB.01.12	2.5	Terminate earth continuity conductor				
	.01	70 mm ² BCEW	No	12		
	.02	25 mm ² BCEW	No	12		
	.03	16 mm ² BCEW	No	12		
	.04	10 mm ² BCEW	No	2		
	.05	6 mm ² BCEW	No	2		
	.06	2,5 mm ² BCEW	No	2		
		CARRIED FORWARD				

SCHEDULE NO 15 : INSTALLATION E8:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.01.04	3.	<u>WIRING</u>				
	3.1	Replace wiring				
	.01	6 mm ² PVC	m	3 000		
	.02	4 mm ² PVC	m	4 000		
	.03	2.5 mm ² PVC	m	4 000		
	.04	2.5 mm ² BCEW	m	9 600		
AB.01.07	4.	<u>CABLE TRENCH AND ACCESSORIES</u>				
	4.1	Excavate in all materials for trenches, backfill, compact and dispose of surplus material.	m ³	500		
AB.01.08	4.2	Supply and install cable sleeves				
	.01	110 mm ø	m	20		
	.02	32 mm ø	m	20		
AB.01.09	4.3	Supply and install plastic warning tape	m	500		
AB.02.01	5.	<u>LIGHTING INSTALLATION</u>				
	5.1	Re-lamp luminaire				
	.01	58W Fluorescent	No	100		
	.02	36W Fluorescent	No	228		
	.03	PL9W Lamp	No	342		
	.04	2D 16W Lamp	No	1		
	.05	18W T-CD Lamp	No	1		
	.06	26W T-CD Lamp	No	1		
	.07	Dulux Eco 21W/E27	No	128		
AB.02.02	5.2	Service luminaire				
	.01	Type B	No	117		
	.02	Type B1	No	36		
	.03	Type K	No	342		
	.04	Type M	No	342		
		CARRIED FORWARD				

SCHEDULE NO 15 : INSTALLATION E8:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.03	5.3	.05 Type N	No	285		
		.06 Type S	No	57		
		.07 Type L	No	57		
		.08 Type O	No	57		
		Replace existing luminaire with more energy efficient luminaires of similar appearance				
		.01 Type B	No	185		
		.02 Type B1	No	40		
		.03 Type K	No	342		
		.04 Type M	No	342		
		.05 Type N	No	128		
		.06 Type S	No	20		
		.07 Type L	No	20		
		.08 Type O	No	15		
AB.02.06	5.4	Replace luminaire diffuser or lens				
		.01 Type K	No	50		
		.02 Type M	No	40		
		.03 Type N	No	20		
		.04 Type S	No	15		
		.05 Type O	No	15		
AB.02.07	5.5	Service light switch	No	456		
AB.02.04	5.6	Replace light switch				
		.01 16A, single lever, one way Crabtree	No	100		
		.02 16A, two lever, one way Crabtree	No	150		
		.03 16A, single lever, one way IP55 rotary type	No	30		
		CARRIED FORWARD				

SCHEDULE NO 15 : INSTALLATION E8:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
AB.02.05	5.7	Replace photocell				
	.01	National plug-in type	No	40		
	.02	National 16A unit with bracket	No	16		
	6.	POWER OUTLETS				
AB.03.01	6.1	Service socket outlet				
	.01	16A, single SSO, Crabtree	No	160		
	.02	16A, double SSO, Crabtree	No	480		
	.03	16A, single SSO, IP 55	No	57		
	.04	32A, 3Ø Legrand Type 592 11	No	1		
AB.03.02	6.2	Replace socket outlet				
	.01	16A, single SSO Crabtree	No	90		
	.02	16A, double SSO Crabtree	No	200		
	.03	16A, single SSO IP 55	No	30		
AB.03.02	6.3	Service isolator				
	.01	60A 2 pole	No	114		
	.02	20- 3 0A 2 pole	No	228		
AB.03.02	6.4	Replace isolators				
	.01	60A 2 pole	No	80		
	.02	20- 3 0A 2 pole	No	100		
AB.03.06	6.5	Provide connection for fixed equipment via galvanized sprague and 3 x 6 mm ² wiring eg. Stove	No	60		
AB.03.06	6.6	Provide connection for fixed equipment via galvanized sprague and 4 x 6 mm ² wiring eg. cold room compressors kitchen equipment, etc.	No	60		
AB.03.01	6.8	Replace plug tops				
	.01	3-pin single phase	No	45		
	.02	5-pin CEE-form	No	25		
		CARRIED FORWARD				

SCHEDULE NO 15 : INSTALLATION E8:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	7.	<u>WIRE WAYS, CONDUITS AND ACCESSORIES</u>				
AB.03.04	7.1	Replace conduit				
	.01	20 mm Ø PVC	m	2 000		
	.02	25 mm Ø PVC	m	1 000		
	.03	20 mm Ø Galvanised steel	m	200		
	.04	25 mm Ø Galvanised steel	m	30		
	.05	25 mm Ø Hospital saddles	No	95		
	.06	20 mm Ø Hospital saddles	No	200		
AB.03.05	7.2	Replace wiring channel				
	.01	O-line OL 9000, 127 x 76 mm	m	40		
	.02	O-line OL 5000, 100 x 76 mm	m	1		
	.03	Legrand white PVC 76 x 41 mm	m	1		
AB.03.09	7.3	Replace power skirting				
	.01	3 tier powder coated galvanised steel	m	1		
	.02	3 tier white Legrand PVC	m	1		
AB.03.10	7.4	Supply and install Pratley boxes				
	.01	83 mm ø - back entry	No	40		
AB.03.11	7.5	Supply and install draw boxes				
	.01	50 x 100 mm galvanised steel	No	20		
	.02	100 x 100 mm galvanised steel	No	20		
	.03	50 x 100 PVC	No	20		
	.04	100 x 100 PVC	No	20		
AB.03.12	7.6	Supply and install draw box cover				
	.01	50 x 100 mm galvanised steel	No	20		
	.02	100 x 100 mm galvanised steel	No	20		
	8.	<u>EARTHING AND BONDING</u>				
AB.04.01	8.1	Provide earthing and bonding				
	.01	Residential Houses in Town	No	14		
	.02	Residential Houses at Border Post	No	22		
AB.04.02	8.2	Earthing inspection, testing and certification by a specialist contractor				
	.01	Residential Houses in Town	No	28		
	.02	Residential Houses at Border Post	No	28		
		CARRIED FORWARD				

SCHEDULE NO 15 : INSTALLATION E8:						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
	9.	<u>LIGHTNING PROTECTION</u>				
AB.04.03	9.1	Supply and install earth electrodes				
		.01 16 mm ø 1,2 m long Cu	No	100		
AB.04.03	9.2	Provide cadweld joint to 70 mm ² cable	No	100		
AB.04.05	9.3	Earth building roof structure	No	100		
AB.04.02	9.4	Testing and Certificationn as per SANS	Lump sum	1		
TOTAL SCHEDULE NO 15 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL						

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ELECTRICAL INSTALLATIONS**NB** TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK**SCHEDULE NO 16: INSTALLATION E9: STANDBY POWER SYSTEMS****ELECTRICAL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	1	<u>GENERAL</u>				
SB .02	1.1	Compile and supply a complete set of operating and Maintenance Manuals for all installations specified				
	.01	Generator System	Sum	1		
	.02	UPS System	Sum	1		
SC.12.03	1.2	Commissioning and testing of the installation				
	.01	Generator System	Sum	1		
	.02	UPS System	Sum	1		
SD.06.01	1.3	Training on operation of installation and equipment as specified				
	.01	Generator System	Sum	1		
	.02	UPS System	Sum	1		
	CARRIED FORWARD					

SCHEDULE NO 16: STANDBY POWER SYSTEMS						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
HB 10.03.09	2.	<u>Tools and Spares</u>				
	2.1	UPS cabinet key	No	1		
	2.2	Distribution Board key	No	3		
	2.3	Distribution Board face plate square key	No	3		
	2.4	Alarm panel key	No	1		
	2.5	Change-over contactor coil	No	1		
	2.6	HD diesel oil	l	60		
	2.7	Oil funnel	No	4		
	2.8	Distilled water	l	25		
	2.9	Battery hydrometer	No	1		
	2.10	12V diesel jockey pump	No	2		
	2.11	20mm A/E diesel hose	m	50		
	3.	<u>Generator</u>				
HB 10.03.01	3.1	Clean and Repair genset plant room	No	2		
HB 10.03.02	3.2	Service 150 kVA genset - Sub Station No2	No	1		
HB 01	3.3	Supply and Install new 250kVA indoor unit, complete with AMF, Day Tank, Cowling etc.	Sum	1		
HB 01	3.4	Supply and Install new 60kVA Containerised unit, complete with AMF and 1000l Bulk tank	Sum	1		
HB 01	3.5	Supply and Install new 60kVA Containerised Mobile unit, complete with AMF and Bulk tank	Sum	1		
HB 10.03.03	3.6	Service diesel engine	No	2		
HB 10.03.04	3.7	Replace starter battery	No	6		
HB 10.03.05	3.8	Execute dummy load test	No	3		
HB 10.03.06	3.9	Service change-over switchgear	No	3		
HB 10.03.07	3.10	Supply and install padlocks	No	6		
	CARRIED FORWARD					

SCHEDULE NO 16: STANDBY POWER SYSTEMS						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
HB 10.03.08	3.11	Supply diesel fuel	l	10000		
	3.12	Remove, supply and replacement of starter motor	No.	1		
	3.13	Supply, install and adjust new fuel injector set, including removal of old one	Set	1		
	3.14	Supply and install new fuel injector pump	No..	1		
	3.15	Supply, installation and commissioning and testing of Duvalco Modular Fuel Management System (DMFMS) for clearing bulk tank stored diesel fuel of particulate matter and water contamination	No.	2		
	3.16	Supply, installation and commissioning and testing of Duvalco Inline Fuel Filter and Automatically Discharging Water Separation Unit for engine mounting.	No.	2		
	3.17	Supply, install, commission, test and provide official calibration certificate of each of the positive displacement dual register mechanical display diesel fuel flow meter; Maximum flow rate No.t less than 45l/min;	No..	2		
	3.18	Supply/construct, install, commissioning and testing of fusible link fuel cut-off systems, one each on the two power generator installations.	No..	2		
	3.19	Supply and replace all V-belts, multi V-groove drive belts, toothed belts, adjusting belt tension of all drive belts and report.	Set	1		
	3.20	Pulley system; supply, install and set pulley alignment and drive belt tension for all V-belt pulleys, multi V-groove pulleys, toothed pulleys and tensioners / idler pulleys	Set	1		
	3.21	Supply and replacement cooling fan including drive train and coolant pump	No..	1		
	3.22	Remove, recore and refit radiator	No..	1		
	CARRIED FORWARD					

SCHEDULE NO 16: STANDBY POWER SYSTEMS						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	Brought forward					
	3.23	Supply and replace radiator and water hoses.	No..	1		
	3.24	Supply and replacement of the water jacket heater, including: mould (if required), element, thermostat, connecting hoses and fittings, insulation, etc.	No..	1		
	3.25	Supply and replacement of the alternator and charging regulator unit (secondary/engine mounted unit) for charging engine starting battery	No..	1		
	3.26	Supply, install the repair kit, including exciter service kit, automatic Voltage Regulator, etc. and commission to overhaul the alternator (Provide details in tender offer);	No..	1		
	3.27	Supply and replacement including connection of the alternator (Primary unit) and directly coupled ancillary system (eg. automatic voltage regulator and /or exciter unit)	No..	1		
	3.28	Supply, install and commission the control panel including all new switch gear parts, such as circuit breakers, relays, bobbins, controllers, cables lugs glands, panel enclosure, emergence stop, 12 and 24Volt LED emergency lights and run down timer switch.	No..	1		
	3.29	Commissioning of system and furnishing of a Certificate of Compliance of the Primary Alternator system:	No..	2		
	CARRIED FORWARD					

SCHEDULE NO 16: STANDBY POWER SYSTEMS						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
	4.	<u>UPS</u>				
HB 11.03.01	4.1	Service UPS Units				
	4.1.1	MLA 20kVA Unit	No	1		
	4.1.2	Tower 1100 10kVA Unit	No	2		
	4.1.3	Tower 1100 5kVA Unit	No	1		
HB 11.01	4.2	Supply and Install new UPS Units				
	4.2.1	10kVA Unit complete with 30 Min backup	Sum	2		
	4.2.2	5kVA Unit complete with 30 Min backup	Sum	2		
HB 11.03.02	4.3	Execute dummy load test	No	6		
HB 11.03.03	4.4	Replace UPS batteries				
	4.4.1	MLA 20kVA Unit, 12V 45a/h	No	32		
	4.4.2	Tower 1100 10kVA Unit, 12V 7a/h	No	64		
	4.4.3	Tower 1100 5kVA Unit, 12V 7a/h	No	32		
	4.5	Replace UPS battery charger card	No	2		
	4.6	Replace UPS Control card	No	2		
	4.7	Replace UPS Power Supply card	No	2		
TOTAL SCHEDULE NO 16 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL			R			

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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ELECTRICAL INSTALLATIONS**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK****SCHEDULE NO 17: INSTALLATION E10: EXTERNAL LIGHTING****ELECTRICAL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	1.	<u>MANUALS, TRAINING AND RECORDING</u>				
SB.02	1.1	Compile and Supply a complete set of Operating and Maintenance Manuals for all installations specified.				
	.01	External lighting installations	Sum	1		
SD.06.01	1.2	Training on operation of installation and equipment as specified				
	.01	External lighting installations	Sum	1		
SC.12.03	1.3	Commissioning and testing of the installation	Sum	1		
	2.	<u>GENERAL REPAIR</u>				
	2.1	<u>Excavation</u>				
HE 09.06(a)	.01	Excavate in all materials for trenches, backfill, compact and dispose of surplus material	m ³	150		
HE 09.06(b)	.02	Extra over item 1.1 for excavating in hard material	m ³	20		
HE 09.06(c)	.03	Extra over item 1.1 for excavating by hand in all materials	m ³	20		
HE 09.06(d)	.04	Extra over item 1.1 for using backfill material obtained from sources provided by the Contractor	m ³	20		
		CARRIED FORWARD				

SCHEDULE NO 17: INSTALLATION E10: EXTERNAL LIGHTING						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
HE 09.06(e)	2.2	Supply and install uPVC sleeves:				
	.01	110mm diameter	m	10		
	.02	76mm diameter	m	10		
	.03	50mm diameter	m	10		
HE 09.06(f)	2.3	Supply and install cable warning tape	m	150		
HE 09.06(g)	2.4	Supply and delivery of PVC/SWA/PVC Cu LV cable:				
	.01	35mm ² , 4-core	m	200		
	.02	25mm ² , 4-core	m	200		
	.03	16mm ² , 4-core	m	30		
	.04	10mm ² , 4-core	m	1000		
	.05	6mm ² , 4-core	m	30		
	.06	4mm ² , 4-core	m	30		
	.07	10mm ² , 3-core	m	150		
	.08	6mm ² , 3-core	m	50		
	.09	4mm ² , 3-core	m	50		
	.10	2.5mm ² , 3-core	m	50		
HE 09.06(h)	2.5	Lay PVC/SWA/PVC Cu LV cable:				
	.01	35mm ² , 4-core	m	200		
	.02	25mm ² , 4-core	m	30		
	.03	16mm ² , 4-core	m	30		
	.04	10mm ² , 4-core	m	1000		
	.05	6mm ² , 4-core	m	500		
	.06	4mm ² , 4-core	m	50		
	.07	10mm ² , 3-core	m	50		
	.08	6mm ² , 3-core	m	50		
CARRIED FORWARD						

SCHEDULE NO 17: INSTALLATION E10: EXTERNAL LIGHTING						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
HE 09.06(i)	2.6	.09 4mm ² , 3-core .10 2.5mm ² , 3-core Termination of PVC/SWA/PVC Cu LV cable:	m	50		
		.01 35mm ² , 4-core	No	6		
		.02 25mm ² , 4-core	No	8		
		.03 16mm ² , 4-core	No	8		
		.04 10mm ² , 4-core	No	40		
		.05 6mm ² , 4-core	No	10		
		.06 4mm ² , 4-core	No	10		
		.07 10mm ² , 3-core	No	50		
		.08 6mm ² , 3-core	No	30		
		.09 4mm ² , 3-core	No	10		
		.10 2.5mm ² , 3-core	No	10		
HE 09.06(j)	2.7	Supply and delivery of bare copper earth conductor:				
		.01 25mm ²	m	200		
		.02 16mm ²	m	200		
		.03 10mm ²	m	1000		
		.04 6mm ²	m	400		
		.05 4mm ²	m	50		
		.06 2,5mm ²	m	100		
HE 09.06(k)	2.8	Installation of bare copper earth conductors:				
		.01 25mm ²	m	30		
		.02 16mm ²	m	30		
		.03 10mm ²	m	50		
		.04 6mm ²	m	400		
	CARRIED FORWARD					

SCHEDULE NO 17: INSTALLATION E10: EXTERNAL LIGHTING						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
HE 09.06(l)	2.9	.05 4mm ² .06 2,5mm ² Termination of bare copper earth conductors:	m	50		
		.01 25mm ²	No	2		
		.02 16mm ²	No	2		
		.03 10mm ²	No	30		
		.04 6mm ²	No	10		
		.05 4mm ²	No	10		
		.06 2,5mm ²	No	10		
HE 09.06(m)	2.10	Jointing of low voltage cable:				
		.01 35mm ² , 4-core	No	5		
		.02 25mm ² , 4-core	No	5		
		.03 16mm ² , 4-core	No	5		
		.04 10mm ² , 4-core	No	12		
		.05 6mm ² , 4-core	No	5		
		.06 4mm ² , 4-core	No	10		
		.07 10mm ² , 3-core	No	5		
		.08 6mm ² , 3-core	No	5		
		.09 4mm ² , 3-core	No	5		
		.10 2.5mm ² , 3-core	No	10		
HE 09.06(n)	2.11	Re-lamp luminaire				
		.01 1000W HPS lamp (25 & 30m High Mast)	No	8		
		.02 400W HPS lamp	No	12		
		.03 250W HPS lamp	No	24		
		.04 250W HPSE lamp	No	40		
		.05 80W MV lamp	No	40		
	CARRIED FORWARD					

SCHEDULE NO 17: INSTALLATION E10: EXTERNAL LIGHTING						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
HE 10.03 (f)	2.12	.06 125W MV lamp Replace luminaire	No	30		
		.01 80W MV post top luminaire (Bekaway)	No	38		
		.02 Type U: 70W HPS post top luminaire (Bekaray)	No	46		
		.03 250W HPSE Streetlight luminaire (Bekasun)	No	34		
		.04 400W HPSE Streetlight luminaire (Bekasun)	No	34		
		.05 Type W: 250W Floodlight luminaire (Bekamax)	No	10		
		.06 Type X: 400W floodlight luminaire (Bekamax)	No	18		
		.07 1000W floodlight luminaire (Beka Projectolux)	No	12		
		.08 57W LED post top luminaire	No.	20		
		.09 144W LED Streetlight luminaire	No.	50		
		.10 279W LED Streetlight luminaire	No.	25		
		.11 213W Floodlight luminaire	No.	15		
		.12 143W LED Canopy luminaire	No.	25		
		.13 476W High Bay floodlight luminaire	No.	25		
HE 10.03 (g)	2.13	Replace photocell	No	18		
HE 10.03 (h)	2.14	Replace area light pole				
		.01 11m Fiberglass Poles	No	25		
		.02 9m Fiberglass Poles	No	20		
		.03 4.1m Fiberglass Poles	No	25		
		.04 Access door pole cover	No	50		
HE 12.03 (f)	2.15	Replace Luminaire diffuser				
		.01 250W HPSE Streetlight diffuser	No	30		
		.02 250W HPSE Flodlight	No	30		
		.03 Post Top diffuser	No	30		
		.04 125W MV Streetlight diffuser	No	30		
TOTAL SCHEDULE NO 17 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL						R

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ELECTRICAL INSTALLATIONS**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK****SCHEDULE NO 18: INSTALLATION E11: MV AND LV INSTALLATIONS - ELECTRICAL SERVICES RELATED REPAIR WORK****ELECTRICAL REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1.	<u>MANUALS, TRAINING AND RECORDING</u>				
SB.02	1.1	Compile and Supply a complete set of Operating and Maintenance Manuals for all installations specified.				
	.01	MV Installations	Sum	1		
	.02	LV Installations	Sum	1		
SD.06.01	1.2	Training on operation of installation and equipment as specified				
	.01	MV Installations	Sum	1		
	.02	LV Installations	Sum	1		
SC.12.03	1.3	Commissioning and testing of the installation	Sum	1		
	2.	<u>GENERAL REPAIR</u>				
	2.1	<u>Excavation</u>				
HE 09.06(a)	.01	Excavate in all materials for trenches, backfill, compact and dispose of surplus material	m ³	300		
HE 09.06(b)	.02	Extra over item 1.1 for excavating in hard material	m ³	20		
HE 09.06(c)	.03	Extra over item 1.1 for excavating by hand in all materials	m ³	20		
HE 09.06(d)	.04	Extra over item 1.1 for using backfill material obtained from sources provided by the Contractor	m ³	20		
		CARRIED FORWARD				

SCHEDULE NO 17: MV AND LV INSTALLATIONS						
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
HE 09.06(e)	2.2	Supply and install uPVC sleeves:				
		.01 110mm diameter	m	100		
		.02 76mm diameter	m	10		
		.03 50mm diameter	m	10		
HE 09.06(f)	2.3	Supply and install cable warning tape	m	200		
HE 09.06(g)	2.4	Supply and delivery of PVC/SWA/PVC Cu LV cable:				
		.01 120mm ² , 4-core	m	150		
		.02 95mm ² , 4-core	m	150		
		.03 50mm ² , 4-core	m	85		
		.04 35mm ² , 4-core	m	300		
		.05 10mm ² , 4-core	m	100		
		.06 6mm ² , 4-core	m	150		
		.07 10mm ² , 3-core	m	350		
		.08 6mm ² , 3-core	m	20		
		.09 4mm ² , 3-core	m	20		
		.10 2.5mm ² , 3-core	m	20		
HE 09.06(h)	2.5	Lay PVC/SWA/PVC Cu LV cable:				
		.01 120mm ² , 4-core	m	150		
		.02 95mm ² , 4-core	m	150		
		.03 50mm ² , 4-core	m	85		
		.04 35mm ² , 4-core	m	30		
		.05 10mm ² , 4-core	m	100		
		.06 6mm ² , 4-core	m	150		
		.07 10mm ² , 3-core	m	350		
		.08 6mm ² , 3-core	m	20		
	CARRIED FORWARD					

SCHEDULE NO 17: MV AND LV INSTALLATIONS							
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
	Brought forward						
HE 09.06(i)	2.6	.09 4mm ² , 3-core	m	20			
		.10 2.5mm ² , 3-core	m	20			
		Termination of PVC/SWA/PVC Cu LV cable:					
		.01 120mm ² , 4-core	No	6			
		.02 95mm ² , 4-core	No	8			
		.03 50mm ² , 4-core	No	8			
		.04 35mm ² , 4-core	No	40			
		.05 10mm ² , 4-core	No	10			
		.06 6mm ² , 4-core	No	10			
		.07 10mm ² , 3-core	No	50			
HE 09.06(j)	2.7	.08 6mm ² , 3-core	No	30			
		.09 4mm ² , 3-core	No	10			
		.10 2.5mm ² , 3-core	No	10			
		Supply and delivery of bare copper earth conductor:					
		.01 70mm ²	m	120			
		.02 25mm ²	m	120			
		.03 10mm ²	m	120			
		.04 6mm ²	m	400			
		.05 4mm ²	m	50			
		.06 2,5mm ²	m	50			
HE 09.06(k)	2.8	Installation of bare copper earth conductors:					
		.01 70mm ²	m	300			
		.02 25mm ²	m	150			
		.03 10mm ²	m	120			
		.04 6mm ²	m	400			
CARRIED FORWARD							

SCHEDULE NO 17: MV AND LV INSTALLATIONS							
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
		Brought forward					
HE 09.06(l)	2.9	.05 4mm ²	m	50			
		.06 2,5mm ²	m	50			
		Termination of bare copper earth conductors:					
		.01 70mm ²	No	6			
		.02 25mm ²	No	6			
		.03 10mm ²	No	30			
		.04 6mm ²	No	10			
		.05 4mm ²	No	10			
		.06 2,5mm ²	No	10			
HE 09.06(m)	2.10	Jointing of low voltage cable:					
		.01 95mm ² , 4-core	No	4			
		.02 70mm ² , 4-core	No	6			
		.03 35mm ² , 4-core	No	5			
		.04 16mm ² , 4-core	No	12			
		.05 6mm ² , 4-core	No	5			
		.06 4mm ² , 4-core	No	10			
		.07 10mm ² , 3-core	No	5			
		.08 6mm ² , 3-core	No	5			
		.09 4mm ² , 3-core	No	5			
		.10 2.5mm ² , 3-core	No	10			
HC 13	3.	<u>OVERHEAD RETICULATION INSTALLATION</u>					
HC 13.03		.01 Service of overhead installation	m	900			
HC 11.02.01		.02 Replace insulators	No	28			
		CARRIED FORWARD					

SCHEDULE NO 17: MV AND LV INSTALLATIONS							
PAYMENT	ITEM	DESCRIPTION	UNIT	QUAN-	RATE	AMOUNT	
REFERS	NO			TITY			
TO							
	Brought forward						
HC 11.02.01	.03	Replace pole top circuit breakers	No	8			
HC 11.03 (a)	.04	Service of Distribution Kiosk	No	9			
	.05	Replace of Distribution Kiosk	No	2			
HC 13.03 (d)	.06	Replacement of 11m wooden pole	No	30			
HC 13.03 (e)	.07	Replace overhead house connection	No	8			
	3.1	<u>POLE TRANSFORMERS</u>					
HD 11.03(a)	.01	Service transformers	No	6			
HD 11.03(b)	.02	Oil Test	No	4			
HD 11.03(f)	.03	Transformer Oil	L	150			
HD 11.03(d)	.04	Install new silica gel drier	No	6			
	3.2	<u>SUBSTATION NO1 AND NO2</u>					
HA 11.03(a)	.01	Service 11kV Switchgear - Alstom 11kV 90A K1/AF	No	3			
HA 11.03(f)	.02	Check protection relays O/C&EF	No	1			
HA 11.03(a)	.03	Service Transformer 500kVA	No	1			
HA 11.03(b)	.04	Oil Test	No	2			
HA 11.03(e)	.05	Replace Silica Gel	No	1			
HB 10.03.01	.06	Repair work to plant room	No	2			
HA 11.03(e)	.07	Replace Silica Gel	No	1			
HA 11.03(a)	.08	Service LV distrution board	No	2			
	3.3	<u>GROUND/PAD - MOUNTED TRANSFORMERS</u>					
HD 11.03(a)	.01	Service transformers - 50kVA - 200kVA	No	3			
HD 11.03(b)	.02	Oil Test for pole top transformer	No	2			
HD 11.03	.03	New Transformer 200kVA - Supply Delivery, Installation and Commissioning.	No	2			
TOTAL SCHEDULE NO 18 CARRIED TO SUMMARY: REPAIR WORK - ELECTRICAL						R	



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ELECTRICAL INSTALLATIONS

SUMMARY OF SCHEDULE OF QUANTITIES: REPAIR WORK:

ELECTRICAL INSTALLATIONS

	Summary
SCHEDULE NO 8 : INSTALLATION E1: GENERAL REPAIR WORK : TOOLS & SPARES	R
SCHEDULE NO 9 : INSTALLATION E2 : IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS	R
SCHEDULE NO 10 : INSTALLATION E3 : CUSTOMS EXPORT RAMP, IMPORT RAMP AND OFFICES, CLEARING AGENTS, SUB NO2, PUBLIC ABLUTION BUILDINGS ELECTRICAL SERVICES RELATED REPAIR WORKS	R
SCHEDULE NO 11 : INSTALLATION E4 : LIGHT VEHICLE INSPECTION, CONTROL POINT AND PUBLIC TOILETS - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS	R
SCHEDULE NO 12 : INSTALLATION E5 : SAPS BARRACKS, CELLS AND ADMIN OFFICES AND BULK WATER PURIFICATION BUILDING - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS	R
SCHEDULE NO 13 : INSTALLATION E6 : MAIN ENTRANCE CANOPY, LIGHT VEHICLE INSPECTION, PUBLIC INSPECTION AND PEDESTRIAN LUGGAGE SEARCH - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS	R
SCHEDULE NO 14 : INSTALLATION E7 : WASTE WATER TREATMENT PLANT & WATER PUMP SCHEME - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS	R
SCHEDULE NO 15 : INSTALLATION E8 HOUSES IN TOWN : RESIDENTIAL HOUSES - BUILDING ELECTRICAL SERVICES RELATED REPAIR WORKS	R
SCHEDULE NO 16: INSTALLATION E9: STANDBY POWER SYSTEMS	R
SCHEDULE NO 17: INSTALLATION E10: EXTERNAL LIGHTING	R
SCHEDULE NO 18: INSTALLATION E11: MV AND LV INSTALLATIONS - ELECTRICAL SERVICES RELATED REPAIR WORK	R
TOTAL OF SCHEDULE OF QUANTITIES – REPAIR WORK : ELECTRICAL INSTALLATIONS	
CARRIED TO MAIN SUMMARY PAGE - CALCULATION OF TENDER SUM	R

SIGNED ON BEHALF OF TENDERER:

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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BILL OF QUANTITIES**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**

SCHEDULE NO 2: INSTALLATION M1: HVAC INSTALLATION

MECHANICAL
REPAIR WORK

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	200.00	<u>General</u>				
	201.00	As-built information and Operating and Maintenance Manuals.				
SB 05.01 FD 04	.01	Obtaining of all available information, compiling, reproducing and finalising three sets of as built and Operating and Maintenance Manuals and handing over to the Engineer.	Sum	1		
FD 05	202.00	Training				
	.01	Maintenance staff for HVAC	Sum	1		
	.02	Development of syllabus for training operators.	Sum	1		
SD 06.02	.03	Presenting a training course for operators.	Sum	1		
FD 06	203.00	Logging and recording of operating conditions, services, maintenance visits, reports, breakdowns, samples, inspections, tests, etc.				
	.01	HVAC Installation	Sum	1		
PFD 04.01	204.00	Inspection and Report on the following items:				
PFD - 04.01.01(a)	.01	Split air-conditioning installation:				
	.01	Inspect and report on the condition of the unit for any defects, failures, etc.	No.	200		
PFD - 04.01.01(a)	.02	Wall Mounted unit air-conditioning installation:				
	.01	Inspect and report on the condition of the unit for any defects, failures, etc.	No.	15		
Carried forward						

Brought forward					
205.00	SERVICE AC UNITS - MIDWALL SPLIT TYPE AIR-CONDITIONING UNITS (AC)				
.01	Clean air intake screen	No.	200		
.02	Replace filters	No.	200		
.03	De-rust neutralize and touch up paintwork	No.	200		
.04	Check setting and operation of all pressure switches and reset		200		
		No.			
.05	Check setting and operation of all safety switches, i.e. LP&HP switches, oil pressure switch	No.	200		
.06	Check setting and operation of thermostat	No.	200		
.07	Check running current of fans and compressor and settings and operation of overloads		200		
		No.			
.08	Check tightness of all electrical terminals	No.	200		
.09	Ensure operation of local and remote isolators	No.	200		
.10	Reposition and strap cables	No.	200		
.11	Carry out a leak test on all refrigeration piping and components inclusive of evaporator and condenser		200		
		No.			
.12	Replace compressor vibration mounts	No.	200		
.13	Check refrigerant charge sight glass being clear or flashing	No.	200		
.14	Clean condensate tray and test drainage operation	No.	200		
.15	Clean evaporator and condenser fan blades and check unbalance		200		
		No.			
.16	Repair outdoor unit fins	No.	200		
.17	Repair indoor air guide vents	No.	200		
.18	Supply and install condensate drain pipe (25mm diameter)	m	100		
206.00	SERVICE AC UNITS - SELF-CONTAINED AIR-CONDITIONING UNITS				
.01	De-rust neutralize and touch up paintwork	No.	25		
.02	Supply and install condensate drain pipe (25mm diameter)	No.	25		
.03	Repair indoor air guide vents	No.	25		
Carried forward					

Brought forward				
206.00	.04	Repair controls	No.	25
	.05	Replace compressor vibration mountings	No.	25
	.06	Repair outdoor unit fins	No.	25
	.07	Carry out a leak test on all refrigeration piping and components inclusive	No.	25
207.00	SERVICE AC UNITS - DUCTED HIDE AWAY AIR-CONDITIONING UNITS			
	.01	Clean diffusers	No.	10
	.02	Carry out a leak test on refrigeration piping and components inclusive of evaporator and condenser	No.	10
	.03	Replace filters	No.	10
	.04	Repair refrigerant pipe insulation	m	40
	.05	Check settings and operation of thermostat	No.	10
	.06	Clean air intake screen	No.	10
	.07	Ensure operational of remote controllers	No.	10
208.00	SERVICE AC UNITS - VRV OUTDOOR AIR-CONDITIONING UNITS			
	.01	Repair outdoor unit fins	No.	1
	.02	Replace outdoor unit casing	No.	1
	.03	Carry out a leak test on refrigeration piping and components inclusive of evaporator and condenser	No.	1
	.04	Re-gasing of refrigerant	No.	1
	.05	De-rust, neutralize and touch up paint	No.	1
	.06	Check and repair settings and operation of all safety switches, i.e. LP&HP switches, oil pressure switches, etc.	No.	1
	.07	Check running current of fans and compressor, settings and operation of overloads	No.	1
	.08	Replace outdoor vibration mountings	No.	1
	.09	Clean outdoor fan blades and check unbalance	No.	1
209.00	Service of air curtains			
	.01	Repair or Replace Fan & Fan Motor	No	10
	.02	Repair Mounting Brackets & Supports	No	10
	.03	Repair/Replace Controller	No	10
210.00	Replace temperature control unit (remote)		No.	35
211.00	Re-Gas AC units		No.	20
Carried forward				

Brought forward					
212.00	Replace 25mm Thermaflex isolation		m	200	
213.00	Replace condensate pump		No.	5	
214.00	Replace Control PC-board:				
.01	High wall split unit		No.	20	
.02	Window / Wall unit		No.	20	
.03	Under Ceiling Unit		No.	8	
215.00	Replace Compressor:				
.01	9000btu, Window Unit		No.	5	
.02	9000 btu, High Wall Split Unit		No.	5	
.03	12000 Btu high wall split unit		No.	5	
.04	12000btu, Window Unit		No.	5	
.05	18000 Btu high wall split unit		No.	5	
.06	26000 Btu high wall split unit		No.	5	
.07	30000btu,High Wall Split Unit		No.	5	
.08	48000 btu, Under Ceiling Unit		No.	5	
.09	48000btu, High Wall Split Unit		No.	5	
.10	Cassette split unit Capacity: 14.5 kW (48000 btu Heat pump)		No.	5	
216.00	Replace Capacitor:				
.01	9000btu, Window Unit		No.	5	
.02	9000 btu, High Wall Split Unit		No.	5	
.03	12000 Btu high wall split unit		No.	5	
.04	12000btu, Window Unit		No.	5	
.05	18000 Btu high wall split unit		No.	5	
.06	26000 Btu high wall split unit		No.	5	
.07	30000btu,High Wall Split Unit		No.	5	
.08	48000 btu, Under Ceiling Unit		No.	5	
.09	48000btu, High Wall Split Unit		No.	5	
.10	Cassette split unit Capacity: 14.5 kW (48000 btu Heat pump)		No.	5	
217.00	Remove and re-install air-conditioner		No.	30	
Carried forward					

Brought forward					
	218.00	Temperature logging and recording device for air-conditioning units (Data Logger)	No.	1	
	219.00	<u>REPLACE AC UNIT</u>			
	.01	9000btu, Window Unit	No.	2	
	.02	9000 btu, High Wall Split Unit	No.	2	
	.03	12000 Btu high wall split unit	No.	25	
	.04	12000btu, Window Unit	No.	15	
	.05	18000 Btu high wall split unit	No.	25	
	.06	26000 Btu high wall split unit	No.	20	
	.07	30000btu,High Wall Split Unit	No.	3	
	.08	48000 btu, Under Ceiling Unit	No.	2	
	.09	48000btu, High Wall Split Unit	No.	2	
	.10	Cassette split unit Capacity: 14.5 kW (48000 btu Heat pump)	No.	8	
	.11	Air curtains similar to existing	No.	9	
	.12	Supply air ducting, return air ducting provide diffusers and louvres	PC Sum	-	80 000.00
	.13	Profit and attendance on sub item above	%	80000	
	220.00	<u>Extractor Fan</u>			
	.01	Wall Fan, C/W outdoor louver sized to suite fan, all required accessories to ensure a fully functional installation and suitable electrical connection wiring (3m long) between isolator and fan terminals, tested, installed and commissioned in position as per specification. 150 x 150 - 35-40/s @ 50Pa E.S.P	No.	25	
SC 12.03	221.00	Commissioning			
	.01	Commissioning and testing of the installation.	Sum	1	
	222.00	<u>REPAIR WORK TO MANICA BUILDING</u>			
		Provisional Sum for the repair work to damaged building	PC Sum		150 000.00
		Charge required by Contractor on sub item above	%	150 000	
TOTAL - CARRIED TO SUMMARY: REPAIR WORK - MECHANICAL					

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK****SCHEDULE NO 3: INSTALLATION M2: KITCHEN EQUIPMENT****MECHANICAL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	300.00	<u>General</u>				
FF 04	301.00	As-built information and Operating and Maintenance Manuals.				
	.01	Obtaining of all available information, compiling, reproducing and finalising three sets of as built and Operating and Maintenance Manuals and handing over to the Engineer.	Sum	1		
FF 05	302.00	Training				
	.01	Kitchen equipment	Sum	1		
	.02	Development of syllabus for training operators	Sum	1		
SD 06.02	.03	Presenting a training course for operators	Sum	1		
FF 06	303.00	Logging and recording of operating conditions, services, maintenance visits, reports, breakdowns, samples, inspections, tests, etc.				
	.01	Kitchen equipment	Sum	1		
Carried forward						

Brought forward					
	304.00	Repair Work: Repairs to include fans, controls, electrical connections as well as doors and latches			
	304.01	Stove	Sum	1	
PFF.04.02	304.02	Knobs and handles for stoves and ovens	Sum	1	
PFF.04.03	304.03	Gauges	Sum	1	
FF 11.02(a)	.01	Steam traps	Sum	1	
	.02	Strainers	Sum	1	
	.03	De-greasing of Convection ovens	Sum	1	
	.04	Isolating Valve handles	Sum	1	
	.05	Repair of Extraction Canopy	Sum	1	
	304.04	Repair of the following Kitchen Equipment			
	.01	Repair of the fat trap and plumbing	No.	1	
	.02	Minor builders work including Epoxy coating and trenching	No.	1	
	305.00	<u>REPAIR WORK TO MANICA BUILDING</u>			
		Provisional Sum for the repair work to damaged building	PC Sum		15 000.00
		Charge required by Contractor on sub item above	%	15 000	
Carried forward					

Brought forward					
	306	Replace Kitchen Equipment			
	0.1	Supply and install wall mounted stainless steel exhaust hood, LxW: 1100 x 950 Fully furnished with grease filters kitchen Axial flow Fan, C/W intake discharge cowl, WMS,	no	1	
	0.2	2x sound attenuators, flexible connections, mounting feet, spring mounts and flanges as specified, suitable electrical connection wiring (3m long) between isolator and fan Supply and install an industrial stove	no	1	
	0.3	Including all accessories, fittings, installation, etc to ensure a fully functioning system as per the specifications and relevant standards			
	0.01	Three 4kW hotplates 640 x 330mm, each controlled by a three heat switch with a baking oven. Power Supply: 18kW, 400V, 3 Phase, Neutral and Earth.	no	1	
TOTAL - CARRIED TO SUMMARY: REPAIR WORK - MECHANICAL					

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BILL OF QUANTITIES**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK****SCHEDULE NO 4: INSTALLATION M3: INCINERATOR INSTALLATION****MECHANICAL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
FE PFE	400.00	<u>General</u>				
	401.00	As-built information and Operating and Maintenance Manuals.				
FE 04	.01	Obtaining of all available information, compiling, reproducing and finalising three sets of as built and Operating and Maintenance Manuals and handing over to the Engineer.	Sum	1		
FE 05	402.00	Training				
	.01	Incinerators installation.	Sum	1		
	.02	Development of syllabus for training operators	Sum	1		
	.03	Presenting a training course for operators	Sum	1		
SA	403.00	Supply,installation,testing and commissioning	No.	1		
		<u>Corrective Maintenance</u>				
PSA 8.11	404.00	Provide for Incinerator House including steel works and brick wall	Sum Prov	1		
	405.00	Incinerator Casing Clean incinerator casings, interior and exterior including bracings, refractories, doors, etc.				
	.01	incinerator	No.	1		
	406.00	Grit collector Clean out grit collector of all soot, dust and foreign matter				
Carried forward						

Brought forward					
407.00	Loading and ashing doors				
	.01	Clean and free sliding rails for loading doors	No.	1	
	.02	Service and repair loading door	No.	1	
408.00	Chimney				
	.01	Clean chimney stack	No.	1	
	.02	Prepare and repaint chimney stack with 400°C heat resistant paint	No.	1	
409.00	Draught control equipment				
	.01	Inspect, test and service all draught control equipment for correct operation	No.	1	
410.00	Fuel burner equipment				
	.01	Service primary burner for 450 LACR model	No.	1	
	.02	Service after burner for 450 LACR model	No.	1	
	.02	Replacement of Primary/After Burner (Lamborghini ECO22)	No.	2	
		Electrical and temperature controls			
411.00	Instrumentation and controls				
	.01	Service control panel for Incinerator Model (FE 14.03)	No.	1	
	.02	Allow for replacement of the following equipment as per manufacturer's specification:			
	.01	Pyrometer	No.	1	
	.02	Temperature sensor	No.	1	
	.03	Timer	No.	1	
	.04	Digital temperature controller 0 - 400 C	No.	1	
	.05	Digital temperature controller 0 - 1200 C	No.	1	
Carried forward					

Brought forward					
	412.00	Paintwork			
	.01	Clean, prepare and repaint incinerator structure, doors, frames, etc. with high heat resistant black paint	No.	1	
	413.00	Fuel storage, piping and pumping systems			
	.01	Replace fuel filters	No.	1	
	.02	Supply, deliver and install diesel	ø	2200	
	.03	Supply, install, commission, test and provide official calibration certificate of a mechanical display diesel fuel flow meter; Maximum flow rate Not less than 45l/min;	No..	2	
TOTAL - CARRIED TO SUMMARY: REPAIR WORK - MECHANICAL					

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK****SCHEDULE NO 5: INSTALLATION M4: FIRE PROTECTION INSTALLATION****MECHANICAL
REPAIR WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
JC	500.00	<u>FIRE FIGHTING EQUIPMENT</u>				
JC 05	501.00	Inspection and report on existing installations				
	.01	Fire hydrants	No	22		
	.02	Fire hose reels	No	32		
	.03	Fire extinguisher	No	116		
	.04	Fire Control Panels	No	3		
	502.00	Testing of fire protection system				
	.01	Water flow test Fire hose reels	PC Sum			5 000.00
	.02	Fire hydrant testing	PC Sum			5 000.00
	.03	Vessel Pressure Test on Extinguishers	PC Sum			5 000.00
	.04	Fire Control Panels	PC Sum			5 000.00
	.05	Charge required by Contractor on sub item .01 to .04 above	%	20000.00		
JC 05	503.00	Logging and recording of operating conditions, maintenance visits, samples, inspections, surveys, tests etc.: as per technical specification JC 05				
	.01	Conventional fire fighting equipment	Sum	1		
	504.00	Update "As-Built" Information and Operating and Maintenance Manuals	Sum	1		
	505.00	Labelling of all conventional fire fighting equipment with identifying tags and recording of details:				
	.01	Fire hydrants	No.	20		
	.02	Fire hose reels	No.	20		
	.03	Fire extinguishers	No.	100		
Carried forward						

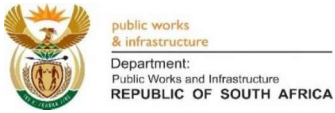
Brought forward					
JC 06	506.00	Signage for fire fighting equipment			
	.01	Photoluminescent escape and fire fighting equipment signs installed complete with, aluminium frame, mountings, brackets, etc.			
	.01	190mm x 190mm	No.	35	
	.02	190mm x 384mm	No.	8	
	.03	190mm x 578mm	No.	8	
	.02	Silk-screened escape and fire fighting equipment signs installed complete with aluminium frame, mountings, brackets, etc.			
	.01	190mm x 190mm	No.	8	
	.02	190mm x 384mm	No.	8	
	.03	190mm x 578mm	No.	8	
	.03	Silk-screened fire fighting equipment signs installed behind backboards			
	.01	400mm x 666mm	No.	5	
		<u>CORRECTIVE MAINTENANCE DETAIL WORK</u>			
	507.00	Supply and installation of fire hydrant equipment:			
	.01	Fire hose cabinet large enough to hold four 30m coils of fire hose	No.	15	
	.02	Jet/spay branch pipes equivalent to AWG 1C	No.	10	
	.03	30m long, 64mm, percolating fire hose coils complete with quick couplings	No.	20	
	.04	Natural anodised fire hydrant keys with four sizes in one	No.	5	
	.05	80 mm dia fire hydrant complete with galvanised mild steel pipe wrapped with denzo tape and in concrete encasement including brass hydrant valve with screwed inlet	No.	6	
	.06	Replace main hydrant seals	No.	12	
	.07	Repaint hydrant	No.	15	
Carried forward					

Brought forward					
508.00	Servicing, cleaning and repair of fire hydrants:				
.01	80 mm dia. brass right angle hydrant valves	No.		7	
.02	Replace quick coupling catches	No.		7	
.03	Replace main hydrant seals	No.		7	
.04	Repaint hydrant	No.		7	
.05	Replace hose drum seal	No.		7	
.06	Replace gland packing and gasket of shutoff valve with repair kit	No.		7	
509.00	Replace rusted medium grade, seamless galvanised mild steel pipework complete with pipe support and accessories as specified				
.01	80mm diam piping including painting	m		100	
.02	50mm diam piping including painting	m		120	
.03	32mm diam piping including painting	m		90	
.04	25mm diam piping including painting	m		96	
510.00	Extra over pipework as follows 90 Degree Bends				
.01	50mm diam piping HDPE Class 9	m		50	
.02	50mm diam GI	m		40	
.03	25mm diam	m		50	
510.00	Reducers				
.01	50>32	No.		20	
.02	32<25	No.		15	
511.00	Tees				
.01	50x50x50mm diam	No.		10	
.02	32x32x32mm diam	No.		9	
.03	External fire piping	No.		11	
512.00	Supply and installation of fire extinguisher equipment:				
.01	9 kg dry chemical powder (STP) fire extinguisher	No.		70	
.02	4.5 kg STP fire extinguisher	No.		35	
.03	5 kg CO ₂ fire extinguisher	No.		25	
.04	Lockable, metal cabinet for fire extinguisher	No.		15	
Carried forward					

Brought forward					
	513.00	Servicing, cleaning, recharging and repair of fire extinguishers:			
		.01 Dry chemical power (STP) fire extinguisher:			
		.01 Replace 9kg fire extinguishers charge	number	18	
		.02 Replace 4,5kg fire extinguishers charge	number	4	
		.03 Replace 1,5kg fire extinguishers charge	number	2	
		.04 Replace discharge hose and Nozzle	number	10	
		.05 Replace gauge and bottle	number	1	
		.06 Check, service and repair activation mechanism	number	22	
		.07 Recharge discharge mechanism	number	22	
		.08 Replace instructions on fire extinguishers	number	22	
		.09 Replace wall-mounting polished hardwood backboard and	number	1	
		.10 Repaint equipment	item	22	
	513.10	.02 Carbon dioxide (CO₂) fire extinguisher:			
		.01 Repair activation mechanism	No.	10	
		.02 Recharge with CO ₂ for 5 kg charge	No.	25	
		.03 Recharge with CO ₂ for 2,27 kg charge	No.	25	
		.04 Reseal discharge mechanism	No.	15	
		.05 Replace instructions on extinguisher	No.	15	
		.06 Replace discharge nozzle and pipe	No.	10	
		.07 Replace wall mounting polished hardwood backboard and bracket	No.	10	
		.08 Replace gauge on bottle	No.	5	
		.09 Repaint equipment	No.	10	
		Compilation of a fire plan for service buildings	No.	15	
Carried forward					

Brought forward						
JC 04	513.20	03. Provide full service of fire extinguishing equipment				
		.01 Statutory annual servicing of 9kg STP fire extinguisher	number	18		
		.02 Statutory annual servicing of 4.5kg STP fire extinguisher	number	4		
		.03 Statutory annual servicing of 1.5kg STP fire extinguisher	number	5		
		.04 Statutory annual servicing of 5kg CO ₂ fire extinguisher	number	5		
		.05 Statutory annual servicing of 2kg CO ₂ fire extinguisher	number	5		
		.06 Fire fighting training	number	2		
		514.00 Supply and installation of fire hose reel equipment:				
		.01 Fire hose reels with 30m hoses	No.	6		
		.02 Shut-off valve	No.	6		
		.03 314 Stainless steel lockable, metal cabinet for fire hose reel	No.	6		
		515.00 Servicing, cleaning and repair of fire hose reels:				
		.01 Fire hose reels with 30m hoses	No.	4		
		.02 Replace 30m hose	No.	4		
		.03 Replace hose drum seal	No.	4		
		.04 Replace gland packing and gasket of shut-off valve	No.	4		
		.05 Repaint equipment	No.	4		
		516.00 Fire Booster Pump:				
		.01 Decommissioning and removal of electric pumping	number	1		
		.02 Supply and delivery of diesel pumping equipment	number	1		
		.03 Installation, testing and commissioning of diesel pumping equipment	number	1		
		.04 Compile and supply a complete set of Operating and Maintenance Manuals	number	1		
	Carried forward					

Brought forward					
517.00	FIRE DETECTION SYSTEM				
	.01	Service ZP3 fire panel	No.	2	
	.02	Replace Surface mounted Call-Point Break Glass unit ZP785-3	No.	4	
	.03	Replace Annalogue Optical Smoke Sensor ZP730-2	No.	8	
	.04	Replace Annalogue Thermal (Ionization) Sensor ZP720-2	No.	6	
	.05	Replace fire alarm system siren with strobe light ZP755B-2	No.	5	
	.06	Replace fire sensor base ZP7-R81	No.	3	
	.07	Replace call point glasses	No.	4	
518.00	REPAIR WORK TO MANICA BUILDING				
		Provisional Sum for the repair work to damaged building	PC Sum		150 000.00
		Charge required by Contractor on sub item above	%	150 000	
TOTAL - CARRIED TO SUMMARY: REPAIR WORK - MECHANICAL					



DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SUMMARY OF BILL OF QUANTITIES: MECHANICAL REPAIR WORK

		Summary
SCHEDULE NO 1: INSTALLATION M1: HVAC INSTALLATION	R	
SCHEDULE NO 2: INSTALLATION M2: KITCHEN EQUIPMENT	R	
SCHEDULE NO 3: INSTALLATION M3: INCINERATOR INSTALLATION	R	
SCHEDULE NO 4: INSTALLATION M4: FIRE PROTECTION INSTALLATION	R	
TOTAL OF BILL OF QUANTITIES - MECHANICAL REPAIR WORK CARRIED TO CALCULATION OF TENDER SUM	R	

SIGNED ON BEHALF OF TENDERER:

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002A1

**SCHEDULE No. 3.1: INSTALLATION C1.MB: BEITBRIDGE:
STRUCTURAL AND BUILDING**

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

CIVIL MAINTENANCE

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	1500.00	STRUCTURAL AND BUILDING RELATED WORK				
SA.01	1500.01	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to the following during daily Preventative maintenance work and minor corrections of all structural and building related facilities, including components and elements such as, but not limited to:</p> <ul style="list-style-type: none"> • Doors (hinges, locksets, strike plates, indicator locks) • Windows (pegs, stays, etc.) • Pull handles • Glass putty • Fascia boards • Roof cladding and sheeting • Cornices • Ceiling boards and jointing strips • Sealant • Skirtings, etc. 				
	.01	Beitbridge: Proper maintenance of Structural and Building related work of operational area, residential area and mobile homes. Maintenance is not limited to the above-mentioned	points	360		
SA.01	1500.02	<p>Maintenance report</p> <p>The Contractor shall compile and submit a monthly facilities inspection report, in which damaged structural components and elements of buildings and facilities ("damages") shall be listed and quantified, only if such components and elements could not be maintained or corrected at the time of inspections, due to the nature of the damage, or the need for replacement of such components and elements.</p>				
	.01	Beitbridge: Comprehensive monthly facilities inspection report	points	360		
		Breakdown maintenance: Repair of damages is remunerated for from the payment items, within the maximum allowable downtime:				
		Carried forward				

		Brought forward				
SA.04	1500.03	Payment reduction: .01 Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-500.00	rate only
SA.01 PS 5.1	1501.00	Maintenance tools and equipment The Contractor shall carry out his inspections with the necessary tools and consumables required for on-the-spot maintenance and corrections of all structural elements and components. An updated asset register shall be provided: .01 Maintenance: Appropriate tool shed, tools/equipment and consumables for proper maintenance on-the-spot/on-site. Lockable cabinet with duplicate keys and updated register for port of entry	points	360		
SA.01 PS 4	1502.00	Programme of the Works (Construction Programme) The Contractor shall compile and submit a complete and accurate Programme of the Works 14 days after site handover and updated monthly which is linked to the expenditure and project cash flow .01 Beitbridge: Programme of the Works	points	360		
SA.04 PS 4	1502.01	Payment reduction: .01 Beitbridge: Payment reduction due to late submission of an adequate/ acceptable Programme of the Works	days	-	-500.00	rate only
SA.03 SA.04	1503.00	Maintenance Control Plan The Contractor shall compile and submit a complete and accurate monthly Maintenance Control Plan (see Additional Specification SA), which shall be utilised to log and record all faults, system checks, breakdowns and site inspections .01 Beitbridge: Maintenance Control Plan Payment reduction for late submission of the Maintenance Plan:	points	360		
		Carried forward				

		Brought forward				
SA.04	1503.01	<p><u>LATE SUBMISSION OF ACCEPTABLE MAINTENANCE CONTROL</u></p> <p>Payment reduction:</p> <p>.01 Beitbridge: Payment reduction due to late submission of an adequate/ acceptable Maintenance Control Plan</p>	days	-	-500.00	rate only
<p>TOTAL SCHEDULE No. 3.1: CARRIED TO SUMMARY: MAINTENANCE AND OPERATION WORK</p>						

Tender No: H22/002AI
SCHEDULE No. 3.2:

INSTALLATION C2.MB: BEITBRIDGE:
PLUMBING, DRAINAGE AND WET SERVICES - RELATED MAINTENANCE WORK

CIVIL MAINTENANCE

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01	1600.00	<u>MAINTENANCE OF PLUMBING, DRAINAGE, WET SERVICES AND SEWER NETWORKS AT OPERATIONAL AND RESIDENTIAL BUILDINGS AND MOBILE HOMES</u>				
	1600.01	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specification AA Plumbing and Drainage Installations: Table AA 10.02/1 - Rainwater Disposal System, Table AA 10.02/2 - Soil and Wastewater Drainage System, Table AA 10.02/3 - Domestic Water Distribution and Reticulation Systems, Table AA 10.02/4 - Sanitary and Brassware Equipment, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Checking, inspecting, cleaning, unblocking, re-adjusting, painting, fixing, repairing or replacing, inclusive of appurtenances of all drains and sewers including: <ul style="list-style-type: none"> - Pipes - Gutters - Catch pits - Channel drains - Floor outlets - Gullies - Manhole covers and frames - Brackets - Grease traps, oil separators, etc. - Plumbing - Water distribution including: <ul style="list-style-type: none"> · Pipes · Isolation · Non-return valves · Control valves · Air release valves · Other valves · Strainers • Water closets (WC): <ul style="list-style-type: none"> - Seats and covers - Cisterns - Sanitary ware mountings, etc. • Fixing of leaks and replacing of materials and components, etc: 				
	Carried forward					

	Brought forward					
	.01	Beitbridge: Maintenance work: Plumbing, drainage,wet services and	point	360		
	1600.02	Payment reduction:				
SA.03	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-2 000.00	rate only
SA.04	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-500.00	rate only
SA.05	.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-500.00	rate only
SF.01	1601.00	Operation of a complete installation: Water demand management, data logging and recording, as per: Technical Specification KA Water Audit (KA.04.01). Comprising of: <ul style="list-style-type: none">• Checking operation of water meters• Cleaning strainer units at water meters• Read water meters• Verification of sample meter readings• Updating of water demand database (spreadsheet)• Measuring sewer night flows• Analysis of data and identification of water leaks• Adjust operation of pressure-reducing valves• Compilation of monthly water balance on volume and costs and issue of consumer accounts at:				
	1601.01	.01 Beitbridge: Operation work: Operational area, residential area and mobile homes	point	360		
		Payment reduction due to exceeding of maximum allowable down-time during breakdown:				
	Carried forward					

	Brought forward					
	1601.02	Payment reduction:				
SA.03	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-2 000.00	rate only
SA.04	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-500.00	rate only
SA.05	.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-500.00	rate only
TOTAL SCHEDULE No. 3.2: CARRIED TO SUMMARY: MAINTENANCE AND OPERATION WORK						

Tender No: H22/002A1

SCHEDULE No. 3.3:

INSTALLATION C3.MB: BEITBRIDGE:

CIVIL MAINTENANCE

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01 SN 01	1700.00	<u>MAINTENANCE OF FENCING AND GATES</u>				
	1700.01	Maintenance of a complete installation: The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CC: Fencing and Gates, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Clearing 2.5 m wide of fence lines (both side) • Cleaning fire break areas • Inspection and repair of damages • Corrosion protection on fencing, gates and tubular posts • Inspection of fence for tightness to straining wire and redress or repair where required • Inspection of gate hinges and repair or replace if necessary, ensuring alignment of gates • Painting of previously painted posts, stays, gates, mesh fences, etc. at: 				
		.01	Beitbridge: Maintenance work: Perimeter fence line, at operational area and at residential area. Maintenance is not limited to the above-mentioned	point	360	
SA.03	1700.02	Payment reduction:				
		.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-2 000.00 rate only
SA.04		.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-500.00 rate only
SA.05		.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-500.00 rate only
	Carried forward					

	Brought forward						
SA.01 SN 01	1701.00	<u>MAINTENANCE OF SITE KEEPING INSTALLATION</u>					
	1701.01	Maintenance of a complete installation: The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CJ: Site Keeping and Cleaning (CJ.01.01.01 and CJ.04.02.01), shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Cleaning out of and supply of black refuse bags to all waste bins in public areas • Watering of plants, shrubs, grass and trees upon strict instruction from the Engineer (in line with water restrictions) • Removal of weeds, clearing of weeds and grass along the edges of paved areas • Cutting of grass • Trimming of dense shrubs • Fertilisation of lawns, fertilisation of flower beds and trees • Removal of undesirable shrubs • Trimming of trees • Collecting of litter and foreign objects, removal of waste, etc. at: 					
		.01	Beitbridge: Maintenance work: All areas included within the perimeter fence of the port of entry which includes the operational area and the residential area as well as site keeping 20m around the outside of the perimeter fence line	point	360		
SA.03	1701.02	Payment reduction:					
		.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-2 000.00	rate only
SA.04		.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-500.00	rate only
SA.05		.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-500.00	rate only
	Carried forward						

	Brought forward				
SA.01 CJ 05 SN 01	1702.00	<u>MAINTENANCE AND CLEANING OF BUILDINGS</u>			
	1702.01	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CJ: Site Keeping and Cleaning (CJ.01.02 and CJ.01.03), shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Dusting/wet wiping of counter tops • Dusting under counter shelves and floors in public areas and open plan offices (daily, before opening of port of entry) • Sweeping/washing and polishing office floors • Vacuum cleaning carpets • Emptying and cleaning of waste baskets in offices • Service and polishing fittings • Washing interior and exterior walls • Cleaning and maintaining ablution facilities in a sanitary condition • Emptying and cleaning of all waste receptacles • Cleaning of all bowls, basins and urinals • Cleaning and polishing of all fittings and mirrors • Washing and cleaning out of She-bins • Washing of windows • Dusting of window sills, ledges, pipes and fittings • Dusting of buildings interiors • Deep cleansing of toilets and ablution blocks every six months, etc. at: <p style="text-align: center;">Beitbridge: Maintenance work: Operational buildings, ablution blocks, public areas, paving areas, concrete screeds, etc.</p>	point	360	
	Carried forward				

	Brought forward					
	1702.02	Payment reduction:				
SA.03	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-2 000.00	rate only
SA.04	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-500.00	rate only
SA.05	.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-500.00	rate only
TOTAL SCHEDULE No. 3.3: CARRIED TO SUMMARY: CIVIL MAINTENANCE AND OPERATION WORK						

Tender No: H22/002A1

SCHEDULE No. 3.4: INSTALLATION C4.MB: BEITBRIDGE:

CIVIL MAINTENANCE

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01	1800.00	<u>MAINTENANCE OF BULK WATER SUPPLY SYSTEMS AND</u>				
	1800.01	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specifications CE: Water Distribution Networks, DA: Borehole Pump Systems, and DL: Chlorination Systems for the Disinfection of RO units of Drinking Water, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Routine checking, inspection, and repair of leaks/replacement of corroded pipes • Clean out all strainers • Fix and maintain all bracketing systems • Paint repairs to piping, fittings and equipment • Scour reservoirs and pipes to remove silt and deposits, empty and clean bulk water reservoirs • Check, test, service, re-adjust, repair or replace all types of valves and vacuum breakers, inclusive of gaskets, gland packings, seals, etc. • Check V-belts, MCC* panels with level sensing devices and electric motors where applicable • Remove, inspect and service repair or replace submersible pumps • Service re-adjust and calibrate pressure gauges and water meters • Service, repair and clean chlorine dosing apparatus from blockages <p>• Replace and service small reverse</p> <p>.01 Beitbridge: Maintenance work: Bulk water supply systems and external water networks</p>	point	360		
	Carried forward					

	Brought forward					
SA.03	1800.02	Payment reduction: .01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2 000.00	rate only
SA.04		.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500.00	rate only
SA.05		.03 Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-500.00	rate only
	1801.00	<u>OPERATING OF BULK WATER SUPPLY SYSTEM</u>				
SF.01 DH.09.05	1801.01	Operating of installation: Operation as per Technical Specification DH: Operation of Potable Water Works, DA: Borehole Pump Systems, and DL: Chlorination Systems for the Disinfection of Drinking Water, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Logging and recording of all pressure gauges, water meters, water level in reservoir, borehole water levels at start and stop of pump, amperes, volts and hour meter readings of borehole pumps (and calculate kW-hours) • Drafting of a water balance of the bulk water system (spread sheet based), as well as measuring and recording residual chlorine in the drinking water system at reservoir and furthest distribution point user • Recording of rainfall (date, precipitation and duration per event) • Checking integrity of power supply at MCC and verify correct switching of pumps • Logging of all failures, malfunctions, spills, pollution events, power failures and detail of corrective measures implemented, ensuring correct borehole pump flow rate by adjusting control valve 				
	Carried forward					

	Brought forward					
		<ul style="list-style-type: none"> Supply chemicals and make-up chlorine solution, ensuring the correct chlorine dosing rate and re-adjustment proportional to pump rate and on-site residual chlorine measurements, keeping facilities neat, controlling access to the site Service and maintain clarifier and replace/clean filters Maintaining safety conditions on site, etc. at: 				
		.01 Beitbridge: Operating work: Bulk water supply systems and external networks	point	360		
	1801.02	Payment reduction:				
SA.03	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2 000.00	rate only
SA.04	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500.00	rate only
SA.05	.03	Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-500.00	rate only
DA	1802.00	BOREHOLES AT BEITBRIDGE PORT OF ENTRY:				
	1802.01	Testing and servicing				
DA 04.03	.01	Pump testing of boreholes	No	1		
	.02	Extra over on sub item .01 above				
	.01	Ground water sampling	No	1		
	.02	Compilation of borehole project	No	1		
	Carried forward					

	Brought forward				
DA.03.05	1802.02	Decommissioning and removal of submersible pumping			
	.01	Borehole submersible pump	No	1	
DA.03.06		Servicing of submersible pumping equipment			
	.01	Borehole submersible pump	No	1	
DA.03.02	1802.03	Commissioning of submersible pumping equipment			
	.01	Borehole submersible pump	No	1	
TOTAL SCHEDULE No. 3.4: CARRIED TO SUMMARY: MAINTENANCE AND OPERATION WORK					

Tender No: H22/002AI

SCHEDULE No. 3.5:

INSTALLATION C5.MB: BEITBRIDGE:

CIVIL MAINTENANCE

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01	1900.00 1900.01	<p><u>MAINTENANCE OF WASTEWATER TREATMENT WORKS AND</u></p> <p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specifications CF: Sewer Networks, EA: Wastewater Inlet Works, EB: Pump Systems, EC: Sedimentation Tanks, EK: Valves and Sluice Gates, EQ: Reed Beds, which consist of, but not limited to:</p> <ul style="list-style-type: none"> • Routine inspection of manholes • Inspection chambers covers and frames • Necessary cleaning and rodding • Unblocking of the bulk sewer network and raw sewage pump station • Repair of manhole benching • Fixing of leaks • Cleaning and servicing of pumps including lubrication of moving parts, replacement of components • Repair and corrosion protection • Servicing of MCCs • Maintaining all valves and sluice gates forming part of the wastewater infrastructure • Checking and lubrication of sluice guide rails and hand wheels • Cleaning and calibration of flow rate <p>List continued:</p>				
	Carried forward					

	Brought forward					
		<ul style="list-style-type: none"> • Servicing and repair of internal pipe work and recirculation pumps 				
		.01 Beitbridge: Maintenance work: Wastewater	point	360		
	1900.02	Payment reduction:				
SA.03	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2 000.00	rate only
SA.04	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500.00	rate only
SA.05	.03	Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-500.00	rate only
	Carried forward					

	Brought forward					
SF.01	1901.00	OPERATING OF WASTEWATER TREATMENT WORKS				
	1901.01	Operating of installation: Operation as per Technical Specification EM: Operate Wastewater Works, shall consist of at least, but not limited to: <ul style="list-style-type: none"> • Logging and recording on a spread sheet database, with graphs, all wastewater operational data, including flow rates, volumes of screenings, all motor running hours, amperes and volts, and on-site chemical analysis including pH, temperature, ORP, EC, visual inspection of effluent in Imhoff cone, indications and observations of colour, odour, foam, scum, algae, as well as incidents and observations of raw wastewater characteristics • Provision of all tools and equipment for operation, such as nets, rakes, brooms, spades, wheelbarrows • Removal, washing and drying of solids (screenings, scum and debris) • Setting and adjustment of valves according to process configuration from time to time • Scour humus tank and check for clumps of floating sludge • Set and adjust recycling pump period 				
		.01	Beitbridge: Operation work: Wastewater treatment	point	360	
	1901.02	Payment reduction:				
SA.03		.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2 000.00 rate only
SA.04		.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500.00 rate only
SA.05		.03	Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-500.00 rate only
TOTAL SCHEDULE No. 3.5: CARRIED TO SUMMARY: MAINTENANCE AND OPERATION WORK						

Tender No: H22/002A1
SCHEDULE No. 3.6:

INSTALLATION C6.MB: BEITBRIDGE:

CIVIL MAINTENANCE

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01	2000.00	<u>MAINTENANCE OF ROADS AND STORM WATER DRAINAGE</u>				
	2000.01	<p>Maintenance of a complete installation:</p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CA and CB: Roads, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Routine inspection of roads, gravel shoulders, pavements, road signs and road markings • Blading all gravel roads and parking areas • Removing loose material from road surfaces and the surface of parking areas by means of mechanical brooming • Repair of all surfaces, road pavements, kerbs, road markings and signs, as well as <p>Technical Specification CB: Storm Water drainage, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> • Inspection, cleaning, unblocking and repair of all storm water infrastructure components such as: <ul style="list-style-type: none"> – Culverts – Drains – Manholes – Inlet covers – Inlet benching, grids and frames, etc. at: 				
	2000.02	.01	Beitbridge: Maintenance work: Roads and storm	point	360	
SA.03		.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-2 000.00 rate only
SA.04		.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-500.00 rate only
SA.05		.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-500.00 rate only
TOTAL SCHEDULE No. 3.6: CARRIED TO SUMMARY: MAINTENANCE AND OPERATION WORK						



DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

SUMMARY OF SCHEDULE OF QUANTITIES: CIVIL MAINTENANCE AND OPERATION

			Summary
SCHEDULE No. 3.1:	INSTALLATION C1.MB: BEITBRIDGE: STRUCTURAL AND BUILDING	R	
SCHEDULE No. 3.2:	INSTALLATION C2.MB: BEITBRIDGE: PLUMBING, DRAINAGE AND WET SERVICES	R	
SCHEDULE No. 3.3:	INSTALLATION C3.MB: BEITBRIDGE: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING	R	
SCHEDULE No. 3.4:	INSTALLATION C4.MB: BEITBRIDGE: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS	R	
SCHEDULE No. 3.5:	INSTALLATION C5. MB BEITBRIDGE: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS	R	
SCHEDULE No. 3.6:	INSTALLATION C6. MB: BEITBRIDGE ROADS AND STORM WATER DRAINAGE	R	
TOTAL OF SCHEDULE OF QUANTITIES - MAINTENANCE AND OPERATION WORK CARRIED TO		R	

SIGNED ON BEHALF OF TENDERER:

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities

NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK

SCHEDULE NO 8 : INSTALLATION E2 : IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

ELECTRICAL MAINTENANCE

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA 06.01	1	Maintenance of an installation				
	1.1	Maintenance of installation E2 - Prior to Practical Completion	point	60		
	1.2	Maintenance of installation E2 - After Practical Completion	point	300		
	2.1	Payment reduction				
SA 06.03	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA 06.04	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2500	Rate only
SA 06.05	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500	Rate only
SA 06.06	2.1.4	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	-500	Rate only
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	5		
TOTAL SCHEDULE NO 8 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL				R		

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities

NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK

SCHEDULE NO 9 : INSTALLATION E3 : CUSTOMS EXPORT RAMP, IMPORT RAMP AND OFFICES, CLEARING AGENTS, SUB NO2, PUBLIC ABLUTION BUILDINGS ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

ELECTRICAL MAINTENANCE

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	1	Maintenance of an installation				
	1.1	Maintenance of installation E3 - Prior to Pratical Completion	point	60		
	1.2	Maintenance of installation E3 - After Pratical Completion	point	300		
	2.1	Payment reduction				
SA 06.03	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA 06.04	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2500	Rate only
SA 06.05	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500	Rate only
SA 06.06	2.1.4	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	-500	Rate only
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	5		
TOTAL SCHEDULE NO 9 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL						R

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities

NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK

SCHEDULE NO 10 : INSTALLATION E4 : LIGHT VEHICLE INSPECTION, CONTROL POINT AND PUBLIC TOILETS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

ELECTRICAL MAINTENANCE

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	1	Maintenance of an installation				
	1.1	Maintenance of installation E4 - Prior to Practical Completion	point	60		
	1.2	Maintenance of installation E4 - After Practical Completion	point	300		
	2.1	Payment reduction				
SA 06.03	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA 06.04	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2500	Rate only
SA 06.05	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500	Rate only
SA 06.06	2.1.4	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	-500	Rate only
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	5		
TOTAL SCHEDULE NO 10 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL			R			

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities

NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK

SCHEDULE NO 11 : INSTALLATION E5 : SAPS BARRACKS, CELLS AND ADMIN OFFICE AND BULK WATER PURIFICATION BUILDING - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

ELECTRICAL MAINTENANCE

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	1	Maintenance of an installation				
	1.1	Maintenance of installation E5 - Prior to Practical Completion	point	60		
	1.2	Maintenance of installation E5 - After Practical Completion	point	300		
	2.1	Payment reduction				
SA 06.03	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA 06.04	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2500	Rate only
SA 06.05	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500	Rate only
SA 06.06	2.1.4	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	-500	Rate only
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	5		
TOTAL SCHEDULE NO 11 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL				R		

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical infrastructure and Installations for a period of 36 Months.

Bill of Quantities**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK**

SCHEDULE NO 12 : INSTALLATION E6 : MAIN ENTRANCE CANOPY, LIGHT VEHICLE INSPECTION, PUBLIC INSPECTION AND PEDESTRIAN LUGGAGE SEARCH - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

ELECTRICAL MAINTENANCE

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA 06.01	1	Maintenance of an installation				
	1.1	Maintenance of installation E6 - Prior to Practical Completion	point	60		
	1.2	Maintenance of installation E6 - After Practical Completion	point	300		
	2.1	Payment reduction				
SA 06.03	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA 06.04	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2500	Rate only
SA 06.05	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500	Rate only
SA 06.06	2.1.4	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	-500	Rate only
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	5		
TOTAL SCHEDULE NO 12 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL				R		

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK****SCHEDULE NO 13 : INSTALLATION E7 : WASTE WATER TREATMENT PLANT & WATER PUMP SCHEME - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS****ELECTRICAL MAINTENANCE**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	1	Maintenance of an installation				
	1.1	Maintenance of installation E7 - Prior to Practical Completion	point	60		
	1.2	Maintenance of installation E7 - After Practical Completion	point	300		
	2.1	Payment reduction				
SA 06.03	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA 06.04	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2500	Rate only
SA 06.05	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500	Rate only
SA 06.06	2.1.4	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	-500	Rate only
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	5		
TOTAL SCHEDULE NO 13 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL				R		

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK****SCHEDULE NO 14 : INSTALLATION E8: RESIDENTIAL HOUSES - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS****ELECTRICAL MAINTENANCE**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA 06.01	1	Maintenance of an installation				
	1.1	Maintenance of installation E8 - Prior to Practical Completion	point	60		
	1.2	Maintenance of installation E8 - After Practical Completion	point	300		
	2.1	Payment reduction				
SA 06.03	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA 06.04	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2500	Rate only
SA 06.05	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500	Rate only
SA 06.06	2.1.4	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	500.00	Rate only
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	5		
TOTAL SCHEDULE NO 14 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL				R		

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities

NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK

SCHEDULE NO 15: INSTALLATION E9: STANDBY POWER SYSTEMS MAINTENANCE WORK

ELECTRICAL MAINTENANCE

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	1	Maintenance of an installation				
	1.1	Maintenance of Standby Power Systems - Prior to Practical Completion	point	60		
	1.2	Maintenance of Standby Power Systems - After Practical Completion	point	300		
	2.1	Payment reduction				
SA 06.03	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA 06.04	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2500	Rate only
SA 06.05	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500	Rate only
SA 06.06	2.1.4	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	-500	Rate only
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	10		
	4.1	Generator Services				
HB 10.03.02	4.1.1	Service new 250kVA Generator at Sub No1	Sum	1		
HB 10.03.02	4.1.2	Service 150kVA Perkins Generator at Sub No2	Sum	1		
HB 10.03.02	4.1.3	Service new 60kVA Generator at WWTP	Sum	1		
HB 10.03.02	4.1.4	Service new 60kVA Mobile Generator	Sum	1		
HB 10.03.08	4.1.5	Supply Diesel fuel	L	15 000		
HB 10.03.05	4.1.6	Dummy Load Test	No	2		
HB 10.03.12	4.1.6	Fuel water separator	No	4		
TOTAL SCHEDULE NO 15 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL R						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities

NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK**SCHEDULE NO 16: INSTALLATION E10: EXTERNAL LIGHTING MAINTENANCE WORK**

ELECTRICAL MAINTENANCE

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	1.	Maintenance of the completed installation:				
HA 13.03	1.1	Maintenance of installation External Lighting - Prior to Practical Completion	point	60		
	1.2	Maintenance of installation External Lighting - After Practical Completion	point	300		
	2.1	Payment reduction:				
SA.04	2.1.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2 500.00	Rate only
SA.05	2.1.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-2 500.00	Rate only
SA.06	2.1.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-500.00	Rate only
SA.07	2.1.4	Payment reduction due to exceeding of maximum allowable down-time during malicious damage repair	day	-	-500.00	Rate only
SD.04	3.1	Training:				
	3.1.1	Presenting a training course for maintenance personnel on <i>all facilities</i>	number	3		
	4.1	Emergency Breakdown				
	4.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	10		
TOTAL SCHEDULE NO 16 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL R						

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities

NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK

SCHEDULE NO 17: INSTALLATION E11: POWER RETICULATION MAINTENANCE WORK

ELECTRICAL MAINTENANCE

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	1.	General Maintenance				
SA.06.01	1.1	Maintenance of Power Reticulation Maintenance Work - Prior to Practical Completion	point	60		
SA.06.02	1.2	Maintenance of Power Reticulation Maintenance Work - After Practical Completion	point	300		
	2.	Payment Reduction				
SA.06.04	2.1	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	-2500	Rate only
SA.06.05	2.2	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-2500	Rate only
SA.06.06	2.3	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-500	Rate only
SA.06.07	2.4	Payment reduction due to exceeding of maximum allowable down-time during malicious damage repair	days	-	-500	Rate only
HB 12.06 SA.06.01	2.5	Maintenance of completed UPS	point	300		
SA.06.02	2.6	Maintenance of UPS system prior to practical completion	point	60		
	3.1	Emergency Breakdown				
	3.1.1	Call out for repair of Emergency Breakdown 24Hour response	No	10		
TOTAL SCHEDULE NO 17 CARRIED TO SUMMARY: MAINTENANCE WORK - ELECTRICAL					R	



DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002A1

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

Bill of Quantities

**SUMMARY OF SCHEDULE OF QUANTITIES: MAINTENANCE WORK:
ELECTRICAL INSTALLATIONS**

SCHEDULE NO 8 : INSTALLATION E2 : IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

R

SCHEDULE NO 9 : INSTALLATION E3 : CUSTOMS EXPORT RAMP, IMPORT RAMP AND OFFICES, CLEARING AGENTS, SUB NO2, PUBLIC ABLUTION BUILDINGS ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

R

SCHEDULE NO 10 : INSTALLATION E4 : LIGHT VEHICLE INSPECTION, CONTROL POINT AND PUBLIC TOILETS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

R

SCHEDULE NO 11 : INSTALLATION E5 : SAPS BARRACKS, CELLS AND ADMIN OFFICE AND BULK WATER PURIFICATION BUILDING - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

R

SCHEDULE NO 12 : INSTALLATION E6 : MAIN ENTRANCE CANOPY, LIGHT VEHICLE INSPECTION, PUBLIC INSPECTION AND PEDESTRIAN LUGGAGE SEARCH - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

R

SCHEDULE NO 13 : INSTALLATION E7 : WASTE WATER TREATMENT PLANT & WATER PUMP SCHEME - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

R

SCHEDULE NO 14 : INSTALLATION E8: RESIDENTIAL HOUSES - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS

R

SCHEDULE NO 15: INSTALLATION E9: STANDBY POWER SYSTEMS MAINTENANCE WORK

R

SCHEDULE NO 16: INSTALLATION E10: EXTERNAL LIGHTING MAINTENANCE WORK

R

SCHEDULE NO 17: INSTALLATION E11: POWER RETICULATION MAINTENANCE WORK

R

TOTAL OF SCHEDULE OF QUANTITIES – MAINTENANCE WORK : ELECTRICAL INSTALLATIONS

CARRIED TO MAIN SUMMARY PAGE - CALCULATION OF TENDER SUM

Summary

SIGNED ON BEHALF OF TENDERER:

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK****SCHEDULE NO 1: INSTALLATION M1: HVAC INSTALLATION****MECHANICAL
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA	100.00	<u>HVAC INSTALLATION</u>				
	101.00	<u>Maintenace of AC Units</u>				
SA 06.01	.01	Maintenance of split unit installation during repair phase.	point	60		
	.02	Maintenance of wall mounted unit installation during maintenance phase.	point	300		
SA 06.02	102.00	<u>Special Testing of Installation</u>				
	.01	Special testing of an installation where ordered by the Engineer.	Sum	1		
	103.00	<u>Payment Reduction</u>				
SA 06.04	.01	Payment reduction due to exceeding of maximum allowable down time during emergency breakdown.	Day	-	-2 000.00	rate only
SA 06.05	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-500.00	rate only
SA 06.06	.03	Payment reduction due to exceeding of maximum allowable down-time during operational damage breakdown	Day	-	-500.00	rate only
Carried forward						

Brought forward						
SD 06.02	104.00	Training				
	.01	Presenting a training course for operators.	Sum	1		
FD PFD	105.00	Mandatory periodical services (Bi-Annually) not included in preventative maintenance items listed above:				
	.01	Provide full service of Air-conditioning units according to manufacturer's specifications (Bi-Annually)	PC Sum	-		200 000.00
	.02	Charge required by Contractor on sub item .01 above	%	R	200 000.00	
FD PFD	106.00	Mandatory periodical services (Annually) not included in preventative maintenance items listed above:				
	.01	Provide full service of Air-conditioning units according to manufacturer's specifications (Annually)	PC Sum	-		400 000.00
	.02	Charge required by Contractor on sub item .01 above	%	R	400 000.00	
TOTAL SCHEDULE NO 1 - CARRIED TO SUMMARY: MAINTENANCE WORK						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK****SCHEDULE NO 2: INSTALLATION M2: KITCHEN EQUIPMENT AT POLICE BARRACKS****MECHANICAL
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA	200.00	<u>KITCHEN EQUIPMENT</u>				
	201.00	<u>Maintenace of Kitchen equipment</u>				
SA 06.01	.01	Maintenance of kitchen equipment installation during repair phase.	point	60		
	.01	Maintenance of kitchen equipment installation during maintenance phase.	point	300		
SA 06.02	202.00	<u>Special Testing of Installation</u>				
	.01	Special testing of an installation where ordered by the Engineer.	Sum	1		
	203.00	<u>Payment Reduction</u>				
SA 06.03	.01	Payment reduction due to exceeding of maximum allowable down time during fatal break down	Hour	-	-2 500.00	rate only
SA 06.04	.02	Payment reduction due to exceeding of maximum allowable down time during emergency breakdown.	Day	-	-2 000.00	rate only
SA 06.05	.03	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-500.00	rate only
SA 06.06	.04	Payment reduction due to exceeding of maximum allowable down-time during operational damage breakdown	Day	-	-500.00	rate only
	204.00	<u>Training</u>				
SD 06.02	.01	Presenting a training course for operators.	Sum	1		
TOTAL SCHEDULE NO 2- CARRIED TO SUMMARY: MAINTENANCE WORK						

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**SCHEDULE NO 3: INSTALLATION M3: INCINERATOR INSTALLATION****MECHANICAL
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA	300.00	<u>INCINERATORS INSTALLATION</u> Scheduled and unscheduled preventative maintenance and breakdown maintenance, as per Technical Specification FE: Incinerator Installation and, Particular Specification PFE: Incinerator Installation, comprising inspection, logging and recording by the incinerator supervisor of the type and quantity of waste, the fuel quantity consumed, running hours and operational observations, routine inspection of the fuel system for leakages and correct functioning, cleaning the interior and exterior of the incinerator and maintaining a clean incinerator plant room, testing the firing equipment and the draught controls for correct operation, inspection of refractories and repair where necessary, lubrication of all required lubrication points, inspection and testing of all electrical equipment, control functions, seals and joints and readjustment where necessary, sampling and analysis of fuel quality, sampling, inspection of loading and ashing doors and repair and replace as required, cleaning and repair of all fuel storage and firing equipment and chimney stacks, repaint as required and remove, strip, service, repair, adjust and repair fuel burners and associated equipment, as well as ensuring and certification of waste ash removal to a legal landfill site, at:				
SA 06.01	301.00	<u>Maintenance of Incinerator equipment</u>				
	.01	Maintenance of Incinerator installation during repair phase	point	60		
	.02	Maintenance of Incinerator installation during maintenance phase.	point	300		
		The maintenance scope is described in technical specifications: FE, PFE				
Carried forward						

Brought forward

SA 06.02	302.00	<u>Special Testing of Installation</u>				
		.01 Special testing of an installation where ordered by the Engineer.	Sum	1		
	304.00	<u>Payment Reduction</u>				
SA 06.03		.01 Payment reduction due to exceeding of maximum allowable down time during fatal break down	Hour	-	-2 500.00	rate only
SA 06.04		.02 Payment reduction due to exceeding of maximum allowable down time during emergency breakdown.	Day	-	-2 000.00	rate only
SA 06.05		.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-500.00	rate only
SA 06.06		.04 Payment reduction due to exceeding of maximum allowable down-time during operational damage breakdown	Day	-	-500.00	rate only
SD 06.02	305.00	Mandatory periodical services not included in preventative maintenance items listed above				
		.01 INCINERATOR				
		.01 Presenting a training course for operators	Sum	1		
		.02 Cleaning of intensifier fan	Item	3		
		.03 Replacement of fly ash screen	No.	3		
		.04 Supply and install of diesel for an incinerator	€	1500		
FE PFE		.05 Provide full service of Incinerator according to manufacturer's specifications. (Annually)	PC Sum	-		200 000.00
		.06 Charge required by Contractor on sub item .05 above	%	200000		

TOTAL SCHEDULE NO 3 - CARRIED TO SUMMARY: MAINTENANCE WORK

Tender No: H22/002A1

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK****SCHEDULE NO 4: INSTALLATION M4: FIRE PROTECTION INSTALLATION****MECHANICAL
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA	400.00	<u>FIRE PROTECTION INSTALLATION</u>				
	401.00	<u>Maintenance of Fire Protection</u>				
SA 06.01	.01	Maintenance of Fire Protection during repair phase.	point	60		
	.02	Maintenance of Fire Protection during maintenance phase.	point	300		
SA 06.02	402.00	<u>Special Testing of Installation</u>				
	.01	Special testing of an installation where ordered by the Engineer.	Sum	1		
	403.00	<u>Payment Reduction</u>				
SA 06.04	.01	Payment reduction due to exceeding of maximum allowable down time during emergency breakdown.	Day	-	-2 000.00	rate only
SA 06.05	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-500.00	rate only
SA 06.06	.03	Payment reduction due to exceeding of maximum allowable down-time during operational damage breakdown	Day	-	-500.00	rate only
	404.00	<u>Training</u>				
SD 06.02	.01	Presenting a training course for operators.	Sum	1		
JC PIC	405.00	Mandatory periodical services not included in preventative maintenance items listed above:				
	.01	Provide full service of Fire Equipment units according to manufacturer's specifications (Annually)	PC Sum	-		300 000.00
	.02	Charge required by Contractor on sub item .01 above	%	R 300 000.00		
TOTAL SCHEDULE NO 4 - CARRIED TO SUMMARY: MAINTENANCE WORK						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H22/002AI

Land Port of Entry: Beit Bridge: Appointment of a Service Provider(s) for the Maintenance and repairs of Building, Civil, Mechanical and electrical Infrastructure and Installations for a period of 36 Months.

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SUMMARY OF BILL OF QUANTITIES: MECHANICAL MAINTENANCE WORK

SCHEDULE NO 1: INSTALLATION M1: HVAC INSTALLATION

R

SCHEDULE NO 2: INSTALLATION M2: KITCHEN EQUIPMENT AT POLICE BARRACKS

R

SCHEDULE NO 3: INSTALLATION M3: INCINERATOR INSTALLATION

R

SCHEDULE NO 4: INSTALLATION M4: FIRE PROTECTION INSTALLATION

R

**TOTAL OF BILL OF QUANTITIES - MECHANICAL MAINTENANCE WORK
CARRIED TO CALCULATION OF TENDER SUM**

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Summary

SIGNED ON BEHALF OF TENDERER: