

## PG-02.1 (EC) PRICING INSTRUCTIONS – (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

Project title:	<b>BEITBRIDGE LAND PORT OF ENTRY: APPOINTMENT OF A SERVICE PROVIDER/S FOR THE MAINTENANCE AND REPAIRS OF BUILDINGS, CIVIL, MECHANICAL, ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS (APPOINTMENT OF A CONTRACTOR)</b>		
Tender no:	H21/016AI	Reference no:	H21/016AI

### C2.1 Pricing Instructions

#### 1. GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Standard, Project and Particular Specifications) and the Drawings.

#### 2. DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardized Specifications and the Particular Specifications, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

#### 3. QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to remeasuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Standard, Project and Particular Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

#### 4. PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 6.6 of the General Conditions of Contract 2010. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities will lead to the disqualification of the Tenderer.

#### 5. PRICING OF THE BILL OF QUANTITIES

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and



maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

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Each item shall be priced and extended to the "Total" column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Tenderer omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words "rate only" appear in the "Total" column. "Rate Only" items have been included where:

- (a) an alternative item or material is contemplated;
- (b) variations of specified components in the make-up of a pay item may be expected; and
- (c) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For "Rate Only" items no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

All rates and amounts quoted in the Bill of Quantities shall be in rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities.

The Tenderer shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as is practicable) as to:

- (a) the form and nature of the Site and its surroundings, including subsurface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of work and materials necessary for the execution and completion of the Works,
- (d) the means of access to the Site and the accommodation he may require

and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his Tender.

## **6. CORRECTION OF ENTRIES**

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

## **7. ARITHMETICAL ERRORS**

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication or addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

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## **8. UNITS OF MEASUREMENT**

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations which may appear in the Bill of Quantities are as follows:

No.	=	Number
%	=	Percent
Sum	=	Lump sum
PCsum	=	Prime cost sum
Prov sum	=	Provisional sum
m <sup>3</sup> .km	=	Cubic metre - kilometre
Km-pas	=	kilometre - pass
m <sup>2</sup> .pass	=	square metre – pass



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## **C2.1 Bill of Quantities**

**DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE**

Tender No H21/016 AI

**BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)****BILL OF QUANTITIES****NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK****SUMMARY OF SCHEDULE OF QUANTITIES:**

		TENDER SUM
TOTAL : SCHEDULE NO 100: PRELIMINARIES & GENERAL	R	-
TOTAL : INSTALLATION 200: CARPENTRY AND JOINERY RELATED WORK	R	-
TOTAL : INSTALLATION 210: FLOORS & WALL FINISHES RELATED WORK	R	-
TOTAL : INSTALLATION 220: MASONRY AND PLASTERING RELATED WORK	R	-
TOTAL : INSTALLATION 230: INTERNAL PLUMBING, DRAINAGE AND FITTINGS RELATED WORK	R	-
TOTAL : INSTALLATION 240: PAINTING RELATED WORK	R	-
TOTAL : INSTALLATION 250: DOORS & WINDOWS RELATED WORK	R	-
TOTAL : INSTALLATION 260: IRONMONGERY & SANITARYWARE RELATED WORK	R	-
TOTAL : INSTALLATION 270: BUILDING METALWORK	R	-
TOTAL : INSTALLATION 280: FENCING AND SITE KEEPING RELATED WORK	R	-
TOTAL : INSTALLATION 290: LANDSCAPING AND SIGNAGE RELATED WORK	R	-
TOTAL : 300: STRUCTURAL AND BUILDING RELATED WORKS	R	-
TOTAL : INSTALLATION 400: CIVIL RELATED WORKS	R	-
TOTAL : INSTALLATION 500: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS RELATED WORK	R	-
TOTAL : INSTALLATION 510: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS RELATED WORK	R	-
TOTAL : INSTALLATION 600: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS RELATED WORK	R	-
TOTAL : INSTALLATION 610: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS RELATED WORK	R	-
TOTAL : INSTALLATION 700: MECHANICAL REPAIR WORK: HVAC	R	-
TOTAL : INSTALLATION 710: MECHANICAL REPAIR WORK: KITCHEN EQUIPMENT	R	-
TOTAL : INSTALLATION 720: MECHANICAL REPAIR WORK: INCINERATOR	R	-
TOTAL : INSTALLATION 730: MECHANICAL REPAIR WORK: FIRE PROTECTION	R	-
CARRIED FORWARD	R	-

<b>CARRIED OVER</b>		R	-
TOTAL :	INSTALLATION 740: MECHANICAL REPAIR WORK: WET SERVICES	R	-
TOTAL :	INSTALLATION 750: MECHANICAL MAINTENANCE: HVAC	R	-
TOTAL :	INSTALLATION 760: MECHANICAL MAINTENANCE KITCHEN EQUIPMENT AT BARRACKS	R	-
TOTAL :	INSTALLATION 770: MECHANICAL MAINTENANCE: INCINERATOR	R	-
TOTAL :	INSTALLATION 780: MECHANICAL MAINTENANCE: FIRE PROTECTION	R	-
TOTAL :	INSTALLATION 790: MECHANICAL MAINTENANCE: WET SERVICES	R	-
TOTAL :	INSTALLATION 800: ELECTRICAL SERVICES RELATED REPAIR WORKS	R	-
TOTAL :	INSTALLATION 810 : IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS	R	-
TOTAL :	INSTALLATION 820 : IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS	R	-
TOTAL :	INSTALLATION 830 : LIGHT VEHICLE INSPECTION, CONTROL POINT AND PUBLIC TOILETS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS	R	-
TOTAL :	INSTALLATION 840 : SAPS BARRACKS, CELLS AND ADMIN OFFICE AND BULK WATER PURIFICATION BUILDING - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS	R	-
TOTAL :	INSTALLATION 850 : MAIN ENTRANCE CANOPY, LIGHT VEHICLE INSPECTION, PUBLIC INSPECTION AND PEDESTRIAN LUGGAGE SEARCH - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS	R	-
TOTAL :	INSTALLATION 860 : WASTE WATER TREATMENT PLANT & WATER PUMP SCHEME - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS	R	-
TOTAL :	INSTALLATION 870: RESIDENTIAL HOUSES - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS	R	-
TOTAL :	INSTALLATION 880: STANDBY POWER SYSTEMS MAINTENANCE WORK	R	-
TOTAL :	INSTALLATION 890: EXTERNAL LIGHTING MAINTENANCE WORK	R	-
TOTAL :	INSTALLATION 900: POWER RETICULATION MAINTENANCE WORK	R	-
TOTAL :	INSTALLATION 910: FIRE DETECTION SYSTEM	R	-
	TOTAL EXCLUSIVE OF VAT	R	-
	VAT @ 15%	R	-
<b>TOTAL INCLUSIVE OF VAT</b>		<b>R</b>	<b>-</b>



DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

BILL OF QUANTITIES

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

SCHEDULE NO 100: PRELIMINARIES & GENERAL				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SANS 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	R 450 000,00	R 450 000,00
PSA 8.4.1	100,02	Scheduled time-related items:				
	.01	Beitbridge Port of Entry	No	36	R 20 000,00	R 720 000,00
PSA 8.8	101,00	<u>Temporary Works</u>				
PSA 8.8.4.1	101,01	Location and protection of existing				
	.01	Water, sewer and stormwater pipes	Sum	1	R 30 000,00	R 30 000,00
	.02	Electrical and other cables	Sum	1	R 30 000,00	R 30 000,00
PSA 8.12	102,00	<u>Call Centre:</u>				
	.01	Call Centre for breakdown calls logged	PC sum	1	R 300 000,00	R 300 000,00
	.02	Charge required by Contractor on sub item .01 above	%			
		<u>Land Survey:</u>				
	.01	Reference beacons set out by Professional Land surveyor	Sum	1	R 30 000,00	R 30 000,00
	.02	As-built survey of all new stone pitching, abutment blocks and new sewer lines	Sum	1	R 15 000,00	R 15 000,00
PSA 8.6	103,00	<u>HOUSING FOR THE ENGINEER'S REPRESENTATIVE</u>				R -
	.01	Housing for the Engineer's representative	PC sum	-	-	R 360 000,00
	.02	Charge required by Contractor on sub item .01 above	%			
SI.01	104,00	<u>OCCUPATIONAL HEALTH AND SAFETY ACT</u>				
	.01	Compliance to OHS Act Requirements and construction regulations 2014	No	36	R 10 000,00	R 360 000,00
SJ	105,00	<u>COVID-19 - OCCUPATIONAL HEALTH AND SAFETY ITEMS</u>				
	.01	OHS Signage, Medical Waste Bins, Hand Sanitizer, soaps, Masks, Thermometer, Gloves and other related Personal Protective Equipment for COVID-19	Sum	-	R 450 000,00	R 450 000,00
CARRIED FORWARD						

CARRIED OVER							
SJ 06.01		APPOINTMENT OF A COVID-19 AWARENESS CHAMPION	No	36	R 5 000,00	R 180 000,00	
SJ 06.03		PROVIDING PERSONAL PROTECTIVE EQUIPMENT (PPE)	No	36	R 500,00	R 1 260 000,00	
SJ 06.07		PROVIDE NOTICES AND POSTERS	No	36	R 200,00	R 7 200,00	
	106,00	<b>HIV/AIDS AWARENESS</b>  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.  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					
SH 07		.01 Awareness Champion  Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services	Sum	1	R 100 000,00	R 100 000,00	
SH 04.01	104,00	.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	R 150 000,00	R 150 000,00	
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	R 15 000,00	R 15 000,00	
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	R 15 000,00	R 15 000,00	
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	R 36 000,00	R 36 000,00	
CARRIED FORWARD							



CARRIED OVER							
BF	105,00	<b><u>PEST CONTROL</u></b>					
PSA 8.6		.01 Preventative pest control	PC sum	1	-	R	360 000,00
		.02 Charge required by Contractor on sub item .01 above	%				
PSA 8.6	106,00	<b><u>BCOCC CONTINGENCY</u></b>					
		.01 Provide contingency measures during festive seasons	PC sum	-	-	R	3 600 000,00
		.02 Charge required by Contractor on sub item .01 above	%				
	107,00	<b><u>EMPLOYMENT AND TRAINING OF LABOUR ON THE EPWP-NYS</u></b>					
		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.					
	108,00	<b><u>TRAINING OF YOUTH WORKERS (TARGET: 48 YOUTH WORKERS)</u></b>					
	109,00	<b>Orientation, Life skills development and technical skills training:</b>					
SL 11.01.01		.01 Orientation and Life Skills development training for youth workers for an average of 10 days per youth	PC Sum	1		R	120 000,00
		.02 Profit and attendance for administration of items above	%				
SL 11.01.02		.03 Technical skills training for youth workers for an average of 80 days.	PC Sum	1		R	840 000,00
		.04 Profit and attendance for administration of items above	%				
11.01.03	110,00	<b>Provide Medical Surveillance</b>	PC Sum			R	26 400,00
		The above items are only applicable if NYDA do not fund the specific training.					
SL 11.01.04		Payment Reduction due to not meeting the training target (ref. SL 11.03)	Youth-worker	-2 500			
	111,00	<b><u>TRAVELING DURING ON-SITE TRAINING:</u></b>					
SL 11.02.01		<b><u>Practical Work based Experiential training for 6 months each (ref. SL 11.02.01)</u></b>					
		Travelling during On-Site training:					
		.01 Travelling (based on R20 per day return trip/ youth worker)	PC Sum	1		R	200 000,00
		.02 Profit and attendance (on item above)	%				
CARRIED FORWARD							

CARRIED OVER						
SL 11.03.01	112,00	<b>EMPLOYMENT OF YOUTH WORKERS</b>  The unit of measurement shall be the number of youth workers at the labour rate of R 96.00 per day on Training as per EPWP Ministerial Determination 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 9 months appointment for youth workers  Profit and attendance on condition that services and cost has been incurred	Prov Sum			R 960 000,00
	113,00	<b><u>PROVISION OF EPWP DESIGNED OVERALLS AND HARD HATS TO YOUTH WORKERS</u></b>				
SL 11.04.01		Supply EPWP branded 2 x overalls, safety boots and 1 x EPWP branded hard hat to youth workers	PC Sum		Sum	R 76 800,00
SL 11.04.02		Profit and attendance on condition that services and cost has been incurred	%			
	114,00	<b><u>PROVISION OF BASIC TOOLS FOR YOUTH WORKERS</u></b>				
SL 11.05.01		Provide all youth workers with prescribed tools for their respective trades. Specification for the mentioned tools to be provided by the Service Provider. These tools will become the property of the youth workers after the completion of the programme	PC Sum			R 86 400,00
SL 11.05.02		Profit and attendance on condition that services and cost has been incurred	%			
SL 11.06.01	115,00	<b>APPOINTMENT OF YOUTH TRAINING COORDINATOR (TEAM LEADER/S)</b>  Appointment of Youth Team Leader/s for the duration of the contract	Prov Sum			R 65 000,00
SL 11.07	116,00	<b>LIAISON WITH SERVICE PROVIDER</b>	hours	100	20,00	R 2 000,00
	117,00	<b>LOGISTICS FOR EXIT WORKSHOP</b>  Provide logistic items for Exit Workshop/ Graduation (Catering, Orange Golf Shirts, Venue Hire and Sound System).	PC Sum	1		R 22 480,00
SN	118,00	<b>IMPLEMENTATION OF LABOUR-INTENSIVE INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP)</b>				
SN 10.03.01	119,00	<b>EMPLOYMENT OF UNSKILLED CLEANERS</b>	No	45	R 4 070,00	R 6 593 400,00
	120,00	<b>CONTINGENCY FOR UNFORESEEN MAINTENANCE AND OPERATIONAL DAMAGES</b>	Sum		R 2 500 000,00	R 2 500 000,00
	121,00	<b>TOPOGRAPHICAL SURVEY</b>  .01 Profit and attendance on item above	PC Sum	1	R 300 000,00	R 300 000,00
			%			
<b>TOTAL SCHEDULE 1 : GENERAL - CARRIED TO SUMMARY</b>						

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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## BILL OF QUANTITIES

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INSTALLATION 200: CARPENTRY AND JOINERY RELATED WORK				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	200,00	<b><u>AA: CARPENTRY AND JOINERY</u></b>				
AB.06.02.03	200,01	.01 Remove, repair and refix Bathroom cabinets	No.	20		
AB.06.02.04	200,02	<b><u>CEILING</u></b>				
		.01 Supply, repair and/or fix gypsum ceiling				
		.01 6.4 mm thick gypsum ceiling boards	m <sup>2</sup>	250		
		.02 metal H-section jointing strips	m	500		
		.03 75mm covered cornice	m	500		
		.02 Supply, repair and fix fibre cement ceiling;				
		.01 6.4 mm thick gypsum ceiling boards	m <sup>2</sup>	60		
		.02 SANS 803 flat pressed type jointing strips	m	60		
		.03 75mm coved cornice	m	60		
		.03 Supply and replace suspended exposed T-system ceiling;				
		.01 6 mm thick fibre cement ceiling boards	m <sup>2</sup>	60		
		.02 SANS 803 flat pressed T/H type jointing strips	m	2400		
		.03 44mm shadow line wall angle	m	600		
	201,00	<b><u>ROOF INSULATION</u></b>				
BA.07		.01 Supply and install roof insulation				
		.01 3-ply undertile membrane (Code: 3ply) with joints lapped 150mm, fixed over rafters.	m <sup>2</sup>	900		
		(Removal and replacement of roof covering measured elsewhere)				
BA.06	200,01	<b><u>FASCIA AND BARGE BOARDS</u></b>				
	200,02	.01 Repairs to fascia and barge boards				
		.01 Replace 10mm x 150mm fibre cement fascia and barge boards	m	1200		
		.02 Add 25mm x 102mm timber joist (sub fascia) where trusses are damaged at ends (Paint measured elsewhere)	m	60		
AB.01	202,00	<b><u>FURNISHINGS</u></b>				
AB.06.02.01	202,01	.01 Supply and install bathroom vanity units				
		.01 400mm(B) x 700mm(W) x 759mm(H) under basin cabinet, 2 door timber units for bathroom applications	No	16		
AB.06.02.03	202,02	.02 Kitchen units repair				
		.01 Replace damaged materials and accessories for kitchen cabinets (Paint measured elsewhere)	PC sum			R 200 000,00
		.01 Charge required by Contractor on sub item .01 above	%			
CARRIED FORWARD						

CARRIED OVER						
AB.06.02.01	202,03	.01 Supply and install office accessories				
		.01 Supply and install 1200mm x 900mm carpet pinning bulletin, Information & pin Boards, ribbed carpet surface, Velcro Friendly with Aluminium frame edging. To be supplied with accessories and mounting brackets	No	9		
		.02 Supply and install 1200mm x 900mm slimline magnetic whiteboard (Retail line) with graduated lines. To be supplied with accessories and mounting brackets	No	9		
AB.06.02.01	203,00	<u>SKIRTINGS AND QUADRANTS</u>				
	203,01	.01 Meranti skirtings and quadrants				
		.01 100mm x 19mm meranti skirtings with 19mm quadrants fixed tight using skirting adhesive or plugs	m	400		
AB.06.02.01	204,00	<u>RETROFITTING NEW KITCHEN</u>				
	204,01	.01 Retrofitting new kitchen where complete installation is requires				
		.01 Strip, removal and dispose, Prepare surfaces to receive new joinery material	PC sum	2	R 4 500,00	R 9 000,00
		.01 Charge required by Contractor on sub item .01	%			
		.02 Install new kitchen as per design by engineer.	PC sum	5	R 50 000,00	R 250 000,00
		.01 Charge required by Contractor on sub item .02	%			
CARRIED TO SUMMARY: CARPENTRY AND JOINERY RELATED WORK						

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**INSTALLATION 210: FLOORS & WALL FINISHES RELATED WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	CONTRACTOR		
				QUANTITY	RATE	AMOUNT
BD.06.02.05	210,00	<b><u>WALL TILE REPAIRS</u></b>				
	210,01	<b><u>Break out/hack up, demolish and remove:</u></b>				
		.01 6mm thick white glazed wall tiles to existing painted or plastered walls as approved by the Engineer	m <sup>2</sup>	600		
		.02 152mm x 152mm x 5mm glazed ceramic wall tiles Including cement mortar bed.	m <sup>2</sup>	10		
BD.06.02.05	211,00	<b><u>FLOORING REPAIRS</u></b>				
	211,01	<b><u>Alterations and repairs to existing structures</u></b>				
		.01 Ceramic/stone tiles:	m <sup>2</sup>	1000		
		.02 Vinyl tiles:	m <sup>2</sup>	1200		
		.03 Hardwood skirting with quadrant bead:	m	200		
	211,02	Preparation of floor slab and surface beds for new floor screeds:				
		.01. The existing concrete screed shall be removed in patches designated by the Engineer:	Prov sum			R 60 000,00
	211,03	Surface preparation of existing floor screeds for new floor coverings				
		.01. The Engineer will specify the where existing vinyl tiles are to be replaced.	Prov sum			R 60 000,00
	211,04	Floor screeds				
BE.06.02.03		.01 Apply 35 mm thick granolithic screed finish onto existing prepared surfaces.	m <sup>2</sup>	700		
		.02 One coat synthetic copolymer primer. Apply two coats of polyurethane alkyd enamel interior quality paint.	m <sup>2</sup>	450		
	212,00	<b><u>REPLACE WALL AND FLOOR FINISHES</u></b>				
	212,01	<b><u>Replace floor tiling, wall tiling and finishes, etc:</u></b>				
		.01 Items measured by area:				
		.01 350mm x 350mm x 5,5 mm thick, PEI Class 4/5 Ceramic/Porcelain floor tiles as approved by Engineer	m <sup>2</sup>	900		
		.02 300mm x 300mm x 5,5 mm thick, PEI Class 4/5 Ceramic/Porcelain floor tiles as approved by Engineer	m <sup>2</sup>	350		
		.03 40mm x 40mm x 6mm thick PEI Class 4/5 Mosaic floor tiles as approved by Engineer	m <sup>2</sup>	30		
CARRIED FORWARD						

CARRIED OVER					
BE.06.02.03	212,02	.04 Replace indoor acid-proof tiles similar/equivalent to Terra-Stone - Rustico cement wash cement based tiles (Code: 1CHARCOAL-RSL600), size 600 x 600 x 20mm thick , with 5-8mm joints continuous in both directions grouted with suitable grout (elsewhere specified), excess grout on the surface to be cleaned with water as the work proceeds, bedded in a cement slurry on 25-30mm thick semi-dry mortar screed and tamped using a rubber mallet on a 100mm thick concrete surface bed on 150mm subbase, conforming to SANS 1200D MJ degree of Accuracy I. Areas of replacement as directed by Engineer.	m <sup>2</sup>	300	
		.05 Replace Outdoor Acid-proof tiles similar/equivalent to Terra-Stone - Lava Stone non-slip cement based tiles (Code: 1DR34LAVSL600), size 600 x 600 x 20mm thick laid externally to 1:50 falls, with 5-8mm joints continuous in both directions grouted with suitable grout (elsewhere specified), excess grout on the surface to be cleaned with water as the work proceeds, bedded in a cement slurry on 25-30mm thick semi-dry mortar screed and tamped using a rubber mallet on a 100mm thick concrete surface bed on 150mm subbase, conforming to SANS 1200D MJ degree of Accuracy I. Areas of replacement as directed by Engineer.	m <sup>2</sup>	300	
		.06 Ceramic wall tiles, size 200 x 200mm, fixed to internal wall plaster backing with TAL tile adhesive (elsewhere specified) mixed with approved bonding liquid in lieu of water with joints continuous in both directions and grouted with TAL tile grout (elsewhere specified), excess grout on the surface to be cleaned with water as work proceeds.	m <sup>2</sup>	300	
		.07 Semi Flexible vinyl floor tiles colour to match existing flooring, size 300 x 300 x 1,5mm thick, laid in acrylic adhesive spread with a notched trowel on suitably prepared cement screed floors with a hygrometer reading showing a moisture content of less than 70% and rolled with 68kg articulated floor roller, all in accordance with manufacturer's recommendations.	m <sup>2</sup>	1200	
		.02 Items measured by number:			
		.01 Supply and apply new wall & Floor Grout is suitable for filling wall and floor tile joints 8mm wide. Approx coverage: 50-60m <sup>2</sup> on 300x300x10mm tiles with 8mm grout joints. (Tiles measured elsewhere)	m <sup>2</sup>	1150	
		.02 High Traffic: Supply and apply new quick setting grout, with scratch and water resistant finish in high traffic and heavy traffic commercial areas. Approximate coverage = 0.48 kg/m <sup>2</sup>	m <sup>2</sup>	930	
CARRIED TO SUMMARY: FLOORS & WALL FINISHES RELATED WORK					



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## INSTALLATION 220: MASONRY AND PLASTERING RELATED WORK

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	CONTRACTOR		
				QUANTITY	RATE	AMOUNT
CE.05.01	220,00	<b>BUILDING WORK</b>				
	220,01	<b>Break out/hack up and remove masonry:</b>				
		.01 Existing masonry to create opening for new door. Prepare openings for and build in new door frames including making good finishes and reveals to match existing (new doors and frames elsewhere)	m <sup>3</sup>	1.0		
		.02 115mm brick wall	m <sup>2</sup>	5.0		
		.03 230mm brick wall	m <sup>2</sup>	10.0		
CE.01.01	221,00	<b>NEW MASONRY CONSTRUCTION</b>				
	221,01	<b>EXCAVATION &amp; BACKFILLING</b>				
		.01 Excavation of soft material within the following depth: 450mm x 650mm trenches in setting out, keeping trenches free of water and collapse	PC sum	1	R 10 000,00	R 10 000,00
			%			
CE.05.01	221,02	<b>SUBSTRUCTURE BRICKWORK</b>				
		.01 Brickwork of NFX bricks (14 Mpa nominal compressive strength) in class II mortar (Concrete strip foundation measured elsewhere)	PC sum	1	R 25 000,00	R 25 000,00
		.01 Charge required by Contractor on sub item .01 above	%			
CE.05.01	221,03	<b>SUPERSTRUCTURE</b>				
		.01 Masonry for new works				
		.01 Brickwork of NFP bricks in class II mortar	PC sum	1	R 75 000,00	R 75 000,00
		.01 Charge required by Contractor on sub item .01 above	%			
		.02 Brickwork of NFX bricks (14 Mpa nominal compressive strength) in class II mortar	PC sum	1	R 75 000,00	R 75 000,00
		.01 Charge required by Contractor on sub item .01 above	%			
		.02 Masonry for repair work (C201 Building)				
		.03 Brickwork of NFX bricks (14 Mpa nominal compressive strength) in class II mortar	m <sup>2</sup>	70		
		.03 Cement sand plastering				
		.01 1:4 Cement sand plaster to existing surfaces	PC sum	1	R 5 000,00	R 5 000,00
		.01 Charge required by Contractor on sub item .01 above	%			
CARRIED FORWARD						

CARRIED OVER								
BD.01	222,00	.02 1:4 Cement sand plaster to new walls	PC sum	1	R	15 000,00	R	15 000,00
		.01 Charge required by Contractor on sub item .01 above	%					
		<u>BRICKWORK SUNDRIES</u>						
		.01						
		Forming toothing and bonding new brickwork to existing	PC sum	1	R	3 000,00	R	3 000,00
		.01 Charge required by Contractor on sub item .01 above	%					
		.02 Raking out joints of existing face brickwork to receive plaster finish	PC sum	1	R	3 500,00	R	3 500,00
		.01 Charge required by Contractor on sub item .02 above	%					
		.03 Splayed mortar fillets	PC sum	1	R	1 500,00	R	1 500,00
		.01 Charge required by Contractor on sub item .03 above	%					
		.04 Prestressed fabricated concrete lintels including necessary temporary supports	PC sum	1	R	7 500,00	R	7 500,00
		.01 Charge required by Contractor on sub item .04 above	%					
		.05 Galvanised hoop iron cramps, ties, etc	PC sum	1	R	3 500,00	R	3 500,00
		.01 Charge required by Contractor on sub item .05 above	%					
.06 Brick force and wire ties	PC sum	1	R	3 500,00	R	3 500,00		
.01 Charge required by Contractor on sub item .06 above	%							
.07 DPM, DPC and other membranes	PC sum	1	R	5 000,00	R	5 000,00		
.01 Charge required by Contractor on sub item .07 above	%							
BB.06.02.04	223,00	<u>PLASTERING: WALLS OF WET AREAS</u>						
		.01 Apply approved ready-mixed or pre-mixed bagged plaster mortar with 5 MPa compressive strength to interior walls	m²	40				
		.02 Raking out joints of existing face brickwork to receive plaster	PC sum	1	R	1 200,00	R	1 200,00
		.01 Charge required by Contractor on sub item .02 above	%					
CARRIED TO SUMMARY: MASONRY AND PLASTERING RELATED WORK								

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**INSTALLATION 230: INTERNAL PLUMBING, DRAINAGE AND FITTINGS RELATED WORK**

INSTALLATION 230: INTERNAL PLUMBING, DRAINAGE AND FITTINGS RELATED WORK				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
AD.01	230,00	AD: PLUMBING AND DRAINAGE INSTALLATION				
	230,01	REPAIR WORK TO PLUMBING AND DRAINAGE INSTALLATION				
AD 05.02	230,02	Isolation, stripping, dismantling and removal of existing brassware, sanitary ware and piping:				
		.01 Water closets (WC):				
		.01 Vitreous China WC pan (cistern type)	No	50		
		.02 Vitreous China WC cistern	No	50		
		.03 Flushing mechanisms	No	50		
		.04 Tailpipe connections to WC, including shut of valve	No	50		
		.05 Pan connector (100mm dia)	No	50		
		.06 Toilet seat and cover	No	100		
		.07 Toilet flush valve	No	50		
		.02 Wash hand basins (WHB):				
		.01 Vitreous China wall-mounted wash hand basin	No	25		
		.02 15 mm ø pillar taps and mixers	No	60		
		.03 15 mm ø pipe connections to pillar taps	No	30		
		.04 Rubber flexi P-trap or CP bottle trap	No	50		
		.03 Showers:				
		.01 CP Shower heads	No	25		
		.02 Under-tile stop cocks	No	10		
		.03 Shower gratings	No	10		
		.04 Baths:				
		.01 15mm or 20mm bath taps	No	20		
		.02 Rubber flexi P-trap or CP bottle trap	No	15		
		.03 Bathtub	No	5		
		.05 Urinals:				
		.01 Built-in or wall hung urinal	No	10		
		.02 Under wall stop tap or existing flush master	No	10		
CARRIED FORWARD						

CARRIED OVER								
AD.05.04	231,00	.03 Rubber flexi p-trap or CP bottle trap	No	30				
		.04 Existing junior flush valve	No	30				
		.06 External:						
		.01 20mm dia. RB hose bib tap	No	15				
		.07 Sinks and wash troughs:						
		.01 15mm or 22mm wall mounted taps	No	30				
		.03 15mm or 22mm extension	No	25				
		.04 Stainless steel sink	No	5				
		Supply and install sanitaryware and brassware:						
		.01 Water closet (WC):						
		.01 Vitreous China WC washdown pan with enlarged pedestal (360mm x405mm)	No	30				
		.02 Vitreous China WC pan -white paraplegic low level suite	No	2				
		.03 Vitreous China WC cistern -9 litre complete with lid and filaments	No	30				
		.04 WC (Disabled) and ceramic cistern with side lever colour White. seat and cover bolted to bowl with metal washers and rubber gaskets, 100mm outlet with cistern connected to 15mm water supply with foot of bowl sealed to floor with abe Dow Corning acetoxysilicone sealant. • Material: Vitreous China • Height: 1116mm • Width: 460mm • Depth: 750mm	No	4				
		.05 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	12				
		.06 3/4" (19 mm) Standard existing flush master 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	9				
		.07 1-1/4" (32 mm) Standard existing flush master flush valves. exposed type top entry with exposed type top entry with connector end wall flange. Comprises flush valve, straight flush pipe connector with chromed cover.	No	6				
		.08 Top entry flush pipe and flush pipe connector for existing standard flush master	No	30				
		.09 Compression pan connector for existing standard flush master	No	30				
		.10 100 mm Ø PVC pan connector.	No	30				
		.11 15 mm Ø CP ball-o-stop valve with CP flexi tail pipe to WC cistern	No	10				
CARRIED FORWARD								

CARRIED OVER						
		.12 Heavy duty white buckalite type toilet seat and cover with CP hinge and Spindle	No	125		
		.13 Vitreous China WC Cistern -white existing Vaal 9 litres, with side flush lever for disabled facilities - code 710631	No	3		
		.14 Wash hand basins (WHB):				
		.15 Vitreous China 520 x 415mm rounded wall -mounted wash hand basin - white	No	25		
		.16 Flexi rubber P-trap	No	60		
		.17 CP Bottle trap with 75mm deep re-seal and adjustable telescopic pipe	No	30		
		.18 15 mm Ø CP pillar taps SANS 226 Type1 (BS5412). JASWIC Listed	No	60		
		.19 15 mm Ø CP pillar taps Square type. SANS 226 Type 2 (BS5412) JASWIC Listed	No	30		
		.20 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	25		
		.21 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		
		.22 15 mm Ø flexi pipe tailpipe connections to pillar taps including 15mm CP ball-o-stop valve	No	60		
		.23 Plug and chain for WHB	No	90		
		.24 Sinks and wash troughs:				
		.25 CP wall-mounted sink mixer 15mm Ø - SANS 226 Type 1 (BS5412). JASWIC Listed	No	20		
		.26 20mm CP wall-mounted hose bib tap - SANS 226 Type 1 (BS5412). JASWIC Listed	No	10		
		.27 20mm RB wall-mounted hose bib tap - SANS 226 Type 1 (BS5412). JASWIC Listed	No	10		
		.28 20mm CP extension pieces	No	20		
		.29 Flexi rubber P-Trap	No	20		
		.30 15 mm BSP male brass drinking fountain pillar cock with adjustable nozzle flow control, hygienic protective plate	No	20		
CARRIED TO SUMMARY: INTERNAL PLUMBING, DRAINAGE AND FITTINGS RELATED WORK						

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## INSTALLATION 240: PAINTING RELATED WORK

INSTALLATION 240: PAINTING RELATED WORK				CONTRACTOR			
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
AC.01	240,00	<u>AC: PAINT WORK</u>					
	240,01	Paint to new unpainted surfaces:					
		.01 Plastered surfaces:					
		.01 Apply Super acrylic PVA on plaster finish (New ablutions C201)	m <sup>2</sup>	32			
		.02 Steel surfaces:					
		.01 Steel door frames:					
		.02 apply one coat zinc phosphate primer for steel. Apply one coat of universal undercoat. Apply two coats of high gloss enamel paint	m <sup>2</sup>	4			
		.03 Fibre cement fascia & badge boards:					
		.01 Apply two coats of super acrylic copolymer PVA emulsion or polyurethane alkyd enamel	m <sup>2</sup>	100			
		.04 Ceilings to wet areas (ablutions, kitchens and laundries):					
AC.02	240,02	Paint to previously painted surfaces:					
		.01 Steel surfaces:					
		.01 Apply protective and decorative solvent based polyurethane alkyd semi- gloss non-drip enamel paint:					
		.01 I-section columns and rafters	m <sup>2</sup>	60			
		.02 Lipped channel purlins	m <sup>2</sup>	60			
		.03 Angle section bracing	m <sup>2</sup>	60			
		.04 Residential type glazed windows	m <sup>2</sup>	300			
		.05 Window burglar proofing or mantis expanded metal grid to steel frame in burglar proofing	m <sup>2</sup>	100			
		.06 Doors	m <sup>2</sup>	50			
		.07 Door frames	m <sup>2</sup>	240			
		.08 Security gates	m <sup>2</sup>	300			
		.09 Rails, posts, pipes, etc. not exceeding 50 mm diameter	m	300			
		.10 Rails, posts, pipes, etc. not exceeding 50 mm diameter	m	450			
	CARRIED FORWARD						



CARRIED OVER						
		.11 structural steel elements	m <sup>2</sup>	300		
		.12 Gutters	m	340		
		.13 Down pipes	m	230		
	240,03	<u>Paint to previously painted surfaces in poor condition:</u>				
AC.03		.02 Aluminium paint:				
		.01 Washing line posts not exceeding 100 mm dia.	m	350		
AC.03		.03 Wood surfaces:				
		.01 Protective and decorative solvent based polyurethane alkyd semi- gloss non-drip enamel paint:				
		.01 Cupboards, counters, shelving. Etc	m <sup>2</sup>	300		
		.02 Skirtings and quadrant beads not exceeding 150 mm girth	m <sup>2</sup>	200		
		.02 Water resistant polyurethane clear malt varnish:				
		.01 Doors and fittings	m <sup>2</sup>	400		
		.02 Skirtings and quadrant beads not exceeding 150 mm girth	m <sup>2</sup>	200		
AC.02		.02 Ultra violet light resistant exterior Ultra violet light resistant exterior	m <sup>2</sup>	50		
		.04 Concrete surfaces:				
		.01 Alkali resistant solvent based (modified alkyd) stoep paint:				
		.01 Floors	m <sup>2</sup>	1000		
		.02 Window sills, etc	m <sup>2</sup>	200		
AC.02		.05 Plastered surfaces:				
		.01 Apply interior quality pure acrylic emulsion paint with smooth sheen appeal;				
		.01 Walls	m <sup>2</sup>	15000		
		.02 Exterior quality pure acrylic emulsion paint with Teflon:				
		.01 Walls	m <sup>2</sup>	8400		
		.03 Protection and decorative solvent based polyurethane alkyd semi-gloss non-drip enamel paint:				
		.01 Walls	m <sup>2</sup>	900		
		.02 Ceiling	m <sup>2</sup>	420		
		.04 Apply two coats of super acrylic copolymer PVA emulsion or polyurethane alkyd enamel.	m <sup>2</sup>	3700		
		.05 Ceilings to habitable areas (Dry areas):				
		.01 Super acrylic PVA	m <sup>2</sup>	12000		
	240,03	.06 Interior acrylic emulsion paint with smooth sheen appeal:				
		.01 Walls	m <sup>2</sup>	500		
CARRIED FORWARD						

CARRIED OVER						
AC.01	240,03	.07 Apply exterior quality pure acrylic emulsion paint with Teflon:				
		.01 Walls and piers	m <sup>2</sup>	2500		
		.08				
		.01 Walls	m <sup>2</sup>	300		
AC.01	240,03	.02 Ceiling	m <sup>2</sup>	420		
		.06 Fibre cement surfaces:				
		.01 Exterior quality pure acrylic emulsion paint with Teflon:				
		.01 Ceilings and cornices	m <sup>2</sup>	1200		
AC.01	240,03	.07 Soft board surfaces:				
		.01 Interior quality super acrylic copolymer PVA paint				
		.01 Ceilings and cornices (polystyrene)	m	25		
		.02 Protective and decorative solvent based polyurethane alkyd semigloss non-drip enamel paint:				
AC.01	240,03	.01 Ceilings and comices	m <sup>2</sup>	700		
CARRIED TO SUMMARY: PAINTING RELATED WORK						

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## INSTALLATION 250: DOORS &amp; WINDOWS RELATED WORK

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	250,00	<b>BUILDING WORK</b>				
BD.01	251,00	<b>DOORS &amp; WINDOWS</b>				
BD.05	251,01	<b>Alterations and repairs to existing structures:</b>				
		.01 Remove existing damages door frames to create opening for new door frame. Prepare openings to receive new door frames including making good finishes and reveals	No.	4.0		
BD.05	252,00	<b>Break out/hack up, demolish and remove:</b>				
		.01 Damaged sections of putty in steel sashes	m	100		
		.02 6 mm clear float laminated glass to aluminium windows	m <sup>2</sup>	10		
		.03 4 mm clear float glass to steel sashes with putty	m <sup>2</sup>	25		
		.04 4 mm obscure glass to steel sashes with putty	No.	6		
BD.05	253,00	<b>Remove existing structures:</b>				
		.01 Carefully remove & dispose existing damaged doors:				
		.01 External single doors(n.e 813mm x 2032mm)	No.	10		
		.02 Internal single doors (n.e 813mm x 2032mm)	No.	10		
		.03 Toilet doors in ablutions(n.e 813mm x 2032mm)	No.	6		
		.04 Garage roll-up door and frame(n.e 2430mm x 2100mm)	No.	6		
		.02 Remove existing window frames to create opening for new window frame. Prepare openings to receive new window frames including making good finishes and reveals.	No.	3.0		
BD.05	254,00	<b>Corrective work to existing structures:</b>				
		.01 Repair and refix:				
		.01 Single wooden doors	No.	40		
		.02 Double wooden doors	No.	25		
		.01 Single steel doors	No.	20		
		.02 Double steel doors (Including metal grilles)	No.	15		
		.03 Windows ( n.e 2000mm x 2000mm)	No.	30		
		.04 Door frames	No.	65		
		.05 Aluminium sliding windows	No.	10		
		.06 Tip up single garage door including servicing opening mechanisms, locks, etc.	No.	10		
		.07 Shower door including replacing broken or missing roller guide wheels	No.	15		
		.08 Industrial galvanised roller doors. Including guides. Gears shafts and drive (Large doors (3.1m x 3.7m)	No.	15		
		.09 Single garage door Including servicing opening mechanism locks, etc.	No.	20		
CARRIED FORWARD						

CARRIED OVER							
BD.05	255,00	.01 Remove repair and refix:					
		.01 Timber single or double door	No.	40			
		.09 Mirror glass 450mm x 600mm wide	No.	20			
		.12 Striking plates	No.	80			
		.14 Weather strips for single doors	No.	20			
		.16 Standard arm door closers	No.	20			
BD.05	256,00	.01 Repair and seal:					
		.01 Crack in plastered wall with plaster	m	250			
		.02 Joints in concrete walls with non-shrink grout not exceeding 20mm wide x 20mm deep	m	200			
		.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	30			
		.04 Supply and install new window frame:					
		.01 Steel window NCT1S (533mm x 949mm)	No.	1			
		.02 Steel window NCTX&S (949mm x 1022mm)	No.	1			
		.03 Steel window 533mm x 654mm	No.	1			
BD.01	257,00	<u>Supply and installation of materials:</u>					
		.01 Supply and install new door frame:					
		.01 1.6 mm thick pressed steel double rebated door frame similar or equally approved to fit existing 230mm wall	No.	8			
		.02 1.6 mm thick pressed steel door frame similar or equally approved to fit existing 110mm wall	No.	8			
		.03 Sundries for steel door frames (Hinges, striker plates) (Painting measured elsewhere)	Prov sum			R	5 000,00
BD.01		.02 Supply and install new solid timber doors:					
		.01 Solid laminated timber door. 40 mm thick x 813 mm wide x 2032 (Lockset measured elsewhere)	No.	20			
BD.01	258,00	Supply and install glazing where required by engineer. Installation requirements in accordance to 10400-N (Glazing) of the National Building Regulations.					
		.01 6mm Frosted glazing to ablutions, bathrooms and toilets (Measured elsewhere)					
		.02 6mm clear laminated annealed safety glass	PC sum	1	R	10 000,00	R 10 000,00
		.01 Charge required by Contractor on sub item .02 above	%				
		.03 8mm clear laminated annealed safety glass	PC sum	1	R	15 000,00	R 15 000,00
		.01 Charge required by Contractor on sub item .03 above	%				
		.04 Bullet resistant glazing material	PC sum	1	R	7 500,00	R 7 500,00
		.01 Charge required by Contractor on sub item .04 above	%				
BD.01	259,00	<u>Remove and discard damages insect screens:</u>					
		.01 Check damaged insect screens and discard.					
CARRIED FORWARD							

## CARRIED OVER

BD.01	260,00	<b>Supply and installation of insect screens:</b>				
	260,01	.01 Supply and install new insect screens for windows:				
		.01 vertical widow spring loaded weatherproof fibreglass mesh insect screen, size 1600mm x 2300mm high with nylon accessories and brake for controlling closing of the screen, powder coated aluminium side guides fitted with standard brush pile, screen to be fitted inside reveal to concrete lintel.	No.	120		
		.02 Supply and install new insect screens for windows:				
		.01 vertical widow spring loaded weatherproof fibreglass mesh insect screen, size not exceeding 1200mm x 1800mm high with nylon accessories and brake for controlling closing of the screen, powder coated aluminium side guides fitted with standard brush pile, screen to be fitted inside reveal to concrete lintel.	No.	120		
		.03 Supply and install new insect screens for doors:				
		.01 Horizontal single door spring loaded weatherproof fibreglass mesh insect screen, size to fit standard opening 1000mm x 2100mm high with nylon accessories and brake for controlling closing of the screen, powder coated aluminium side guides fitted with standard brush pile, screen to be fitted inside reveal.	No.	60		
BD.01	260,01	.03 Supply and install new semi-solid timber doors (C201 new work):				
		.01 Semi-solid core flush panel door, 40mm thick x 813 mm (W) x 2032 mm (H) with meranti veneer on both sides	No.	25		
BD.01		.04 Supply and install new timber double doors:				
		40 mm thick solid laminated door or equivalent approved as specified for interior or exterior use. (Lockset & painting measured elsewhere)	Pair	5		
BD.01		.05 Supply and install new steel combinations doors:				
		.01 1,6mm thick similar or equivalent approved chromadek steel roll-up door with frame and locking device for 2400mm x 2135mm high opening in 230mm walls.	No.	10		
BD.01		.05 Supply and install new timber doors, window frames and glazing to new ablution Building C201:				
		.01 Door panel				
		.01 Framed ledged and braced batten flash back hardwood door, 40mm thick x 813mm wide x 2032 mm high with splayed weather board	No.	1		
		.02 Steel door frame				
		.01 1,6 mm thick pressed steel door frame for door size 813 mm x 2032 mm high suitable for 110 mm wall	No.	5		
		.03 Steel window frame for C201(New ablutions)				
		.01 Steel top hung window, opening outwards, E Type NE1, with burglar bars, window size 654mm x 533 mm wide	No.	5		
		.04 Steel window frame for D136 (8 Rooibos Crescent)				
		.01 Steel top hung window, opening outwards, NCT1S, with burglar bars, window size (533mm x 949mm)	No.	1		
		.02 Steel top hung window, opening outwards, NCTX&S with burglar bars, window size (949mm x 1022mm)	No.	1		
CARRIED FORWARD						

CARRIED OVER						
BD.01		.06 Supply and install new glazing to windows:				
		.01 For new ablutions				
		.01 Supply and fit 6mm frosted safety glass for C Type top hung residential steel window, to fit, size 533mm x 949mm high, fitted with putty. With burglar bars. Painting (measured elsewhere)				
		.01 Top pane 600mm x 533mm	No.	5		
		.02 Bottom fixed pane 349mm x 533mm	No.	5		
CARRIED TO SUMMARY: DOORS & WINDOWS RELATED WORK						



## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN **BLACK INK****INSTALLATION 260: IRONMONGERY & SANITARYWARE RELATED WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	CONTRACTOR		
				QUANTITY	RATE	AMOUNT
BD.04 AB.06.02.03	260,00	<b><u>IRONMONGERY &amp; ACESSORIES</u></b>				
AB.06.02.03 & BD.06.02.05	260,01	.01 Remove repair and refix:				
		.01 Peg and stay to steel window	No.	35		
		.02 Sliding stay to steel window	No.	50		
		.03 Window handle to steel window	No.	75		
		.04 Cupboard locksets	No.	20		
		.05 Mortice lockset with handles	No.	100		
		.06 All types of locksets with handles	No.	100		
		.07 All types of door handles	No.	100		
		.08 15 mm roller ball catch with striking plate	No.	30		
		.06 Cupboard pull handles	No	50		
AB.06.02.03 & BD.06.02.04	260,02	.01 Replace/Supply and fix:				
		.01 Standard brass peg and stay to steel windows	No	10		
		.02 Standard 175mm brass (Medium duty) sliding stay to steel windows	No	30		
		.03 Residential type steel window handle	No	15		
		.04 Window handle for aluminium windows	No	12		
		.05 Cupboard pull handles with push button lock and two keys	No	60		
		.06 Cupboard pull handles	No	45		
		.07 100 mm brass barrel bolt	No	20		
		.08 Three lever mortice lockset with one pair handles chrome type 63081. two keys. back plates and striking plate	No	40		
		.09 Three lever (Heavy duty) mortice lockset with one pair anodized aluminium handles type B3084. two keys. back plates and striking plate	No	40		
		Three lever (Heavy duty) mortice lockset with one pair anodized aluminium handles and back plate type B3085 two keys, back plates and striking plate	No	25		
		.10 Four lever mortice lockset with one pair handles chrome type 63081. two keys. back plates and striking plate	No	40		
		.11 Four lever (Heavy duty) mortice lockset with one pair anodized aluminium handles type B3084. two keys, back plates and striking plate	No	40		
		Four lever (Heavy duty) mortice lockset with one pair anodized aluminium handles and back plate type B3085 two keys, back plates and striking plate	No	25		
		.12 Cylinder lever lockset with one pair anodized aluminium handles type 83084. two keys. back plates and striking plate	No	10		
CARRIED FORWARD						

CARRIED OVER						
AB.06.02.03 & BD.06.02.04	260,02	.13 Indicator bolt with one pair anodized, aluminium handles type B3085, display back plates and striking plate.	No	10		
		.14 Facility Indicator bolt for disabled person facilities with one pair anodized aluminium handles type B3634, display back plates and striking plate	No	24		
		.15 Indicator bolt for type B3632, similar to existing with display, back plates and striking plate	No	40		
		.16 Rim cylinder night latch with two key and striking plate	No	20		
		.17 Anodized aluminium door handles type B3081	Pair	40		
		.18 Aluminium weather strips for single doors	No	12		
		.19 Anodized aluminium door handles type B3085, including back plate	No	20		
		.20 15 mm roller ball catch with striking plate	No	24		
		.21 6mm thick mirror glass 450mm x 600mm wide	No	180		
		.22 Stainless steel soap dish type 62789	No	60		
		.23 Striking plate for single door	No	24		
		.24 White glazed ceramic toilet roll holder	No	100		
		.25 Stainless steel lockable double toilet tissue holder	No	36		
		.26 19 mm diameter chromium plated towel or hanging rail 1200 mm long including end bracket	No	38		
		.27 380 mm x 610 mm high bathroom cabinet with mirror, two doors, handles and one shelf	No	38		
		.28 Standard arm door closer with adjustable closing speed, adjustable hydraulic latch action, suitable for doors up to 1100mm	No	18		
		.29 Garage door lock, Including two keys	No	38		
		.30 Standard CP door handles similar to existing	No	12		
		.31 Stainless steel floor mounted door stoppers	No	120		
		.32 Stainless steel wall mounted door stoppers	No	30		
		.33 Stainless steel hat and coat hook with a rubber buffer	No	24		
		.34 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	10		
		.35 Aluminium sliding shower door "PIVOT "with range of up to 1050mm wide x 1800mm high	No	10		
AB.06.02.03	260,03	.02 Disabled person facilities:				
		.01 32mm diameter stainless steel grab bars for disabled person facilities:				
		.01 Cistern back rail 750mm long	No	9		
		.02 Dog leg side grab rail 300 x 300 x 300mm	No	9		
AD.03.02	261,00	<u>SUPPLY AND INSTALL/REPLACE SANITARYWARE</u>				
AD.05.04	261,01	.03 Urinals:				
		.01 Vitreous china Built-in or wall hung urinal	No	16		
		.02 Stainless steel wall hung urinal	No	5		
CARRIED TO SUMMARY: IRONMONGERY & SANITARYWARE RELATED WORK						

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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

**INSTALLATION 270: BUILDING METALWORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	CONTRACTOR		
				QUANTITY	RATE	AMOUNT
	270,00	<b>BH: FITTINGS</b>				
AA.06.02.04		.01 Remove repair and refix:				
		.01 Towel or hanging rail including end brackets	No.	20		
AA.06.02.03	270,01	.01 Steelwork and joinery:				
		.01 Supply and fit cupboard Ironmongery 0.8mm thick steel baked enamel with 32mm postform composite laminate tops SANS approved:				
		.01 Hinge for kitchen cupboard door	No	80		
		.02 Kitchen cupboard pull handles	No	60		
		.03 Base double bowl sink and unit 1800 mm x 533 mm x 865 mm high with three doors and one shelf size	No	10		
		.04 Base unit size 1800 mm x 533 mm x 865 mm high with three doors, four drawers and one shelf	No	10		
		.05 Wall unit size 1500 mm x 533 mm x 865 mm high with three doors, and one shelf	No	10		
		.02 Items measured by linear metre:				
		.01 Towel or hanging rail including end brackets	No.	25		
		.03 Steel cupboards:				
		32 mm chipboard with postform composite laminate finish on one side and profiled edges where so described:				
		.01 Work top 600 mm wide with profiles front edge and fitted on top of kitchen cupboard floor unit	m	30		
		.04 32 mm hardwood meranti shelves and profiled edges where so described:				
		.01 Work top 500 mm wide with profiled front edge and fitted on top of kitchen cupboard floor unit	m <sup>2</sup>	40		
		.02 Work top 1000 mm wide with profiled front edge and fitted on top of kitchen cupboard floor unit	m <sup>2</sup>	30		
		.03 32 mm x 1.2 mm existing Formica veneered edge strips	m <sup>2</sup>	60		
		.05 Repairs to existing fittings:				
		.01 Service, repair and refix kitchen cupboards as per technical specification BH 03.01.02				
		.01 Kitchen cupboard door	No	25		
		.02 Kitchen cupboard drawer including sliders	No	60		
		.02 Removal of existing steel or wooden kitchen:				
		.01 Sink, base or wall unit up to 2000mm long	m <sup>2</sup>	10		
		.02 Existing counter tops up to 600mm wide	m <sup>2</sup>	30		
		.06 Supply and replace tile trims:				
		.01 8mm natural finish Aluminium tile edging strip/trim for interior floor and wall application	m	400		
CARRIED FORWARD						

CARRIED OVER						
BA 02.5  BA 03.02.08    BA 03.02.10   BA 03.02.10	271,00	.02 22.5mm Brass tile trim for exterior floor tiling applications	m	100		
		05. Fibre cement fascia & badge boards:				
		.01 Apply two coats of super acrylic copolymer PVA emulsion or polyurethane alkyd enamel	m²	125		
		.02 Work top 600 mm wide with profiles front edge and fitted on top of kitchen cupboard floor unit	m	30		
		06. custom made burglar guards:				
		.01 heavy duty hot dip galvanised internal burglar guard, size to be determined by engineer, comprising 12 x 12mm solid square bar including all necessary extension pieces, fixed with S37 coach bolts with snap-off nuts.	PC sum	1	R 250 000,00	R 250 000,00
		.01 Charge required by Contractor on sub item .01 above	%			
		custom made burglar guard at C204 (Map):				
		.02 heavy duty hot dip galvanised external burglar guard, size to be determined by engineer, 3200mm high x 9000mm long comprising 50mm x 50mm MS square tubes fillet welded and painted, fixed with m12 bolts and welded. Foundation footings and painting measured elsewhere.	PC sum	1	R 25 000,00	R 25 000,00
		.01 Charge required by Contractor on sub item .02 above	%			
		07. Supply and install custom made expanded metal sheet grille steel :				
		.01 Supply and install expanded metal sheet grille steel with aperture 16mm x 8mm x and 0.8mm thick. To be installed on the underside of the entrance South Gate (A-101) canopy/steel roof shelter. Area: 10200mm x 17200.	m²	130	R 150,00	R 19 500,00
		.02 provide fillet welded frame to hold the expanded mesh, with 40mm x 40mm x 3m MS angle iron commercial quality. Frame to be fixed on existing metal structure as instructed by engineer. (Painting of frame measured elsewhere)	m	240	R 420,00	R 100 800,00
		.03 Metal work sundries (Fasteners, brackets, wire ties)	Prov sum			R 3 500,00
<b><u>SUPPLY AND INSTALL RAINWATER GOODS</u></b>						
01. Gutters						
.01 Standard size for houses:						
.01 Supply & replace damaged gutters with 100 x 75 x 0.8 thick standard baked enamel/galvanised non-supporting beaded gutter. Galvanised brackets to be provided at every truss. Brackets to be painted to specification in the Schedule of Quantities.	m	340				
02. Gutter accessories and ancillary items						
.01 End stops:						
.01 0.8 mm thick baked enamel/galvanised finished end stops joined to gutter on site and sealed as for joints in gutters.	No.	50				
.02 Outlets:						
.01 0.8 mm thick baked enamel/galvanised finished outlets fixed to gutter with pop rivets and sealed with an approved silicone. Outlet to slip into down pipe.	No.	60				
.03 Fascia straps:	No.	340				
CARRIED FORWARD						

CARRIED OVER						
		.01 25 mm wide x 1.0 mm thick galvanised straps at +/- 686 mm c/c.				
		04. Down pipes				
		.01 100 x 75 x 0, 6 thick baked enamel/galvanised down pipes:	m	230		
		.01 100 x 100 x 0.8 thick baked enamel/galvanised down pipes:	m	230		
		05. Down pipe accessories				
		.01 Brackets:				
		.01 Standard galvanised brackets shall be spaced at centres not exceeding 2,4 metres. Brackets to be primed and painted with 2 coats of high gloss enamel measured elsewhere.	No.	100		
		.02 Shoes, offsets and spreaders:				
		.01 Manufactured from 0,8 mm thick baked enamel/galvanised material. cut and mitred to suit. All joints to be sealed with an approved silicone sealant	No.	50		
BA 02.5	272,00	<b>ROOF FLASHING</b>				
BA.03.02.01		01. Headwall flashing for New Ablutions (C201)				
		.01 Galvanised baked enamel Headwall Flashing:				
		.01 385 mm girth (231 + 154 vertical) headwall flashing. 2 x bends (1 is a shallow bend). Fix flashing to roof sheeting with posidriv screws and washers. 150 mm overlap fixed and sealed with 2 rows of pop rivets and 2 rows of silicone. 1 row of broad flute polycloser bedded in silicone. 1 row x 0.6 mm thick Galvanised baked enamel broad flute metal closer. Bend up trough to form a dam. 154 mm girth (114 + 25 + 15 lip @ 15°) Galvanised baked enamel counter flashing. 3 x bends (1 is a shallow bend). Counter flashing to overlap with headwall flashing with at least 75 mm. Cut 6 mm wide groove into brick wall for counter flashing. Prime joint and seal with an approved 6 x 6 mm poly-urethane sealant.	m	5,42		
CARRIED TO SUMMARY: BUILDING METALWORK						

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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

**INSTALLATION 280: FENCING AND SITE KEEPING RELATED WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	CONTRACTOR		
				QUANTITY	RATE	AMOUNT
	290,00	<b><u>AE: FENCING, CLEANING AND SITE KEEPING</u></b>				
AF.05	290,01	<b><u>Supply of equipment for ablutions</u></b>				
BD.05	290,02	.01 Remove repair and refix:				
		.01 Soap dish	No.	10		
		.02 Toilet tissue holders	No.	25		
AF.05.01		.03 Replace Stainless steel hand dryer unit with blower output of 450 watt @ 20 000 rpm similar or equal to existing accelerator	No	3		
AF.05.06		.04 Replace wall mounted battery operated commercial touch free alcohol sanitizer station	PC sum	1	R 9 000,00	R 9 000,00
		.01 Charge required by Contractor on sub item .04 above	%			
AF.05.11		.05 AAA heavy duty alkaline batteries for Auto digital aerosol	No	4320		
AF.05.02		.06 Auto digital aerosol dispenser with stainless steel cover	No	3		
AF.05.03		.07 Stainless steel toilet paper dispensing units, capable of holding two toilet paper rolls per unit	No	5		
AF.05.04		.08 Stainless steel she bins	No	20		
AF.05.05		.09 Stainless steel hand soap dispenser	No	12		
AF.05.06		.10 Stainless steel urinal sanitizer	No	6		
AF 04.05	291,00	<b>SOLID WASTE MANAGEMENT:</b>				
AF.05.09	291,01	<b><u>Supply of waste bins:</u></b>				
		.01 Square black 240 litre waste bins including wheel	No	20		
		.02 105 litre swing steel bin size 475mm ø x 800mm high	No	5		
		.03 60 litre wall mounted steel litter bin	No	20		
AE.08.03	292,00	<b><u>REPAIR, RE-FIXING, PAINTING AND ALIGNING OF ALL FENCES</u></b>				
		.01 Repair, refix and align fences 1.0m to 1.8m high	m	50		
		.02 Repair, refix and align fences 1.8m to 3.0m high	m	50		
		.03 Repair, replace damaged chain link fence, refix and align fences 1.0m to 1.8m high	m	70		
		.04 Repair and align fences 3.2m high	m	25		
		.05 A pair of 1500mm (W) x 1200mm (H) Residential Adjustable Single Walk-through Chain Link Fence Gate System Garden Fence Security Fence Steel TFT	No	10		
CARRIED FORWARD						



CARRIED OVER						
AE.08.02	293,00	<b>SUPPLY AND ERECTION OF NEW FENCING MATERIAL TO REPLACE OLD MATERIAL:</b>				
		.01 New fence Installation complete (all panels, posts, wiring and structural work) from site residential area around to the waste water	Prov sum	-	-	R 150 000,00
AE.08.01	294,00	<b>RESIDENTIAL FENCE - CLEARING THE FENCE ROUTE:</b>				
AE.08.01.01	294,01	<b>Fence line:</b>				
		.01 Clearing of 1m-2m wide growth along fence route	m	1140		
AE.08.02	295,00	<b>3m PERIMETER FENCE - DIAMOND MESH, TUBULAR STEEL POSTS</b>				
AE.08.02	295,01	<b>Supply and erection of new fencing material to replace old material:</b>				
		.01 Diamond mesh:				
		.01 3.0m (H) diamond mesh	m	295		
		.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	70		
		.02 110mm tubular posts with additional 600mm overhang at 45 degrees and 600mm overhang at 45 degrees and fence	No	30		
		.03 65mm dia stay for 3.0m post	m	28		
		.04 Straining wire	m	1770		
		.05 Barbed wire	m	885		
		.06 SCHEDULED ITEMS				
		.01 Excavate for restricted foundation, footings and trenches all materials and for backfill for embankment or dispose	No	100		
		.02 Break up, hack off and remove existing damaged fence	m	280		
AE.08.02	295,02	<b>3.0 m HIGH SECURITY FENCE (HOTDIPPED GALVANISED IN ACCORDANCE WITH (SO 1461)</b>				
		.01 Posts				
		.01 3750 mm long x 100 mm x 70 mm x8 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. Include 20 Mpa/19mm stone concrete footing size 300 mm dia. X 600mm deep	No	6		
		.02 Toprails				
		.01 2996 mm x40 mm x40 mm x3 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	10		
CARRIED FORWARD						

CARRIED OVER						
		<b>.03 Bottom rails</b>  .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	10		
		<b>.04 Panels - 356 double line wire and single skin</b>  .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 <sup>2</sup> Weld strength 60 -80% Weight 10 000 kg/m <sup>2</sup> Coating: Calfan Class A Coated in accordance with SANS 10244-2-2003	No	6		
		<b>.05 Overhang extension:</b>  .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	20		
		<b>.06 Redress, treating and painting of:</b>  .01 <b>Gates:</b> .01 Double gate up to 6m wide	No	5		
AE.08.06						
		.02 <b>Tubular posts:</b> .01 1.8m - 3m high fence	No	60		
AE.08.05						
AE.08.02	295,03	<b><u>2.6 m HIGH PRECAST CONCRETE PALISADE, CONCRETE POSTS</u></b>				
		<b>.01 Supply and erection of new fencing material to replace old material:</b>  .01 Type 2600mm high Industrial Palisade Fencing, comprising 75 x 100 x 2350mm high pre-cast concrete pales including 1850 x 35 x 300mm anti-dig beam (300mm below NGL) with 140 x 225 x 3360 pre-cast concrete security extension posts at 2000mm centres set in minimum 15MPa/19mm aggregate concrete bases 460 x 460 x 600 deep.	m	75		
AE.08.01.01	295,04	<b><u>Fire break:</u></b>				
		.01 Clearing of growth along fire break on fence route 2.5m wide both sides	m	6000		
AE.08.01.02	295,05	<b><u>Additional Items:</u></b>				
		.01 Dismantling and removal of existing steel sliding gates	No	3		
		.02 Replace damaged shade nets to residential carports	m <sup>2</sup>	150		
		.03 Dismantling & removal existing steel sliding gate guides	No	3		
		.04 Dismantling and removal of existing steel panels	No	6		
		.05 Re-erection of existing damaged steel sliding gates	No	3		
CARRIED FORWARD						

CARRIED OVER							
		.06	Re-erection of existing damaged steel sliding gate guides	No	3		
		.07	Re-erections of existing steel panels	No	3		
		.08	Tying in to existing steel sliding gates	No	3		
		.09	Tying in to existing steel panels	No	3		
		.10	Replace 150mm sliding gate wheels	No	3		
		.08	Tying in to existing steel sliding gates	No	3		
		.09	Tying in to existing steel panels	No	3		
		.10	Replace 150mm sliding gate wheels	No	3		
	295,06		<b>Maintain existing high traffic surfaces:</b>				
		.01	Glazed tiles to walls including cleaning and refilling/grouting of joints	Prov sum	1	R 30 000.00	R 30 000.00
		.02	Cold water high pressure cleaning for external surfaces with soil & debris as indicated by the engineer	Prov sum	1	R 40 000.00	R 40 000.00
		.03	Chemical cleaning for external surfaces with grease, grime and stains as indicated by the engineer	Prov sum	1	R 60 000.00	R 60 000.00
AE.04.03	295,07		<b>Additional required cleaning sundries:</b>				
AE.05.09		.01	2pc econo wet floor sign	No.	10		
AE.05.09		.02	50L econo double bucket & wringer	No.	3		
AE.05.09		.03	Econo 20L bucket & wringer	No.	5		
AE.05.09		.04	Housekeeping trolley - procart - medium	No.	3		
AE.05.09		.05	Litter picker	No.	5		
AE.05.09		.06	280gsm woven microfibre cloth (20 pack) - 40cm x 40cm	No.	10		
AE.05.09		.07	Hd spunlace cloth - 30cm x 50cm, 50pc/pack	No.	10		
AE.05.09		.08	Dust absorption cloth (oil impregnated), 100pc/pack	No.	1		
AE.05.09		.09	45gsm spunlace roll - 400m x 24cm x 50cm perforation	No.	10		
AE.05.09		.10	Spray trigger head only (blue)	No.	20		
AE.05.09		.11	Tele pole 2x3m	No.	6		
AE.05.09		.12	35cm window squeegee	No.	12		
AE.05.09		.13	35cm window washer sleeve	No.	12		
CARRIED TO SUMMARY: FENCING AND SITE KEEPING RELATED WORK							

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN **BLACK INK****INSTALLATION 290: LANDSCAPING AND SIGNAGE RELATED WORK**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	CONTRACTOR		
				QUANTITY	RATE	AMOUNT
	290,00	<b>LANDSCAPING &amp; SIGNAGE</b>				
SANS 1186-1:2015	290,01	Mountable signage & Assembly				
SANS 1186-1:2015	290,02	.01 Supply and install SABS (1186) approved 150mm x 150mm standard non-reflective, informative, general instruction signage on vinyl sheets (decals)				
		.01 General direction (GA2)	No	18		
		.02 Direction to escape route (GA3)	No	18		
		.03 Ladies toilet (GA10)	No	12		
		.04 Gents toilet (GA11)	No	12		
		.05 Allocated to or accessible to wheelchair (GA22)	No	6		
		.06 No smoking (R11)	No	30		
		.07 Gents toilet (GA11)	No	12		
		.08 Emergency assembly (SABS Sign) mounted on 50mm galvanized post, 1600mm above finished floor level. Concrete footing measured elsewhere	No	9		
AB.06.02.01	291,00	Modular Direction signage & Assembly				
	291,01	.01 3 of 4mm thick FunderMax Max Resistance white/charcoal pressure laminate (Code: 0606), overall sheet size 1630 x 3660mm, constructed in accordance with the drawings.	PC sum	1	R 50 000,00	R 50 000,00
		.01 Charge required by Contractor on sub item .01 above	%			
	291,02	.02 6 of 4mm thick FunderMax Max Resistance white/charcoal pressure laminate directional signage boards (Code: 0606), overall sheet size 1200 x 1600mm, constructed in accordance with the drawings.	PC sum	1	R 60 000,00	R 60 000,00
		.01 Charge required by Contractor on sub item .02 above	%			
	291,03	External temporary shelter/canopy for inspection officers				
		.01 1200mm (B) x 2600mm (L) x 1900mm (H) glazed (Perspex) temporary service kiosk with movable counter for use at gate entry (North, South & Bridge points)	PC sum	1	R 75 000,00	R 75 000,00
		.01 Charge required by Contractor on sub item .01 above	%			
		.02 Supply and install concrete bench, size 1600 x 500 x 500mm colour Charcoal.	No	10		
AF.04.02	291,04	<b>Tree felling and clearing obstruction to buildings</b>				
		.01 Tree felling to broken tree with girth exceeding 5m	No	1		
		.02 Tree felling to live tree with girth exceeding 12m	No	3		
		.02 Trimming of trees that cause obstruction	No	50		
<b>CARRIED TO SUMMARY: LANDSCAPING AND SIGNAGE RELATED WORK</b>						

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

## BEITBRIDGE PORT OF ENTRY:

Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36

## BILL OF QUANTITIES

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

300: STRUCTURAL AND BUILDING RELATED WORKS				CONTRACTOR			
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
BA	300,00	STRUCTURAL AND BUILDING RELATED WORKS					
	301,00	ROOF COVERINGS					
BA.03.02.01	301,01	Supply and install cladding and sheeting:					
		.01	0.6mm thick galvanised IBR, corrugated iron or equivalent approved sheeting with silicone polyester finish on one side:				
		.01	Straight roof sheeting with pitches exceeding 15 degrees, fixed to timber or steel purlins	m <sup>2</sup>	2000		
		.02	Curved roof sheeting fixed to timber or steel purlins	m <sup>2</sup>	1500		
BA.03.02.03	301,02	.03	Side cladding	m <sup>2</sup>	500		
		Carefully remove existing cladding and sheeting:					
		.01	Existing galvanised sheet metal roof covering removed from timber or steel purlin or girts	m <sup>2</sup>	2000		
		.02	Existing galvanised sheet metal side cladding	m <sup>2</sup>	500		
BA.03.02.06	301,03	Supply and install sundry items, etc:					
		.01	0.8mm thick galvanised sheet iron flashing with existing 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	200		
		.02	Side wall flashing	m	200		
		.03	Gable flashing	m	100		
		.04	Valley flashing	m	100		
BA.03.02.11	301,04	Roof Rehabilitation					
		.01	Rehabilitation of roof sheeting	m <sup>2</sup>	500		
		.02	Rehabilitation of side cladding	m <sup>2</sup>	500		
BA.03.02.12	301,05	Supply and install additional fixing screws, etc:		No	200		
BA.03.02.15	301,06	Prepare existing roof sheeting and repaint:		m <sup>2</sup>	2000		
BA.03.02.16	301,07	Replacement of existing roof tiles in patchwork:					
		.01	Concrete roof tiles with pitches exceeding 15 degrees, fixed to timber battens	No	3000		
BB	302,00	STRUCTURAL TIMBER					
BB.06.02.01	302,01	Supply and Install timber trusses and other timber elements for new staff ablutions and replacement of existing timber roof trusses as instructed by the Engineer:					
		.01	Roof timber trusses complete	PC Sum	1,00	R 900 000,00	R 900 000,00
		.02	Charge required by Contractor on sub item .01 above	%			
CARRIED FORWARD							

CARRIED OVER							
		.03	Other timber elements	PC Sum	1.00	R 150 000.00	R 150 000.00
		.04	Charge required by Contractor on sub item .01 above	%			
BB.06.02.05	302,02		Repairs to watermarked and slightly rotten timber in roof voids:	m	300		
BB.06.02.06	302,03		Repairs to damaged masonry, plastering and surface finishes:				
		.01	Items measured by square metre				
		.01	Plastering and surface finishes	m <sup>2</sup>	200		
		.02	Masonry wall	m <sup>2</sup>	500		
BB.06.02.07	302,04		Painting to top cords of timber trusses in roof voids:	m	300		
BB.06.02.08	302,05		Painting of existing members in overhangs:	m	200		
BC	303,00		<u>WATERPROOFING OF CONCRETE ROOFS</u>				
BC.06.02.01	303,01		Approved waterproofing system to:				
		.01	Pure acrylic emulsion waterproofing paint with polyester memberane or glass-fibre tissue waterproofing sealing system				
		.01	Concrete roofs	m <sup>2</sup>	300		
BC.06.02.02	303,02		Remove existing waterproofing and sundry items:				
		.01	Bituminous,plastomeric or reinforced liquid water proofing membranes on concrete roofs	m <sup>2</sup>	300		
BC.06.02.03	303,03		Prepare existing surfaces:				
		.01	Prepare existing concrete surface to receive new screed as specified	m <sup>2</sup>	300		
		.02	Prepare existing concrete or screeded surface to receive new waterproofing system	m <sup>2</sup>	300		
BC.06.02.04	303,04		Roof screeds:	m <sup>2</sup>	300		
BC.06.02.05	303,05		Repair bituminous based waterproofing system:	m <sup>2</sup>	300		
	304,00		<u>WALLS</u>				
SABS 1200 DA	304,01		Earthworks (small works):				
8.3.2		.01	Excavate for restricted foundations, footings and trenches in all materials and use for backfill or embankment or dispose	m <sup>3</sup>	200		
		.02	Break up, hack off and remove existing concrete	m <sup>3</sup>	200		
		.03	Importing, placing and compacting approved as per engineer's instruction	Prov Sum	1	R 100 000.00	R 100 000.00
		.04	Extra over item 202.01.01 above for:				
		.01	Intermediate excavation	m <sup>3</sup>	50		
		.02	Hard rock excavation	m <sup>3</sup>	50		
BD.06.02.06	304,02		Alterations and repairs to existing structures				
		.01	Remove and replace aluminium angle corner protector on walls:	m	50		
SABS 1200 G	305,00		<u>STRUCTURAL CONCRETE</u>				
8.3			Scheduled Reinforcement items				
8.3.1	305,01		Steel Bars				
		.01	High-tensile steel bars	t	1		
		.02	Mild steel bars	t	0.5		
8.3.2	305,02		High-tensile welded mesh				
		.01	Ref No 193 mesh in concrete	m <sup>2</sup>	120		
CARRIED FORWARD							



CARRIED OVER						
8.4	305,03	.02	Ref No 245 mesh in concrete	m <sup>2</sup>	120	
			<b>Scheduled Concrete items</b>			
8.4.3	305,04		<b>Strength Concrete,Grade</b>			
		.01	20 MPa concrete in aprons	m <sup>3</sup>	20	
		.02	25 MPa concrete in floors	m <sup>3</sup>	50	
		.03	30 MPa concrete in walls,columns and beams	m <sup>3</sup>	20	
		.04	30 MPa concrete in footings	m <sup>3</sup>	10	
BF	305,05		<b>Concrete Repair</b>			
BD.06.02.06 & BE.06.02.04			<b>Alterations and repairs to existing structures</b>			
		.01	Repair chips and spalling:			
		.01	Repair chips and spalling as specified in BF.03.04	m <sup>2</sup>	40	
		.02	Repair of cracks in concrete elements			
		.01	Repair cracks as specified in BF.03.06	m	50	
		.03	Repair of cracks and leaks on water retaining structures			
		.01	Repair cracks and leaks as specified in BF.03.06 and as per Engineer's Instruction.	m	50	
	305,06		<b>Supply and install scaffolding</b>			
		.01	Design, supply and erect at the following structural elements and height ranges inclusive of dismantling and moving to next structural element. The tendered amount shall include full compensation for design, supply, fabrication, erection, dismantling, movement and for all labour, materials, and equipment required for the below works including the inspections, supervision by the safety officer and maintenance of the temporary access structure and work platform.			
		.01	Concrete columns:			
		.01	Access and platforms from 0m up to 5.0m height	Sum	1.00	
		.02	Dismantle and remove from location or structure	Sum	1.00	
		.02	Elevated storage tank & Immigration clock			
		.01	Access and platforms from 0m up to 5.0m height	Sum	1.00	
		.02	Access and platforms from 5m up to 10m height	Sum	1.00	
		.03	Dismantle and remove from location or structure	Sum	1.00	
BF03 & BF 04	306,00		<b>MOVEMENT JOINTS REMEDIAL PROCEDURE</b>			
BD.06.02.06 & BE.06.02.04	306,01		<b>Alterations and repairs to existing structures</b>			
		.01	Remove and replace damaged joints			
		.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. Replace with a high performance joint and crack sealing system, consisting of an elastomeric, 100mm wide x 2 mm thick, sealing strip and hixotropic epoxy adhesive.	m	400	
		.02	Repair damaged joint sealants			
CARRIED FORWARD						



CARRIED OVER									
		.01	Replace damaged joint sealants with single component fast curing polyurethane joint sealer as	m	100				
SABS 1200 H	307,00	<b>STRUCTURAL STEELWORK</b>							
BD.06.02.06	307,01	<b>Alterations and repairs to existing structures</b>							
		.01	Repair damaged, re-align or replace damaged steel sections						
		.01	Repair damaged steel angle bracing elements	m	50				
		.02	Repair other damaged steel elements (Inclusive of all associated connection elements)	t	6				
		.03	Replace missing M12 Grade 8.8 bolts and nuts	No	10				
		.04	Replace missing M16 Grade 8.8 bolts and nuts	No	15				
		.05	Replace missing M20 Grade 8.8 bolts and nuts	No	15				
DH 09. 12	307,02	<b>Repair of elevated storage tank:</b>							
		.01	Supply and and installation of new or refurbished stairs and ladder	Prov Sum	1	R	80 000,00	R	80 000,00
CB.03	308,00	<b>CONCRETE AND CONSTRUCTION REPAIR-STORMWATER</b>							
CB.03.02	308,01	.01	Cast in situ concrete:						
		.01	Class 20 MPa concrete	m³	20				
		.02	Class 30 Mpa concrete	m³	20				
CB.03.05	308,02	.01	Steel reinforcement						
		.01	Mild steel bars	t	0.2				
		.02	High-tensile steel bars	t	1				
		.03	Welded steel mesh ref 193	kg	100				
CB.03.07	308,03	.01	Demolition and removal of damaged and existing						
		.01	Plain concrete	m³	5				
		.02	Reinforced concrete	m³	5				
CB.06	309,00	<b>REPAIR AND CONSTRUCTION TO EXISTING BRICKWORK-INLETS STRUCTURES</b>							
CB.06.01	309,01	.01	Demolition and removal of existing structures	m²	100				
CB.06.02	309,02	.01	Repair of brickwork inlet structures	No	10				
CB.06.03	309,03	.01	Reconstruction of brickwork inlet structures	No	10				
	310,00	<b>REPAIR OF EXISTING AND CONSTRUCTION OF NEW BRICKWORK BUILDINGS</b>							
BD.06.02.06	310,01	<b>Alterations and repairs to existing structures</b>							
		.01	Demolition and removal of existing brickwork	m²	100				
BD.06.02.05	310,02	<b>Brickwork and plaster</b>							
		.01	Construction of new brickwork of clay bricks with a minimum compressive strength of 14MPa in 1:5 cement						
		.01	One brick wall (110mm)	m²	200				
		.02	Double brick wall (220mm)	m²	200				
		.02	Plaster shall comply with the requirements of SANS 2001-Construction Works Part EM1						
		.01	Smooth finish	m²	200				
		.02	Textured finish	m²	200				
	310,03	<b>Incinerator house</b>							
		.01	Provide for incinerator house including brickwork and steelwork	Sum	1	R	100 000,00	R	100 000,00
CARRIED FORWARD									

CARRIED OVER						
BD.06.02.06	311,00	<u>PROTECTION OF LOADING DOCKS FROM IMPACT</u>				
	311,01	Alterations and repairs to existing structures				
		.01 Remove and replace loading dock bumper/rubber wall protector as per engineer's Instruction	PC Sum	1.00	R 50 000,00	R 50 000,00
		.02 Charge required by Contractor on sub item .01 above	%			
BD.06.02.06	312,00	<u>REPAIR OF ENVIRO-WALL</u>				
	313,01	Alterations and repairs to existing structures				
		.01 Repair and replace the precast concrete blocks similar to existing enviro blocks	PC Sum	1.00	R 50 000,00	R 50 000,00
		.02 Charge required by Contractor on sub item .01 above	%			
TOTAL CARRIED SUMMARY : STRUCTURAL AND BUILDING RELATED WORKS						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 A1

**BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)**

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

**INSTALLATION 400: CIVIL RELATED WORKS**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
COLTO 15.01	400,00	ROADS AND STORMWATER DRAINAGE				
	401,00	ACCOMMODATION OF TRAFFIC				
	401,01	Accommodating traffic and maintaining temporary deviations				
COLTO 15.03		(a) On the Route	km	1,0		
	401,02	Temporary traffic-control facilities				
		(a) Flagmen	man-day	200,00		
		(b) Road signs, STW-, DTG-, TGS- AND TG-series (excluding delineators and barricades)	m²	25,00		
		(c) Delineators (TW 401 and TW 402)				
		(d) Single (800mm x 200mm)	No	50,00		
		(e) Moveable barricade/road sign combination	No	20,00		
		(f) Traffic cones (750mm high)	No	50,00		
COLTO 17.01	402,00	CLEARING AND GRUBBING				
	402,01	Clearing and grubbing				
		(a) By hand	ha	0,50		
COLTO 17.02	402,02	Removal and grubbing of large trees and tree stumps				
		(a) Girth exceeding 1m up to and including 2m	No	10,00		
COLTO 17.05	402,03	Cleaning out of hydraulic structures				
		(a) Catchpit inlets and stormwater pipes (diameter up to 750mm)	m³	2,50		
COLTO 18.01	403,00	DAYWORKS				
	403,01	Personnel				
		(a) Unskilled labour	Hour	10,0		
		(b) Semi-skilled labour	Hour	10,0		
		(c) Skilled labour	Hour	10,0		
		(d) Manager	Hour	10,0		
		(e) Foreman	Hour	10,0		
		(f) Flagman	Hour	10,0		
	403,02	Equipment				
		(a) Tipper truck				
		(i) 6m³ capacity	Hour	10,0		
		(ii) 10m³ capacity	Hour	10,0		
COLTO 18.02		(b) Tractor-loader-backhoe	Hour	10,0		
		(c) Grader (CAT 140 G or similar)	Hour	10,0		
CARRIED FORWARD						

CARRIED OVER							
COLTO 18.03	403,03	(d) Walk-behind roller (Bomag BW90)	Hour	40,0			
		(e) Water truck (5000 litre)	Hour	40,0			
		(f) Mechanical broom	Hour	40,0			
		(g) Compressor (air) including hoses and tools (3 m³/min. @ 650kPa)	Hour	40,0			
		<b>Materials</b>					
		(a) Procurement of materials	Prov Sum	1,00	R 10 000,00	R	10 000,00
		(b) Contractor's handling costs, profit and all other charges in respect of subitem B18.03(a)	%				
COLTO 18.04	403,04	<b>Transport</b>					
		(a) LDV (1 ton)	km	1 000,0			
		(b) Flatbed truck (5 ton)	km	1 000,0			
		(c) Lowbed truck max (30 ton)	km	100,0			
	404,00	<b>DRAINAGE STRUCTURES</b>					
COLTO 21.02	404,01	Clearing and shaping existing open drains	m³	50,0			
COLTO 21.06	404,02	Natural permeable material in subsoil drainage systems (washed crushed stone):					
		(a) Crushed stone obtained from commercial sources (including all haul):					
		(b) Coarse-Grade stone (19mm nominal size aggregate)	m³	100,0			
COLTO 21.08	404,03	Pipes in subsoil drainage systems:					
		(a) Unplasticized PVC pipes and fittings, normal duty, complete with couplings:	m	1 000,0			
		(b) 100 mm internal dia. perforated or slotted	m	1 000,0			
COLTO 21.09	404,04	Polyethylene sheeting 0,15 mm thick, or similar, approved material, for lining subsoil drainage systems	m²	1 000,0			
COLTO 21.10	404,05	Synthetic-fibre filter fabric					
		(a) Type bidim Grade A2 (Table 2104/2)	m²	6 000,0			
COLTO 21.14	404,06	Repairing or replacing existing drainage systems	Prov sum	1,00	R 50 000,00	R	50 000,00
B22.12	404,07	Removing existing concrete (including all haul)					
		(a) Plain concrete in existing line drains	m³	1,0			
		(b) Reinforced concrete on hydraulic structures, gantry pedestals and other median structures within the work zone	m³	1,0			
COLTO 22.14	404,08	Removing and stacking existing prefabricated culverts (450mm to 600mm diameter pipe culverts)	m	100,0			
CD.05.02	404,09	Cleaning of existing manholes ,chambers and other structures					
		(a) Main valve chambers 1.2m x 1.2m x 2.5m deep	No	10			
CD.05.04	404,10	Repair of structure					
		(a) Service manhole cover opening mechanism on pumping main valve chambers	No	30			
	404,11	Supply and install valve box cover					
		(a) 60mm dia water meter	No	10			
		(b) 80mm dia water meter	No	10			
CARRIED FORWARD							

CARRIED OVER						
COLTO 23.02	405,01	Concrete kerbing-channelling combination				
		Precast kerbing to SABS 927				
		(a) Figure 2 Kerb	m	100,0		
		(b) Figure 3 Kerb	m	100,0		
		(c) Figure 7 Kerb	m	100,0		
		(d) Figure 8c Kerb	m	100,0		
COLTO 23.02	405,02	Cast in situ concrete chutes (measured by components):				
		(a) Concrete class 30/19	m <sup>3</sup>	10,0		
		(b) Formwork (F2 Finish)	m <sup>2</sup>	100,0		
COLTO 23.08	405,03	Concrete lining for open drains				
		(a) Narrow side drain type A (Concrete class 30/19)	m <sup>3</sup>	10,0		
		(b) Formwork (U2 Finish)	m <sup>2</sup>	100,0		
COLTO 23.12	405,04	Steel reinforcement				
		(a) Welded steel fabric	kg	500,0		
COLTO 23.13	405,05	Polyethylene sheeting (0,15 mm thick) for concrete-lined open	m <sup>2</sup>	8 825,0		
CA.06	405,06	Repair of kerbing:				
		(a) Removal of existing kerbs	m	500		
	406,00	EARTHWORKS				
COLTO 33.04	406,01	Cut to spoil material obtained from (including all haul)				
		(a) Soft excavation	m <sup>3</sup>	100,0		
		(b) Intermediate excavation	m <sup>3</sup>	100,0		
		(c) Hard excavation	m <sup>3</sup>	100,0		
COLTO 33.07	406,02	Removal of unsuitable material				
		(a) In layer thicknesses of 200 mm and less:				
		Unstable material	m <sup>3</sup>	7 400,0		
		(b) In layer thicknesses exceeding 200mm				
		Unstable material	m <sup>3</sup>	3 500,0		
COLTO 33.11	406,03	Three-roller-passes compaction:				
		(a) Vibratory roller	m <sup>2</sup>	1 000,0		
COLTO 33.12	406,04	In situ treatment of roadbed:				
		(a) In situ treatment by ripping	m <sup>3</sup>	1 500,0		
COLTO 33.13	406,05	Finishing-off cut and fill slopes, medians and interchange				
		(a) Cut slopes	m <sup>2</sup>	12 000,0		
		(b) Fill slopes	m <sup>2</sup>	12 000,0		
	407,00	PAVEMENT LAYERS OF GRAVEL MATERIAL				
		Pavement layers constructed from gravel obtained from commercial sources or approved sources provided by the Contractor, including all haul				
		Gravel subbase (G4) compacted to				
		(a) 100% of MDD (150mm compacted layer thickness)	m <sup>3</sup>	10,0		
CARRIED FORWARD						

CARRIED OVER						
COLTO 35.01	408,00	(b) Gravel subbase (G5) compacted to				
		97% of modified AASHTO density (150mm compacted layer thickness)	m³	10,0		
		95% of modified AASHTO density (150mm compacted layer thickness)	m³	10,0		
		(c) Gravel subbase (G6) compacted to				
		97% of modified AASHTO density (150mm compacted layer thickness)	m³	10,0		
		95% of modified AASHTO density (150mm compacted layer thickness)	m³	10,0		
		(d) Gravel selected layer (G7) compacted to				
		93% of modified AASHTO density (150mm compacted layer	m³	10,0		
		95% of modified AASHTO density (150mm compacted layer	m³	10,0		
		(e) Gravel selected layer (G9) compacted to				
		93% of modified AASHTO density (150mm compacted layer	m³	10,0		
		(f) Gravel subbase (G6/C4 quality material ) compacted to				
		95% of modified AASHTO density (150mm compacted layer thickness)	m³	10,0		
		408,00	STABILISATION			
408,01	Chemical stabilization extra over unstabilized compacted					
COLTO 35.02	408,02	(a) Sub-base				
		150mm thickness	m²	10,00		
COLTO 35.02	408,02	Chemical stabilizing agent				
		(a) CEM II 32.5N	t	25,00		
COLTO 35.04	408,03	(b) Road lime	t	-		Rate only
		Provision and application of water for curing	kl	400,00		
COLTO 35.05	408,04	Curing by covering with the subsequent layer	m²	100,00		
COLTO 36,01	408,05	CRUSHED STONE BASE				
		Crushed stone base				
COLTO 38,08	408,06	(a) Constructed from type G2 material obtained from commercial to 85% of bulk relative density (150mm thickness)	m³	10,00		
		Sewing or cutting asphalt or cemented pavement layers:				
COLTO 39.02	408,07	(a) Sawing asphalt	m²	100,0		
		(b) Cutting asphalt	m	100,0		
COLTO 39.02	408,08	Excavation in existing pavements for patching in:				
		(a) Asphalt layers	m³	350,0		
		(b) Cemented layers	m³	650,0		
		(c) Macadam Layer	m³	350,0		
CARRIED FORWARD						

CARRIED OVER					
COLTO 39.03	408,09	Backfilling of excavations for patching with:			
		(a) Base material stabilized with bituminous emulsion (G2 material stabilized with 2.5% emulsion and 2% Cement) for a patch with a surface area:			
		Not exceeding 5 m²	m³	140.0	
		Exceeding 5 m² but not exceeding 100 m²	m³	140.0	
		Exceeding 100 m²	m³	140.0	
	408,10	Surface treatment of surfaced roads:			
		(a) Trimming the edges and edge break of the existing surfacing	m	20	
		(b) Pothole repair using hot-mix continuously graded asphalt	t	0,5	
		(c) Repairing edge breaks using hot-mix	t	0,5	
CA.04.06	408,11	Cleaning of cracks with compressed air	km	2	
CA.04.07	408,12	Applying Bituminous binders and herbicides for sealing cracks:	km	1	
		(a) Anionic stable-grade emulsion mixed with synthetic modifiers	l	150	
		(b) Course grade slurry mixed in concrete mixer and applies by hand	m³	5	
	409,00	PRIME COAT			
COLTO 41.01	409,01	Prime coat			
		(a) MC-30 cut-back bitumen	ℓ	-	Rate only
		(b) Invert bituminous emulsion (MSP1)	ℓ	70.00	
COLTO 41.02	409,02	Aggregate for blinding	m²	100.00	
COLTO 41.03	409,03	Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	ℓ	70.00	
	410,00	ASPHALT SURFACING			
COLTO 42.02	410,01	Asphalt surfacing (Mix A) using polymer modified binder A-E2			
		(a) Continuously graded 30 mm thick (10mm aggregate)	m²	100.00	
		(Mix A) using polymer modified binder A-P1			
		(a) Continuously graded 30 mm thick (10mm aggregate)	m²	100.00	
COLTO 42.04	410,02	Tack coat of 30% stable-grade emulsion	ℓ	70.00	
COLTO 42.05	410,03	Binder variations			
		(a) Class A-E2 modified binder	t	1.00	
		(b) Class A-P1 modified binder	t	1.00	
COLTO 42.06	410,04	Variations in active filler content:			
		(a) Cement	t	1.00	
		(b) Hydrated Lime	t		Rate only
COLTO 42.22	410,05	Aggregate variations from nominal mix ratios in asphalt mixes	t	1.00	
COLTO 42.23	410,06	Provision for semi- circular (round top) speed hump	No.	10	
	410,07	Single seals:			
COLTO 44.01		(a) Single seals (grade 1 aggregate) using 9.5 mm aggregate (80/100 pen grade bitumen @ 1.0 l/m²)	m²	450	
CARRIED FORWARD					



CARRIED OVER						
COLTO 44.02		(b) Bituminous binder variations: Road grade B8 (80/100 pen grade) bitumen	ℓ	250		
COLTO 44.03		(c) Aggregate variations: 9.5 mm aggregate	m <sup>3</sup>	3		
COLTO 44.04		(d) Application of fog spray: 30% spray-grade emulsion	ℓ	250		
COLTO 44.05		(e) Pre-coating the aggregate at rate of 12 litre/m <sup>3</sup> (bitumen-based pre-coating fluid)	m <sup>3</sup>	20		
COLTO 45.01	410,08	Double seal using :  (a) 20 and 10 mm aggregate with: S-E1 homogenous modified binder  (b) 20 and 10 mm aggregate with: S-R2 homogenous modified binder	m <sup>2</sup>	100.0		
COLTO 45.02	410,09	Bituminous binder variations:  (a) Homogeneous modified binder (S-E1) hot applied	litre	20		
COLTO 45.03	410,10	Aggregate variation  (a) 13.2 mm aggregate  (b) 6,7 mm aggregate	m <sup>3</sup>	0.014		
COLTO 45.04	410,11	Application of fog spray consisting of:  (a) 60% spray-grade emulsion (state anionic or cationic)	litre	50		
COLTO 48.03	410,12	Slurry seal: (b) Texture correction slurry applied by hand (COLTO Table 4302/12)	m <sup>3</sup>	10		
COLTO 51.00	411,00	PITCHING, STONEWORK AND PROTECTION AGAINST EROSION				
COLTO 51.01	411,01	Stone pitching:  (a) Grouted stone pitching  (b) Grouted stone pitching on a concrete bed  (i) 100 mm thickness	m <sup>2</sup>	6 000,0		
COLTO 52.01	411,02	Foundation trench excavation and backfilling:  (a) In all other classes of materials	m <sup>3</sup>	1,0		
COLTO 52.02	411,03	Surface preparation for bedding the gabions	m <sup>2</sup>	100.0		
COLTO 52.03	411,04	Gabions:  (a) Galvanized gabion boxes: Mesh size: 80mm x 100mm Wire diameter: 2.7 mm Diaphragm spacing: 1,0 m:  (i) 2 m x 1 m x 1 m  (b) Galvanized gabion mattresses (6m long, 2m wide) Mesh size: 80mm x 100mm Wire diameter: 2.5mm Diaphragm spacing: 1.0m:  (i) 0,3 m deep	m <sup>3</sup>	5,00		
COLTO 52.05	411,05	Filter fabric  (a) Grade 2 or approved equivalent	m <sup>2</sup>	6 000,0		
COLTO 54.01	411,06	Guardrails on 3.81m spaced posts  (a) Complete galvanised system on:  (i) Timber posts	m	100,0		
CARRIED FORWARD						

CARRIED OVER						
COLTO 54.04	411,06	End treatments:				
		(a) Bridge adaptors	No	8.0		
		(b) End treatments in accordance with the drawings where single guardrail sections are used	No	20,0		
		(c) End treatments in accordance with the drawings where double guardrail sections are used	No	8.0		
COLTO 54.06	411,07	Reflective plates	No	2 000,0		
COLTO 54.07	411,08	Removing of Safety Barriers				
		(a) Removing existing guardrails				
		(i) On steel posts	m	500,00		
		(ii) On timber posts	m	1 000,00		
COLTO 54.09	411,09	Re-erection of guardrails with recovered and/or new material:				
		(a) Single guardrail on:				
		(i) On steel posts	m	500,00		
		(ii) Timber posts	m	1 000,0		
COLTO 54.11	411,10	New material required for the re-erection of guardrails with recovered materials:				
		(a) Guardrails	No	30,0		
		(b) Timber posts	No	30,0		
		(c) Steel posts	No	30,0		
		(d) Reflective plates	No	30,0		
		(e) Spacer blocks	No	30,0		
COLTO 55.01	411,11	Clearing the fence line, 2m wide strip	km	2,0		
COLTO 55.02	411,12	Supply and erect new fencing material for new fences and for supplementing material in existing fences which are being repaired or removed: (9 (nine) strand stockproof )				
	411,13	(a) Zinc-coated barbed wire (SABS 675)				
		(i) High-tensile-grade, single-strand 3.2mm x 2,50mm oval-shaped wire, fully galvanised.	km	1,0		
	411,14	(b) Standards				
		(i) 1,850m x 2,5 kg/m mild steel "Y" section complete with holes at 50mm centres. fully galvanized (SANS 121/ ISO 1461)	No	500,0		
	411,15	(c) Droppers				
		(i) 1,2m x 0,56 kg/m mild steel ridge back section fully galvanized (SANS 121/ ISO 1461)	No	500,0		
	412,00	ROAD SIGNS				
CA.07	412,01	Erection and repair of road traffic signs and traffic-control				
	412,02	Erection or reinstatement of road sign boards:				
		(a) Area not exceeding 2m <sup>2</sup>	m <sup>2</sup>	60		
	412,03	Supply and installation of sign boards:				
		(a) 1.2mm thick non reflective, full colour, signs with baked silicone polyester enamel paint costing 4-6 micron (DFT) primer and 18-22 micron (DFT) final coat mounted in buildings or to entrances of buildings	m <sup>2</sup>	90		
CARRIED FORWARD						

CARRIED OVER						
COLTO 56.10	412,04	(b) 1.4mm thick non reflective, full colour, signs with baked silicone polyester enamel paint costing 4-6 micron (DFT) primer and 18-22 micron (DFT) final coat mounted on frames in open areas	m <sup>2</sup>	90		
		(c) 1.4mm thick pre-painted galvanised steel road signs less than 1.5m <sup>2</sup>	m <sup>2</sup>	90		
		Road sign supports (overhead road sign structures excluded):				
		(a) Steel tubing of 75mm diameter and 3mm wall thickness	m	250		
		(b) Galvanized D-profile steel tubing of 3mm wall thickness	m	300		
		(c) Excavation and backfilling for road signs	m <sup>3</sup>	200		
		(d) Extra over item 705.0104 for cement-treated soil backfilling	m <sup>3</sup>	200		
		(e) Hazards plates (600 x 150 mm)	No	200		
		(f) Repair of road sign faces	m <sup>2</sup>	40		
		COLTO 56.10	413,00	Danger plates at culverts/structures		
(a) Type A speed humps (150mmx600mm) (Back to Back)	No			20,00		
COLTO 57.01	414,01	ROAD MARKINGS				
		Road marking paint				
		White lines (broken or unbroken)				
		(a) 100 mm wide	km	1,00		
		(b) 150 mm wide	km	1,00		
		(c) 200 mm wide	km	1,00		
		(d) 300mm wide	km	1,00		
		White lettering and symbols				
		(a) Transverse lines, painted island and arrestor bed markings	m <sup>2</sup>	50,00		
		(b) Kerb Marking (any colour)	m <sup>2</sup>	50,00		
COLTO 57.05	415,00	Road studs				
		Bi-directional (All colour combinations)				
		(a) Ferro Lynx steel body with shank (43 element glass reflective lens)	No	50,00		
COLTO 57.06	416,00	Setting out and premarking the lines (excluding traffic-island markings, lettering and symbols)	km	3,00		
		LANDSCAPING AND PLANTING PLANTS				
COLTO 58.01	417,01	Trimming:				
		(a) Machine trimming	m <sup>2</sup>	12 000,0		
		(b) Hand trimming	m <sup>2</sup>	12 000,0		
COLTO 58.03	417,02	Preparing the areas for grassing:				
		(a) Ripping	ha	7,0		
		(b) Scarifying for loosening topsoil	ha	7,0		
		(c) Topsoiling within the road reserve, where the following materials are used:				
		(d) Topsoil obtained from borrow areas	m <sup>3</sup>	2 400,0		
CARRIED FORWARD						

CARRIED OVER							
		Providing and applying chemical fertilisers and/or soil - improvement material:					
		(a) Lime	t	1,0			
		(b) Superphosphate	t	1,0			
		(c) Limestone ammonium nitrate	t	1,0			
		Stockpiling of topsoil (including all haul) where the following applies:					
		(a) Topsoil stored at a stockpile site agreed with the engineer	m³	2 400,00			
		(b) Topsoil pushed or bladed into heaps next to area from which it was taken	m³	2 400,00			
COLTO 58.04	417,03	Grassing:					
		(a) Providing an approved seed mixture for hydroseeding:	kg	20,00			
		(b) Hydroseeding (Mixture as per B5802 c)	ha	1,0			
COLTO 58.09	417,04	Trees and shrubs:					
		Providing the trees and shrubs					
		(a) Trees	No	20,0			
		(b) Shrubs	No	20,0			
		Planting and establishing:					
		(a) Trees	No	20,0			
		(b) Shrubs	No	20,0			
COLTO 58.12	417,05	Removal of undesirable vegetation	km	17,5			
	418,00	CONCRETE BLOCK PAVING FOR ROADS					
COLTO 73.01	418,01	Concrete block paving (25 Mpa)					
		(a) Type S-A 60mm	m²	100,00			
		(b) Type S-A 80mm	m²	100,00			
COLTO 73.02	418,02	Cast in situ concrete edge and intermediate beams (Class 25/19 U2 surface finish)	m³	20,00			
COLTO 73.03	418,03	Provision of approved herbicide and ant poison:					
		(a) Provision of materials	PC sum	1,00	R	50 000,00	R 50 000,00
		(b) Contractor's charges and profit added to the prime cost sum	%				
COLTO 73.04	418,04	Provision of pedestrian ramps and tactiles					
		(a) Type A pedestrian ramps including complete transitions	No.	10,00			
		(b) Warning tactile	m	20,00			
		(c) Guidance tactile	m	20,00			
CA.05.01	418,05	Remove concrete paving blocks:					
		(a) Removal and discarding paving blocks	m²	100			
		(b) Stockpile and re-use paving blocks	m²	100			
CA.05.05	418,06	Breaking up and removing concrete edge beams, intermediate beams, etc.	m³	15			
CA.05.06	418,07	Steel reinforcement in edge beams, intermediate beams and					
		(a) Mild steel bars	t	1			
	419,00	TESTING MATERIALS AND WORKMANSHIP					
CARRIED FORWARD							

CARRIED OVER						
COLTO 81.02	419,01	Other special tests requested by the engineer				
		(a) Other special tests requested by the engineer	Prov Sum	1	R 100 000,00	R 100 000,00
		(b) Handling costs and profit in respect of subitem B81.02(a)	%			
AD.05.06	420,00	<u>SUPPLY AND INSTALLATION OF DOMESTIC WATER PIPING</u>				
	420,01	Copper piping Class 1 SANS 460 with capillary soldered type joints for cold -water piping installed in voids including bracketing, lagging and cladding				
		(a) 22mm diameter (including fittings)	m	585		
		(b) 15mm diameter (including fittings)	m	585		
	420,02	Servicing, cleaning and repair of domestic water and drainage pipe installations:				
		Servicing and repair of drainage installations:				
		Unblock and clean pipe work including fittings for:				
		(a) 32mm diameter	m	500		
		(b) 63mm diameter	m	500		
		(c) 75mm diameter	m	500		
		(d) 110mm diameter	m	500		
		Replace damaged gully with precast concrete gully	No	10		
AD.05.05	421,00	<u>SUPPLY AND INSTALLATION OF DRAINAGE PIPING</u>				
	421,01	uPVC solid wall sewer pipes Class 34 - 300 kPa to SANS 791 specifications				
		(a) 50mm diameter pipe fixed to walls and soffits	m	100		
		(b) 110mm diameter soil pipe fixed to wall and soffits	m	1200		
	421,02	.02 uPVC soil and waste pipe fittings	No	40		
		(a) 50mm diameter plain bend 87.5 degrees	No	40		
		(b) 50mm diameter access bend 87.5 degrees	No	40		
		(c) 50mm diameter plain bend 135 degrees	No	40		
		(d) 50mm diameter access bend 135 degrees	No	30		
		(e) 50mm junction plain 87.5 degrees	No	50		
		(f) 50mm diameter junction access heel 87.5 degrees	No	50		
		(g) 110mm diameter plain bend 135 degrees	No	90		
		(h) 110mm diameter access bend 95 degrees	No	90		
		(i) 110mm vent horn bend access heel 95 degrees	No	80		
		(j) 110mm junction single access heel 95 degrees	No	50		
	421,03	.03 Inspection eyes				
		Construct 100mm diameter inline inspection eye complete with square cast iron cover and frame Type 14A (SANS 558) daylight opening size 295 X 295 and 500mm X 500mm X 75mm thick concrete encasement	No	120		
CARRIED FORWARD						

CARRIED OVER					
SANS 8.2.1	422,00	BEDDING FOR WATER PIPES, SEWER PIPES, STORMWATER PIPES AND DUCTS			
	422,01	Provision of bedding from trench excavations:			
	422,02	Selected granular material			
		(a) flexible pipe bedding	m³	1	
		(b) rigid pipe bedding	m³	1	
SANS 8.2.2		(a) flexible pipe bedding	m³	1	
		(b) rigid pipe bedding	m³	1	
	422,04	Supply only of bedding by importation:			
	422,05	From other necessary excavations:			
		(a) Selected granular material	m³	1	
		(b) Selected fill material	m³	1	
	422,07	From borrow pits:			
		(a) Selected granular material	m³	1	
		(b) Selected fill material	m³	1	
	422,08	From commercial sources:			
		(a) Selected granular material	m³	1	
		(b) Selected fill material	m³	1	
	422,09	From stockpiles:			
		(a) Selected granular material	m³	1	
		(b) Selected fill material	m³	1	
SANS 8.2.4	422,10	Encasing of pipes in concrete:			
SANS 8.2.1		(a) Class 15 Mpa / 19 mm	m³	1	
		(b) Class 20 Mpa / 19 mm	m³	1	
	423,00	Supply, lay, joint, bed on class C bedding and test pipeline: (All pipes to be solid wall)			
	423,01	uPVC class 34			
		(a) 110mm	m	100	
		(b) 160mm	m	100	
SANS 8.2.3		(c) 200mm	m	100	
		(d) 250mm	m	100	
		(f) 315mm	m	100	
	423,02	Precast concrete manhole:			
		With SABS 558 type 2A cover and frame, depth:			
		(a) 0m - 0.5m	No	1	
		(b) 0.5m - 1.0m	No	1	
		(c) 1.0m - 1.5m	No	1	
		(d) 1.5m - 2.5m	No	1	
		(f) 2.5m - 3.5m	No	1	
		(g) 3.5m - 4.5m	No	1	
	423,03	With SABS 558 type 4 cover and frame, depth:			
		(a) 0m - 0.5m	No	1	
		(b) 0.5m - 1.0m	No	1	
		(c) 1.0m - 1.5m	No	1	
SANS 8.2.3	423,04	Brick manholes: To be plastered inside and out side with waterproof plaster With SABS 558 type 4 cover and frame for pipes up to 500 mm dia:			
		(a) Depth 0 m up to 0,5 m	No	1	
		(b) Depth 0,5 m up to 1,0 m	No	1	
		(c) Depth 1,0 m up to 1,5 m	No	1	
		(d) Depth 1,5 m up to 2,0 m	No	1	
CARRIED FORWARD					

CARRIED OVER						
SANS 8.2.12	423,05	Raising or lowering of existing manholes, all types:				
		(a) Raise/lower 0 m up to 1,0 m	No	1		
		(b) Raise/lower 1,0 m up to 2,0 m	No	1		
SANS 8.2.14	423,06	Denso Tape (See drawing no. DW-C-FS02_Detail 1)				
		(a) Denso Tape 10m x 50mm	No	1		
		(b) Denso Tape 10m x 100mm	No	1		
		(c) Denso Tape 10m x 150mm	No	1		
SANS 8.2.1	423,07	Supply and lay concrete pipe culverts on Class C bedding:				
		Type Reinforced concrete class 100-D-load pipes with ogee joints:				
		(a) 300mm	m	20		
		(b) 375mm	m	20		
		(c) 450mm	m	20		
		(d) 525mm	m	20		
		(f) 600mm	m	20		
		(g) 675mm	m	20		
		(h) 750mm	m	20		
		(i) 825mm	m	20		
		(j) 900mm	m	20		
	423,08	Type Reinforced concrete class 75-D-load pipes with ogee				
		(a) 300mm	m	20		
		(b) 375mm	m	20		
		(c) 450mm	m	20		
		(d) 525mm	m	20		
		(f) 600mm	m	20		
		(g) 675mm	m	20		
		(h) 750mm	m	20		
AD.05.10	424,00	SERVICING, CLEANING AND REPAIR OF DOMESTIC WATER AND DRAINAGE PIPE INSTALLATIONS	No	60		
	424,01	(a) Video surveying of all underground drainage pipe work to establish root ingress, damaged and corroded pipe work, fat build-up, blockages, incorrect falls, sagging and to provide as-built information;	m	250		
	424,02	(b) Repair work to damaged manholes, gullies, cleaning eyes, valve chambers, etc., including builders' work and benching;	No	150		
	424,03	(c) Repair of existing bracketing systems including fixing and repair of existing brackets and hangers, as well as the supply and installation of additional brackets where required.	No	150		
	424,04	(d) Service and repair to all valves, strainers, pressure-reducing valves, water meters, non-return valves, air release valves and vacuum breakers, including new gaskets, gland packing and seals;	No	150		
CARRIED TO SUMMARY: CIVIL RELATED WORKS						



## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**INSTALLATION 430: MAINTENANCE OF ROADS AND STORM WATER DRAINAGE**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.06.01	430,00	<b><u>MAINTENANCE OF PLUMBING, DRAINAGE, WET SERVICES AND SEWER NETWORKS AT OPERATIONAL AND RESIDENTIAL BUILDINGS AND MOBILE HOMES</u></b>				
	430,01	<p><b>Maintenance of a complete installation:</b></p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specification AA Plumbing and Drainage Installations:</p> <p>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"> <li>• 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"> <li>– Pipes</li> <li>– Gutters</li> <li>– Catch pits</li> <li>– Channel drains</li> <li>– Floor outlets</li> <li>– Gullies</li> <li>– Manhole covers and frames</li> <li>– Brackets</li> <li>– Grease traps, oil separators, etc.</li> <li>– Plumbing</li> <li>– Water distribution including: <ul style="list-style-type: none"> <li>• Pipes</li> <li>• Isolation</li> <li>• Non-return valves</li> <li>• Control valves</li> <li>• Air release valves</li> <li>• Other valves</li> <li>• Strainers</li> </ul> </li> </ul> </li> <li>• Water closets (WC): <ul style="list-style-type: none"> <li>– Seats and covers</li> <li>– Cisterns</li> <li>– Sanitary ware mountings, etc.</li> </ul> </li> <li>• Fixing of leaks and replacing of materials and components, etc:</li> </ul> <p>.01 Beitbridge: Maintenance work: Plumbing, drainage, wet services and sewer networks of operational and residential areas and mobile homes. Maintenance is not limited to the above-mentioned</p>	point	360		
SA.05.02	430,02	<b><u>Payment reduction:</u></b>				
	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-R 2 000,00	rate only
SA.05.02	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-R 500,00	rate only
CARRIED FORWARD						

CARRIED OVER						
SA.05.02		.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-R 500,00 rate only
SF.01	430,03	<b>Operation of a complete installation:</b>  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"> <li>• Checking operation of water meters</li> <li>• Cleaning strainer units at water meters</li> <li>• Read water meters</li> <li>• Verification of sample meter readings</li> <li>• Updating of water demand database (spreadsheet)</li> <li>• Measuring sewer night flows</li> <li>• Analysis of data and identification of water leaks</li> <li>• Adjust operation of pressure-reducing valves</li> <li>• Compilation of monthly water balance or volume and costs and issue of consumer accounts at:</li> </ul>				
	430,04	.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:			
	430,05	<b>Payment reduction:</b>				
SA.03		.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-R 2 000,00 rate only
SA.04		.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-R 500,00 rate only
SA.05		.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-R 500,00 rate only
CARRIED TO SUMMARY: MAINTENANCE OF ROADS AND STORM WATER DRAINAGE						

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No. H21/016 AI

**BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)**

**BILL OF QUANTITIES**

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

INSTALLATION 440: MAINTENANCE OF ROADS AND STORM WATER DRAINAGE				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01 SN 01	440,00	<b>MAINTENANCE OF FENCING AND GATES</b>				
	440,01	<b>Maintenance of a complete installation:</b>  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"> <li>• Clearing 2.5 m wide of fence lines (both side)</li> <li>• Cleaning fire break areas</li> <li>• Inspection and repair of damages</li> <li>• Corrosion protection on fencing, gates and tubular posts</li> <li>• Inspection of fence for tightness to straining wire and redress or repair where required</li> <li>• Inspection of gate hinges and repair or replace if necessary, ensuring alignment of gates</li> <li>• Painting of previously painted posts, stays, gates, mesh fences, etc. at:</li> </ul>				
	440,02	<b>Payment reduction:</b>				
	SA.03	.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-R 2 000,00	rate only
	SA.04	.02 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-R 500,00	rate only
SA.05		.03 Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-R 500,00	rate only
CARRIED FORWARD						

CARRIED OVER						
SA.01 SN 01	440,03	<b>MAINTENANCE OF SITE KEEPING INSTALLATION</b>				
	440,04	<b>Maintenance of a complete installation:</b>  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"> <li>• Cleaning out of and supply of black refuse bags to all waste bins in public areas</li> <li>• Watering of plants, shrubs, grass and trees upon strict instruction from the Engineer (in line with water restrictions)</li> <li>• Removal of weeds, clearing of weeds and grass along the edges of paved areas</li> <li>• Cutting of grass</li> <li>• Trimming of dense shrubs</li> <li>• Fertilisation of lawns, fertilisation of flower beds and trees</li> <li>• Removal of undesirable shrubs</li> <li>• Trimming of trees</li> <li>• Collecting of litter and foreign objects, removal of waste, etc. at:</li> </ul>				
	440,05	<b>Payment reduction:</b>				
SA.05.02	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-R 2 000,00	rate only
SA.05.02	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-R 500,00	rate only
SA.05.02	.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-R 500,00	rate only
CARRIED FORWARD						

CARRIED OVER						
SA.01 CJ 05 SN 01	440,06	<b><u>MAINTENANCE AND CLEANING OF BUILDINGS</u></b>				
	440,07	<b>Maintenance of a complete installation:</b>  The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification C.J: Site Keeping and Cleaning (C.J.01.02 and C.J.01.03), shall consist of at least, but not limited to: <ul style="list-style-type: none"> <li>• Dusting/wet wiping of counter tops</li> <li>• Dusting under counter shelves and floors in public areas and open plan offices (daily, before opening of port of entry)</li> <li>• Sweeping/washing and polishing office floors</li> <li>• Vacuum cleaning carpets</li> <li>• Emptying and cleaning of waste baskets in offices</li> <li>• Service and polishing fittings</li> <li>• Washing interior and exterior walls</li> <li>• Cleaning and maintaining ablution facilities in a sanitary condition</li> <li>• Emptying and cleaning of all waste receptacles</li> <li>• Cleaning of all bowls, basins and urinals</li> <li>• Cleaning and polishing of all fittings and mirrors</li> <li>• Washing and cleaning out of She-bins</li> <li>• Washing of windows</li> <li>• Dusting of window sills, ledges, pipes and fittings</li> <li>• Dusting of buildings interiors</li> <li>• Deep cleansing of toilets and ablution blocks every six months etc. at</li> </ul>				
	440,08	<b>Payment reduction:</b>				
	SA.05.02	.01 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-R 2 000.00	rate only
SA.05.02	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-R 500.00	rate only
SA.05.02	.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-R 500.00	rate only
CARRIED TO SUMMARY: MAINTENANCE OF ROADS AND STORM WATER DRAINAGE						

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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

INSTALLATION 450: MAINTENANCE OF ROADS AND STORM WATER DRAINAGE					CONTRACTOR	
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	450,00	<b>MAINTENANCE OF ROADS AND STORM WATER DRAINAGE</b>				
	450,01	<b>Maintenance of a complete installation:</b> 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: • 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 Technical Specification CB: Storm Water drainage, shall consist of at least, but not limited to: • Inspection, cleaning, unblocking and repair of all storm water infrastructure components such as: – Culverts – Drains – Manholes – Inlet covers – Inlet benching, grids and frames, etc. at:				
		.01	Beitbridge: Maintenance work: Roads and storm water drainage at Operational area and residential area	point	360	
	450,02	<b>Payment reduction:</b>				
SA.05.02		.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-R 2 000,00 rate only
SA.05.02		.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-R 500,00 rate only
SA.05.02		.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-R 500,00 rate only
CARRIED TO SUMMARY: MAINTENANCE OF ROADS AND STORM WATER DRAINAGE						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

BILL OF QUANTITIES

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

**INSTALLATION 500: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS  
RELATED WORK**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b><u>BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER</u></b>				
DA	500	Testing borehole capacity				
DA.08.01	500,01	Pump testing of boreholes	No	3		
DA 08.01.01	500,02	.01 Extra over above item				
		a) The removal of existing equipment	No	2		
		b) Reinstallation of existing pumping equipment	No	2		
		c) Groundwater sampling	No	2		
		d) Borehole report	No	3		
DA 08.02	500,03	.01 Repair of existing borehole structures				
DA 08.02.01		.01 220mm thick Brickwork	m <sup>2</sup>	10		
DA 08.02.02		.02 Concrete base slab (30 Mpa)	m <sup>3</sup>	1		
DA 08.02.03		.03 Clean around borehole	No	18		
DA 08.02.04		.04 Removal of concrete base slab	m <sup>3</sup>	1		
DA 08.02.05		.05 Painting of exposed pipework	m	5		
DA 08.03.05	500,04	De-commissioning and removal of submersible pumping equipment				
		.01 Borehole submersible pump and pipe work	No	3		
DA 08.03.03	500,05	Reconditioning of pumping equipment				
		.01 Borehole submersible pump	No	4		
DA 08.03.02	500,06	Commissioning of submersible pumping equipment				
		.01 Borehole submersible pump and pipe work	No	6		
		<b><u>BOREHOLES</u></b>				
	500,07	<b>CORRECTIVE MAINTENANCE TO EXISTING BOREHOLES</b>				
DC 05.05		.01 Rehabilitation of existing boreholes:	m	75		
DC 05.02.01		.02 Supply and install steel casing 165mm diameter	m	25		
DC 05.02.02		.03 Supply and install casing shoe	No	4		
DC 05.02.04		.04 Supply and install perforated casing 165mm	m	75		
CARRIED FORWARD						



CARRIED OVER							
DA 08.04.01	500,08	Supply and delivery of submersible borehole pumps					
		.01 Borehole submersible pump capable of pumping 8Litres/second and maximum 140m total head	No	2			
DA 08.04.02		.02 Installation, testing and commissioning of submersible borehole pumps complete with 2000mm x 1500mm x 750mm concrete chamber	No	2			
DA 08.04.03		.03 Supply, deliver and install 110mm HDPE type PE 100 Class PN 12.5 rising pipe	m	1500			
DA 08.04.04		.04 Remove existing equipment from borehole and store on site as directed by the Engineer:	No	3			
DB 04	500,09	APPOINTMENT OF HYDROGEOLOGICAL CONSULTANT					
		.01 Appointment of Hydrogeological Consultant	PC sum	1	R 75 000,00	R	75 000,00
		.02 Charge required by Contractor on subitem (a) above	%				
		<u>WATER TREATMENT WORKS</u>					
DF	500,10	POTABLE WATER DISINFECTION AND SEDIMENTATION UNITS					
DF 06.01		.01 Decommissioning and removal of dosing equipment	No	6			
DF 06.02		.02 Service of dosing equipment	No	9			
DF 06.03		.03 Installation, testing and commissioning of dosing equipment	No	9			
DF 06.04		.04 Supply, delivery, installation, and commissioning of dosing equipment	No	3			
DH 09.06	500,11	SUPPLY AND DELIVERY OF WATER TREATMENT CHEMICALS & EQUIPMENT					
		.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			
DH .09.07	500,12	Service pump Control and level settings	Lump Sum	1	R 50 000,00	R	50 000,00
DH 09.09	500,13	Repair MCC'S,Cable racks and cable trays	No	3			
DH 09.11	500,14	Supply and installation of new valves, pressure gauges and pipework	Lump Sum	1	R 70 000,00	R	70 000,00
DN 11.06	500,15	Supply, installation, testing and commissioning of MCC boards or other electricity boards					
		.01 Motor control centre to operate at least 3kw submersible pump with a pressure switch for automatic mode and manual operation on demand. Fitted on two 65mm diameter GMS support poles @ 1.5m. Including the issuing of Certificate of Compliance.	No	4			
DN.11.07	500,15	Reconditioning of MCC Boards as described in DN.08.05	No.	2			
DN.11.05	500,16	Repair of pumping equipment 3kw submersible pump with a pressure switch for automatic mode and manual operation on demand. Fitted on two 65mm diameter GMS support poles @ 1.5m.	No	4			
CARRIED FORWARD							

CARRIED OVER						
DN 11.02	500,17	<b>Installation, testing and commissioning of pumping equipment</b>  .01 Pump and motor as an integrated unit 3kw submersible pump with a pressure switch for automatic mode and manual operation on demand. Fitted on two 65mm diameter GMS support poles @ 1.5m. .02 Replace, test and commissioning of float level switches or other level probes	No	2		
DN 11.07	500,18	<b>Decommission, recondition, test, and re-commission MCC boards or other electricity boards</b>  .01 Motor control centre to operate at least 3kw submersible pump with a pressure switch for automatic mode and manual operation on demand. Fitted on two 65mm diameter GMS support poles @ 1.5m. Including the issuing of Certificate of Compliance.	No	2		
SANS 1200 L 8.2.8	500,19	<b>BOREHOLE PIPEWORK</b> <b>Supply and install pipes, valves, fittings and specials</b>  .01 25mm ball valve with plastic coated plated steel lever and 2" (50mm) female connection .02 25mm double orifice air valve and pump protector with bias mechanism .03 20mm ball valve with plastic coated plated steel lever and 2" (50mm) female connection .04 20mm pressure gauge 0-1000kPa with large scale and stainless steel housing .05 80mm diameter flanged bulk water meter of flow rates between 0.15 m3/h and 100 m3/h, 6 figure display and epoxy powder body and cover for sizes 40mm to 125mm pressure of 16 bar .06 80mm dia flanged resilient seal gate valve with wheel handle .07 80mm dia. Standard cast iron flange adaptor from 80mm GMS to 75mm HDPE	No	10		
SANS 1200 L 8.2.5	500,20	<b>Supply and install pipes, valves, fittings and specials as per borehole pipe and fittings schedule:</b>  .01 Pipe fitting 1: borehole bass plate .02 Pipe fitting 2: Flanged T with couplings .03 Pipe fitting 3: Flanged 1m section .04 Pipe fitting 4: Flanged elbow	No	50		
SANS 1200 L 8.2.1	500,21	<b>Supply, lay and bed pipes complete with couplings, including testing:</b>  .01 32mm dia HDPE PE100 Class 10 pipe jointed with existing plasson high compression fittings .02 75mm dia HDPE PE100 Class 10 pipe jointed with existing plasson high compression fittings	m	60		
DL.08.01	500,22	<b>BULK WATER SUPPLY</b>  <b>CHLORINATION OF NEW BOREHOLE</b> <b>Supply and delivery of chlorination systems as described in DL.04</b>	No	1		
CARRIED FORWARD						

CARRIED OVER						
DL.08.02	500,23	Installation, testing and commissioning of chlorination systems	No	1		
DL.02	500,24	Installation, testing and commissioning of chlorination systems				
DN 11.01	500,25	.01 Complete system with dosing pump, tank and fittings	No	2		
		<b>SUPPLY AND DELIVERY OF PUMPING EQUIPMENT</b>				
		.01 Submersible pumps	No	3		
		3kw submersible pump with a pressure switch for automatic mode and manual operation on demand.				
		<b>VALVES AND PIPEWORK</b>				
DN11.03	500,26	Decommission and remove gate valves, non-return valves air release valves, butterfly valve, ball valve, control valves and pipework				
		.01 50mm double orifice air release valve	No	5		
		.02 80mm non-return valve	No	2		
		.03 80mm gate valve	No	2		
		.04 100mm gate valve	No	2		
		.05 100mm Butterfly valve	No	2		
		.06 Ball valve	No	2		
DN11.04	500,27	Service OR Recondition gate valves, non-return valves air release valves, butterfly valve, ball valve, control valves and pipework				
		.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		
		.05 100mm Butterfly valve	No	2		
		.06 Ball valve	No	2		
DN11.10	500,28	Supply, Installation, testing and commissioning of gate valve, non-return valves, air release valves, butterfly valves, ball valve, control valves and pipework				
		.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		
		.05 100mm Butterfly valve	No	2		
		.06 50mm Ball valve	No	4		
		.07 22mm Control valve	No	4		
		<b>OPERATING AND MAINTENANCE MANUALS</b>				
SB.05.01	500,29	Compile and supply a complete set of operating and maintenance manuals				
		.01 Bulk water supply system, water treatment plant, including boreholes: update existing O & M Manuals	Sum	1	R 20 000.00	20 000.00
CARRIED FORWARD						

CARRIED OVER							
EG 05	500,30	<u>TESTING</u>					
		<u>Potable water quality testing:</u>					
		.01 Portable water quality tests to be performed by an approved SANAS laboratory on a monthly basis on the water delivered to consumers for determinants.	No	36			
		.02 Portable water quality tests to be performed by an approved SANAS laboratory on a monthly basis on the water on the water abstracted from the boreholes	No	36			
	500,31	<u>ADDITIONAL TESTING</u>					
PSA 8.9		.01 Special testing as ordered by the Engineer	PC Sum	1	R	25 000,00	R 25 000,00
		.02 Attendance and profit	%				
	500,32	<u>PERSONAL REVERSE OSMOSIS (RO) UNITS COMPLETE WITH PIPES FITTINGS</u>					
DH 09.15		.01 Supply, installation and commissioning of new personal RO units	No	150			
DH 09.13		.02 Remove, service and re-install existing personal RO units in commercial buildings	No	250			
DH 09.14		.03 .Remove. service and re-install existing personal RO units in residential	No	375			
DH 09.16		.04 Supply deliver and Store of spare filter units and service kits	Lump Sum				
DW 06.05	500,33	<u>Blue Drop Regulation</u>					
		.01 Water Safety Plan	PC Sum	1	R	30 000,00	R 30 000,00
		.02 Risk Assessment	PC Sum	1	R	25 000,00	R 25 000,00
		.03 Asset register	PC Sum	1	R	15 000,00	R 15 000,00
		.04 Plant Process Audit	PC Sum	1	R	25 000,00	R 25 000,00
		'Profit and attendance on items 01 to 04	%				
CARRIED TO SUMMARY: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER RELATED WORK							

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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**INSTALLATION 510: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS  
RELATED WORK**

INSTALLATION 510: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS RELATED WORK				CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
SA.01	510,00	<u>MAINTENANCE OF BULK WATER SUPPLY SYSTEMS AND</u>					
	510,01	Maintenance of a complete installation:  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: <ul style="list-style-type: none"><li>• Routine checking, inspection, and repair of leaks/replacement of corroded pipes</li><li>• Clean out all strainers</li><li>• Fix and maintain all bracketing systems</li><li>• Paint repairs to piping, fittings and equipment</li><li>• Scour reservoirs and pipes to remove silt and deposits, empty and clean bulk water reservoirs</li><li>• Check, test, service, re-adjust, repair or replace all types of valves and vacuum breakers, inclusive of gaskets, gland packings, seals, etc.</li><li>• Check V-belts, MCC* panels with level sensing devices and electric motors where applicable</li><li>• Remove, inspect and service repair or replace submersible pumps</li><li>• Service re-adjust and calibrate pressure gauges and water meters</li><li>• Service, repair and clean chlorine dosing apparatus from blockages</li></ul> <ul style="list-style-type: none"><li>• Replace and service small reverse osmosis units at residential area, etc. at:</li></ul>					
		.01	Beitbridge: Maintenance work: Bulk water supply systems and external water networks	point	360		
		510,02	Payment reduction:				
SA.05.02	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day		-R 2 000,00	rate only	
SA.05.02	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day		-R 500,00	rate only	
SA.05.02	.03	Payment reduction due to exceeding of maximum down-time during damage repair	day		-R 500,00	rate only	
CARRIED FORWARD							

CARRIED OVER						
SF.01 DH.09.05	510,02	<u>OPERATING OF BULK WATER SUPPLY SYSTEM</u>				
	510,03	<p><b>Operating of installation:</b></p> <p>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:</p> <ul style="list-style-type: none"> <li>• 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)</li> <li>• 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</li> <li>• Recording of rainfall (date, precipitation and duration per event)</li> <li>• Checking integrity of power supply at MCC and verify correct switching of pumps</li> <li>• 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</li> </ul>				
		.01	Beitbridge: Operation work: Bulk water supply systems and external water networks	Point	360	
		.01	Beitbridge: Operating work: Bulk water supply systems and external networks	point	360	
	510,04	<b>Payment reduction:</b>				
	SA.05.02	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-R 2 000,00	rate only
	SA.05.02	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-R 500,00	rate only
	SA.05.02	.03	Payment reduction due to exceeding of maximum down-time during damage repair	day	-R 500,00	rate only
CARRIED TO SUMMARY: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER						

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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## BILL OF QUANTITIES

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**INSTALLATION 600: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS  
RELATED WORK**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	600,00	<b><u>BULK SEWER SYSTEMS</u></b>				
		<b><u>WASTEWATER TREATMENT WORKS</u></b>				
		<b><u>RAW WATER PUMP SYSTEM</u></b>				
EB12.08	600,01	Pumping out cleaning and reconditioning of wastewater pump sumps and related infrastructure	No	3		
EB.12.09	600,02	Reconditioning of MCC Boards or other electricity boards	No.	3		
EB.12.10	600,03	Replace MCC Enclosure	No	1		
EB.12.11	600,04	Supply, installation, testing, and commissioning of MCC boards or other electricity boards	No	1		
EB.12.12	600,05	Supply, installation, testing, and commissioning of Mechanical equipment				
EB 12.01		.01 Supply and Intallation of super S3 Bareshaft pump complete with pipework and fittings	No	2		
EB 12.13	600,06	Decommissioning, servicing, testing, recommissioning and calibration of existing flow measuring equipment	No	3		
EB.12.03	600,06	Decommissioning and removal of pumping equipment	No	6		
		pump and motor				
EB.12.04	600,07	Reconditioning of pumping equipment	No	2		
		pump and motor				
EB.12.05	600,08	Repair of pumping equipment	No	2		
		pump and motor				
EB.12.06	600,09	Servicing of pumping equipment	No	6		
		pump and motor				
EB.12.02	600,10	Installation, testing and commissioning of pumping equipment	No	6		
		pump and motor				
EB.12.07	600,11	Replace, test and commissioning of float level switches or other level probes	No	12		
		<b><u>FLOW MEASUREMENT EQUIPMENT</u></b>				
EA.07.01	600,12	Decommissioning, servicing, testing, recommissioning and calibration of existing flow measuring equipment				
		.01 Ultrasonic open channel flow meter (Krohne Electromagnetic flow meters) with transducer and totalizer, including all cables, fixtures and appurtenances	No	4		
CARRIED FORWARD						



CARRIED OVER						
EA .07.02	600,13	Supply, Installation, and commissioning of flow meter and data logger .01 Ultrasonic open channel flow meter with transducer and totalizer, including all cables, fixtures and appurtenances	No	1		
EA 07,04	600,14	Decommissioning and removal of rag catcher	Lump sum			
EA 07.05	600,15	Supply and Installation of new rag catcher	Lump sum			
BF 04	600,16	<b>CONCRETE REPAIR</b>  .01 Scabble surface removing all loose and suspect material taking care not to damage the existing reinforcing  .02 Apply a 20mm thick approved component polymer modified cementitious repair mortar to existing concrete wastewater retaining structures	m <sup>2</sup>  m <sup>2</sup>	50  50		
BD 06,02,05 & BE 06,02,04	600,17	Expansion Joint remedial procedure  .01 Remove all loose and defective joint material and clean around affected areas to prepare the surface for the new material by means of grinding followed by brooming and vacuuming  .02 High performance joint and crack sealing system, consisting of an elastomeric, 200mm wide x 2mm thick sealing strip and hixotropic epoxy adhesive	m  m	150  250		
BD 06,02,05 & BE 06,02,04	600,18	<b>MOVEMENT JOINT</b>  JOINT SEALER: .01 Single component fast curing polyurethane joint sealer suitable for wastewater retaining structures  <b>RAS PUMPS</b> Electrically operated submersible sewage pump 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: 4L/s (maximum delivery of 8L/s Total head = 5.5 meter Motor spec = 2.1 kW @1450 rpm Discharge diameter = 50mm Suction diameter = 50mm	m			
EB12,08	600,19	Pumping out cleaning and reconditioning of wastewater pump sumps and related infrastructure	No	3		
EB.12,09	600,20	Reconditioning of MCC Boards	No	2		
EB.12,04	600,21	Reconditioning of pumping equipment (RAS PUMP Of 2,2-4,0 Kw - capacity of 190-238m <sup>3</sup> /h) .01 pump and motor as an integrated unit	No	2		
EB.12.05	600,22	Repair of pumping equipment .01 pump and motor as an integrated unit	No	4		
EB.12.06	600,23	Servicing of pumping equipment .01 pump and motor as an integrated unit	No	4		
EB.12.01	600,24	Supply and delivery of pumping equipment .01 pump and motor as an integrated unit	No	2		
CARRIED FORWARD						

CARRIED OVER						
EB.12.02	600,25	Installation, testing and commissioning of pumping equipment				
		.01 pump and motor as an integrated unit	No	2		
EB.12.07	600,26	Replace, test and commissioning of float level switches or other level probes	No	2		
<b><u>SLUDGE PUMP SYSTEM</u></b>						
EB.12.08	600,27	Pumping out cleaning and reconditioning of wastewater pump sumps and related infrastructure (Pump of 2,2 - 4,0 Kw - capacity of 190 - 238m³/h)	No	2		
EB.12.03	600,28	Decommissioning and removal of pumping equipment				
		.01 Existing sludge pumps	No	2		
EB.12.05	600,29	Repair of pumping equipment				
		.01 pump and motor	No	4		
EB.12.06	600,30	Servicing of pumping equipment				
		.01 Pump and motor	No	4		
EB.12.01	600,31	Supply and delivery of pumping equipment				
<b><u>Submersible Mixer Pump</u></b>						
		Supply, installation, testing, commissioning of electronically operated submersible sewerage mixer with the following: Speed = 894 - 904 RPM, Motor Spec 1.5 - 2.8kW	No	2		
EB.12.02	600,32	Installation, testing and commissioning of pumping equipment	No	4		
EB.12.04	600,33	Reconditioning of pumping equipment	No	2		
EB.12.05	600,33	Repair of pumping equipment	No	2		
EB.12.06	600,34	Servicing of pumping equipment	No	6		
EB.12.09	600,35	Reconditioning of MCC Boards accommodate new pump	No	2		
EB.12.07	600,36	Replace, test and commissioning of float level switches or other level probes	No	2		
EB.12.10	600,37	Replace MCC Enclosure	No	1		
EB.12.11	600,38	Supply, installation, testing, and commissioning of MCC boards or other electricity boards	No	1		
<b><u>VALVES</u></b>						
EK.07.05	600,39	Decommission and remove 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	2		
		.03 80mm gate valve	No	2		
		.04 100mm gate valve	No	2		
EK.07.03	600,40	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		
CARRIED FORWARD						

CARRIED OVER							
EK 07.02	600,41	.04 100mm gate valve Installation, testing and commissioning of gate valve, non-return valves, air release valves and sluice gates.	No	2			
		.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			
		<b>WWTW OPERATIONS, REPAIR AND SERVICE</b>					
		Compile and supply a complete set of operating and Maintenance manual					
SB.05	600,42	.01 Wastewater treatment works: Update existing O&M Manual	Sum	1	R	20 000,00	R 20 000,00
SC.12	600,43	Commissioning and testing of the installation An entire wastewater treatment works	Sum	1	R	12 000,00	R 12 000,00
EA.07.01	600,44	.01 Service flow meter and data logger .01 Ultrasonic open channel flow meter with transducer and totalizer, including all cables, fixtures and appurtenances	Sum	3	R	15 000,00	R 45 000,00
EA.07.03	600,45	Supply and installation testing and commission of screening draining plate	No	2			
EA.07.04	600,46	Decommissioning and removal of Rag Catcher	Sum	1	R	2 000,00	R 2 000,00
EA.07.05	600,47	Supply and installation of a new Reg-Catcher	Lump Sum	1	R	8 000,00	R 8 000,00
EM.05.01	600,48	Pump out of sludge into a suitable waste containment	m <sup>3</sup>	1000			
EM.05.02	600,49	Disposing of sludge at a registered commercial source on the instruction of the Engineer/Department representative and provide certificate	m <sup>3</sup> /km	30000			
EJ 05	600,50	<b>Wastewater quality testing:</b>  .01 Sewage effluent compliance quality tests to be performed by an approved SANAS laboratory on a monthly basis for determinants specified in EG05  .02 Raw Sewage 24h composite sample and analysis for determinants specified in EJ05	No	36			
			No	6			
		<b>WASTE WATER TREATMENT WORKS</b>					
		<b>SUPPLY AND INSTALLATION OF POSITIVE DISPLACEMENT BLOWERS</b>					
EE.05.01	600,51	Supply, installation, testing and commissioning of blower units with three-lobe rotors and internal pulsation cancellation. Intake volumes from 30m <sup>3</sup> /hr to 15.000 m <sup>3</sup> /hr .02 Profit and attendance on item	PC Sum				R 300 000,00
	600,52	<b>SUPPLY AND INSTALLATION OF AERATION DISCS</b>	%				
EE .05.02	600,53	Supply, installation, testing and commissioning of fine bubble aeration discs type KKI 25 EPDM	No	30			
CARRIED FORWARD							

CARRIED OVER						
EE.05.03	600,54	Supply, installation of galvanised hand railings	m	100		
	600,55	FLOW MEASURING EQUIPMENT				
EA .07.02	600,56	Supply and installation of ultasonic open channel flow meter with transducer and totalizer, including all cables, fixtures and appurtenances at both the inlet and outlet (inclusive of parshall flume structure for the outlet)	Prov sum	1	R 160 000,00	R 160 000,00
		.01 Profit and attendance on item	%			
EA 07.01	600,57	Annual Calibration of ultasonic open channel flow meter by SANAS accredited supplier	Lump Sum	1	R 30 000,00	R 30 000,00
		.01 Profit and attendance on item	%			
EM .05.02	600,58	Disposing of sludge at a regisisterd commercial source on the instruction of the Engineering/Department's repreentative and provide certificate	km			
EQ 06.01	600,59	Supply, delivery and planting of reed beds	m2			
EK 07.01	600,60	<u>Supply and delivery of gate valves, non-return valves, air release valves and sluice gates:</u>				
		.01 50mm double orifice air release valve	No			
		.02 50mm non-return valve	No			
		.03 50mm flanged resilient seal gate valve	No			
EM.05.03	600,61	<u>Waste Water Use licence Audit</u>				
		.01 (c) Annual plant audit by an External Auditor	PC sum	1	R 25 000,00	R 25 000,00
		.02 (d) Risk abatement plan	PC sum	1	R 25 000,00	R 25 000,00
		Profit and attendance on items above	%			
EM.05.03	600,62	<u>Registred professional Environmental Scientist for the following: Water Use Licence Audit</u>				
		.01 (a) Site specific long-term Bio-monitoring program establishment	PC sum	1	R 60 000,00	R 60 000,00
		.02 (b) Monitoring program for aquatic macro-invertebrates and habitat integrity	PC sum	1	R 60 000,00	R 60 000,00
		.03 Profit and attendance on items above	%			
TOTAL CARRIED TO SUMMARY:						

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## BILL OF QUANTITIES

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**INSTALLATION 610: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS RELATED WORK**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	610,00	<b><u>MAINTENANCE OF WASTEWATER TREATMENT WORKS AND SEWER NETWORKS</u></b>				
	610,01	<b>Maintenance of a complete installation:</b>  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: <ul style="list-style-type: none"> <li>• Routine inspection of manholes</li> <li>• Inspection chambers covers and frames</li> <li>• Necessary cleaning and rodding</li> <li>• Unblocking of the bulk sewer network and raw sewage pump station</li> <li>• Fixing of leaks</li> <li>• Cleaning and servicing of pumps including lubrication of moving parts, replacement of components</li> <li>• Maintaining all valves and sluice gates forming part of the wastewater infrastructure</li> <li>• Checking and lubrication of sluice guide rails and hand wheels</li> </ul> <ul style="list-style-type: none"> <li>• Servicing and repair of internal pipe work and recirculation pumps</li> <li>• Maintenance of constructed reed beds, including removal of invasive plants, removal of trees and bushes from earth walls, harvesting reeds periodically, and cleaning inlet and outlet weirs with interconnecting pipes</li> </ul>				
		.01 Beitbridge: Maintenance work: Wastewater treatment works	point	360		R -
	610,02	<b>Payment reduction:</b>				
SA.05.02	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-R 2 000,00	rate only
SA.05.02	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-R 500,00	rate only
SA.05.02	.03	Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-R 500,00	rate only
CARRIED FORWARD						

CARRIED OVER						
SF.01	610,03	<b><u>OPERATING OF WASTEWATER TREATMENT WORKS</u></b>				
	610,04	<b>Operating of installation:</b>  Operation as per Technical Specification EM: Operate Wastewater Works, shall consist of at least, but not limited to: <ul style="list-style-type: none"> <li>• 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</li> <li>• Provision of all tools and equipment for operation, such as nets, rakes, brooms, spades, wheelbarrows</li> <li>• Removal, washing and drying of solids (screenings, scum and debris)</li> <li>• Setting and adjustment of valves according to process configuration from time to time</li> <li>• Scour humus tank and check for clumps of floating sludge</li> <li>• Set and adjust recycling pump period</li> </ul>				
		.01      Beitbridge: Operation work: Wastewater treatment works	point	360		
	610,05	<b>Payment reduction:</b>				
	SA.03	.01      Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	-R    2 000,00	rate only
SA.04		.02      Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	-R      500,00	rate only
SA.05		.03      Payment reduction due to exceeding of maximum down-time during damage repair	day	-	-R      500,00	rate only
CARRIED TO SUMMARY: WASTEWATER TREATMENT WORKS AND SEWER NETWORKS RELATED WORK						

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**INSTALLATION 700: MECHANICAL REPAIR WORK: HVAC**

			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
FA 01 - 14	700,00	<b>HEATING, VENTILATION AND AIR CONDITIONING</b>				
SB 05 FA 04	700,01	As-built Information and O&M Manuals				
FA.14.01(a)	.01	Obtaining of all available information, compiling and finalising three sets of As-built Information and O&M Manuals and handing over to the engineer.	Sum	1	R	-
FA 05 SD 06	700,02	Training				
FA.14.01(b)	.01	Development of training syllabus	No	1	R	-
FA.14.01(c)	.02	Presenting a training course for operators and maintenance staff.	Days	1	R	-
FA 06	700,03	Logging and recording of operating condition, services, maintenance visits, reports, breakdowns, samples, inspections, tests, etc.				
FA.14.01(d)	.01	All HVAC Installations (split, packaged and wall mounted air conditioning units).	Sum	1	R	-
FA 06	700,04	Inspection and Report on the condition of the units for any defects, failures, etc., for the following items:				
FA.14.01(e)	.01	All HVAC Installations (split, packaged and wall mounted air conditioning units).	No	356	R	-
FA 03 FA 12	700,05	Detail repair work for split air-conditioning units				
	.01	Repairs of air conditioning units to bring the HVAC installations to good working condition. The repair works to be completed and commissioned in compliance to all specifications, including but not limited to Technical Specifications (FA). The repairs will cover frequent and non-frequent damages, inherent as well as damages resulting from day to day use of the units.				
FA.14.01(f)	.01	Repair Leaking Drain Pipe	No.	250	R	-
FA.14.01(g)	.02	Replacement of Contactors	No.	250	R	-
FA.14.01(h)	.03	Derust, neutralise and touch-up paint work.	No.	250	R	-
FA.14.01(i)	.04	Replace PC Board	No.	250	R	-
FA.14.01(j)	.05	Replace Compressor	No.	250	R	-
FA.14.01(k)	.06	Repair or Replace Fan & Fan Motor	No.	250	R	-
FA.14.01(l)	.07	Replace Sensor	No.	250	R	-
FA.14.01(m)	.08	Repair/Replace Controller	No.	250	R	-
FA.14.01(n)	.09	Replace Capacitor	No.	250	R	-
CARRIED FORWARD						



CARRIED OVER								
FA.14.01(o)		.10	Repair Insulation	No.	250		R	-
FA.14.01(p)		.11	Regas R410 and R22 Charged AC Units	kg	100		R	-
FA.14.01(q)		.12	Repair Mounting Brackets & Supports	No.	250		R	-
FA.14.01(r)		.13	Ensure operation of local and remote isolators.	No.	250		R	-
FA.14.01(s)		.14	Replace Fuse	No.	250		R	-
FA.14.01(t)		.15	Ensure correct operation of emergency stop	No.	250		R	-
FA.14.01(u)		.16	Carry out a leak test on all refrigeration piping and components.	No.	250		R	-
FA.14.01(v)		.17	All leaks shall be repaired. Should a leak on a component be of such a nature that it cannot be repaired, the component should be replaced	No.	250		R	-
FA.14.01(w)		.18	Check and adjust if necessary, the superheat setting of the thermostatic expansion valve (setting approx. 8 deg.C)	No.	250		R	-
FA.14.01(x)		.19	Check all service valves for full operation. replace caps if missing	No.	250		R	-
FA.14.01(y)		.20	Check compressor vibration mountings	No.	250		R	-
FA.14.01(z)		.21	Test oil acidity	No.	250		R	-
FA.14.01(aa)		.22	Check refrigerant charge sight glass being clear or flashing	No.	250		R	-
FA.14.01(ab)		.23	Check moisture indication being dry	No.	250		R	-
FA.14.01(ac)		.24	Clean evaporator and condensor blades and check unbalance	No.	250		R	-
SC 12 FA 09		.02	Commissioning					
FA.14.01(ad)		.01	Commissioning and testing of the installation	No.	250		R	-
FA 03 FA 12	700,06		<b>Detail repair work for packaged air-conditioning units</b>					
		.01	Diagnose, assess and repair to fully functional state packaged units. The units to be returned to normal operation performance and meet original design and operation specifications. The work to include but not limited to repairs of fans & fan motors, cooling coils, controllers, compressors, electrical connections, regassing, mounting and supports, expansion valves, filters etc.					
FA.14.01(f)		.01	Repair Leaking Drain Pipe	No.	2		R	-
FA.14.01(g)		.02	Replacement of Contactors	No.	2		R	-
FA.14.01(h)		.03	Derust, neutralise and touch-up paint work.	No.	2		R	-
FA.14.01(i)		.04	Replace PC Board	No.	2		R	-
FA.14.01(j)		.05	Replace Compressor	No.	2		R	-
FA.14.01(k)		.06	Repair or Replace Fan & Fan Motor	No.	2		R	-
FA.14.01(l)		.07	Replace Sensor	No.	2		R	-
CARRIED FORWARD								

CARRIED OVER								
FA.14.01(m)		.08	Repair/Replace Controller	No.	2		R	-
FA.14.01(n)		.09	Replace Capacitor	No.	2		R	-
FA.14.01(o)		.10	Repair Insulation	No.	2		R	-
FA.14.01(p)		.11	Regas R410 and R22 Charged AC Units	kg	20		R	-
FA.14.01(q)		.12	Repair Mounting Brackets & Supports	No.	2		R	-
FA.14.01(r)		.13	Ensure operation of local and remote isolators.	No.	2		R	-
FA.14.01(s)		.14	Replace Fuse	No.	2		R	-
FA.14.01(t)		.15	Ensure correct operation of emergency stop	No.	2		R	-
FA.14.01(u)		.16	Carry out a leak test on all refrigeration piping and components.	No.	2		R	-
FA.14.01(v)		.17	All leaks shall be repaired. Should a leak on a component be of such a nature that it cannot be repaired, the component should be replaced	No.	2		R	-
FA.14.01(w)		.18	Check and adjust if necessary, the superheat setting of the thermostatic expansion valve (setting approx. 8 deg.C)	No.	2		R	-
FA.14.01(x)		.19	Check all service valves for full operation, replace caps if missing	No.	2		R	-
FA.14.01(y)		.20	Check compressor vibration mountings	No.	2		R	-
FA.14.01(z)		.21	Test oil acidity	No.	2		R	-
FA.14.01(aa)		.22	Check refrigerant charge sight glass being clear or flashing	No.	2		R	-
FA.14.01(ab)		.23	Check moisture indication being dry	No.	2		R	-
FA.14.01(ac)		.24	Clean evaporator and condensor blades and check unbalance	No.	2		R	-
SC 12		.02	Commissioning					
FA 09								
FA.14.01(ad)		.01	Commissioning and testing of the installation	No.	2		R	-
FA 03	700,07		Detail repair work for ducting					
FA 12		.01	Diagnose, assess and repair to fully functional state supply and return air ducting. The ducting to be returned to normal operation performance and meet original design and operation specifications. The work to include but not limited to repairs of insulations, damages to the sheets metal and air terminals such as diffusers, return air grills, mounting and supports, filters etc.					
FA.14.01(ae)		.01	Repair Insulations	m	20		R	-
FA.14.01(af)		.02	Repair Sheet Metal Ducting	m	20		R	-
FA.14.01(ag)		.03	Repair Supply air diffusers	No.	20		R	-
FA.14.01(ah)		.04	Repair Return air grilles	No.	4		R	-
FA.14.01(ai)		.05	Clean Filters or replace if may not be reused	No.	30		R	-
CARRIED FORWARD								

CARRIED OVER							
SC 12 FA 09		.02 Commissioning					
FA.14.01(ad)		.01 Commissioning and testing of the installation	Sum	1		R	-
FA 03 FA 07 FA 08 FA 09 FA 10 FA 12	700,08	Replacement of AC units: Decommissioning and removal of the existing unit. Supply and installation of new air conditioning unit at the houses, including all accessories, fittings, brackets, vibration absorbers, expansion bolts , electrical wiring, remote controls.					
FA.14.01(aj)		.01 9000btu Cooling Air Conditioning Unit	No.	3		R	-
FA.14.01(aj)		.02 12000btu Cooling Air Conditioning Unit	No.	56		R	-
FA.14.01(aj)		.03 18000 btu Cooling Air Conditioning Unit	No.	12		R	-
FA.14.01(aj)		.04 24000 btu Cooling Air Conditioning Unit	No.	5		R	-
FA.14.01(aj)		.05 26000 btu Cooling Air Conditioning Unit	No.	28		R	-
FA 03 FA 07 FA 08 FA 09 FA 10 FA 12	700,09	Replacement of AC units: Decommissioning and removal of the existing unit. Supply and installation of new air conditioning unit at the Beit Bridge Border Operational Area, including all accessories, fittings, brackets, vibration absorbers, expansion bolts , electrical wiring, remote controls.					
FA.14.01(aj)		.01 9000btu Cooling Air Conditioning Unit	No.	19		R	-
FA.14.01(aj)		.02 12000btu Cooling Air Conditioning Unit	No.	47		R	-
FA.14.01(aj)		.03 18000 btu Cooling Air Conditioning Unit	No.	20		R	-
FA.14.01(aj)		.04 24000 btu Cooling Air Conditioning Unit	No.	13		R	-
FA.14.01(aj)		.05 26000 btu Cooling Air Conditioning Unit	No.	11		R	-
FA.14.01(aj)		.06 30000btu Cooling Air Conditioning Unit	No	3		R	-
FA.14.01(aj)		.07 32000 btu Cooling Air Conditioning Unit	No.	4		R	-
FA.14.01(aj)		.08 38000btu Cooling Air Conditioning Unit	No.	2		R	-
FA.14.01(aj)		.09 48000 btu Cooling Air Conditioning Unit	No.	6		R	-
FA 03 FA 12	700,10	Detail repair work for air curtains					
		.01 Diagnose, assess and repair to fully functional state air curtains.					
FA.14.01(k)		.01 Repair or Replace Fan & Fan Motor	No.	10		R	-
FA.14.01(q)		.02 Repair Mounting Brackets & Supports	No.	10		R	-
FA.14.01(m)		.03 Repair/Replace Controller	No.	10		R	-
CARRIED TO SUMMARY: MECHANICAL REPAIR WORK: HVAC INSTALLATIONS						R	-

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INSTALLATION 710: MECHANICAL REPAIR WORK: KITCHEN EQUIPMENT			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
FC 01 - 13	710,00	<u>KITCHEN EQUIPMENT</u>				
FC 03	710,01	As-built Information and Operating and Maintenance Manuals.				
FC.13.01(a)	.01	Obtaining of all available information, compiling and finalising three sets of as built and Operating and Maintenance Manuals and handing over to the engineer.	Sum	1	R	-
FC 04 SD 06	710,02	Training				
FC.13.01(b)	.01	Development of training syllabus	No	1	R	-
FC.13.01(c)	.02	Presenting a training course for operators and maintenance staff.	Days	1	R	-
FC 05	710,03	Logging and recording of operating condition, services, maintenance visits, reports, breakdowns, samples, inspections, tests, etc.				
FC.13.01(d)	.01	Kitchen Equipment	Sum	1	R	-
FC 06 - FC 10	710,03	Repair Work: Repairs to include fans, controls, electrical connections as well as doors and latches				
FC.13.01(e)	.01	Stove heating plates	No	3	R	-
FC.13.01(f)	.02	Knobs and handles for stoves and ovens	Sum	1	R	-
FC.13.01(g)	.03	De-greasing of convection ovens	No	1	R	-
FC.13.01(h)	.04	Repair of Extraction Canopy	No	1	R	-
CARRIED TO SUMMARY: MECHANICAL REPAIR WORK: KITCHEN EQUIPMENT					R	-

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INSTALLATION 720: MECHANICAL REPAIR WORK: INCINERATOR

			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
FB 01 - 16	720,00	<u>INCINERATOR INSTALLATIONS</u>				
FB 04	720,01	As-built Information and Operating and Maintenance Manuals.				
FB.16.01(a)	.01	Obtaining of all available information, compiling and finalising three sets of as built and Operating and Maintenance Manuals and handing over to the engineer.	Sum	1	R	-
FB 05	720,02	Training				
FB.16.01(b)	.01	Development of training syllabus	No	1	R	-
FB.16.01(c)	.02	Presenting a training course for operators and maintenance staff.	Days	1	R	-
	720,03	Logging and recording of operating condition, services, maintenance visits, reports, breakdowns, samples, inspections, tests, etc.				
FB.16.01(d)	.01	Incinerator	Sum	1	R	-
FB.16.01(e)	720,04	Reconditioning of the incinerator to bring back to good working conditions. Work to include but not limited to repairs of damaged fans, controls, electrical connections as well as doors and latches.	No	1	R	-
CARRIED TO SUMMARY: MECHANICAL REPAIR WORK: INCINERATOR INSTALLATIONS						R -

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INSTALLATION 730: MECHANICAL REPAIR WORK: FIRE PROTECTION			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
FD 01 - 08	730,00	<b><u>FIRE PROTECTION INSTALLATIONS</u></b>				
FD 05	730,01	Inspection and report on existing installations				
FD.08.01(a)	.01	Fire hydrants	No	38	R	-
FD.08.01(a)	.02	Fire hose reels	No	57	R	-
FD.08.01(a)	.03	Fire extinguisher	No	240	R	-
FD 06	730,02	Testing of fire protection system as ordered by the engineer				
FD.08.01(b)	.01	Water flow test Fire hose reels and hydrants	No	3	R	-
FD 06	730,03	Servicing, cleaning, recharging and repairs of fire extinguishers				
	.01	Repair damaged and missing discharge hoses, gauges, operating instruction, recharge to capacity. Replace cupboards, signage and blackboards.				
FD.08.01(c)	.01	4.5kg DCP Fire Extinguishers	No.	41	R	-
FD.08.01(c)	.02	5kg CO2 Fire Extinguishers	No.	9	R	-
FD.08.01(c)	.03	9kg DCP Fire Extinguishers	No.	43	R	-
FD 06	730,04	Servicing, cleaning, recharging and repairs of fire hose reels and fire hydrants				
	.01	Repair damaged and missing discharge hoses, replace signage				
FD.08.01(d)	.01	fire hydrant	No.	18	R	-
FD.08.01(d)	.02	30m fire hose reels	No.	28	R	-
FD 06	730,05	Replace rusted medium grade, seamless galvanised mild steel pipework complete with pipe support and accessories as specified				
FD.08.01(e)	.01	80mm diam piping including painting	m	100	R	-
FD.08.01(e)	.02	50mm diam piping including painting	m	120	R	-
FD.08.01(e)	.03	32mm diam piping including painting	m	100	R	-
FD.08.01(e)	.04	25mm diam piping including painting	m	100	R	-
CARRIED FORWARD						

CARRIED OVER							
FD 06	730,06	Extra over pipework as follows 90 Degree Bends					
FD.08.01(f)		.01	80mm diam	No.	50	R	-
FD.08.01(f)		.02	50mm diam	No.	50	R	-
FD.08.01(f)		.03	32mm diam	No.	50	R	-
FD.08.01(f)		.03	25mm diam	No.	50	R	-
FD 06	730,07	Reducers					
FD.08.01(g)		.01	80>50	No.	20	R	-
FD.08.01(g)		.02	50>32	No.	15	R	-
FD.08.01(g)		.03	32>25	No.	15	R	-
FD 06	730,08	Tees					
FD.08.01(h)		.01	50x50x50mm diam	No.	10	R	-
FD.08.01(h)		.02	32x32x32mm diam	No.	10	R	-
FD.08.01(h)		.03	25x25x25mm diam	No.	10	R	-
FD 06	730,09	Supply of fire extinguishers, fire hose reels, fire hydrant and pressure gauges					
FD.08.01(i)		.01	4,5kg DCP Fire Extinguishers	No	10	R	-
FD.08.01(j)		.02	5kg CO2 Fire Extinguishers	No	5	R	-
FD.08.01(k)		.03	9kg DCP Fire Extinguishers	No	10	R	-
FD.08.01(l)		.04	Fire hydrants	No	5	R	-
FD.08.01(m)		.05	Fire hose reel	No	5	R	-
FD.08.01(n)		.06	Pressure gauge	No.	35	R	-
CARRIED TO SUMMARY: MECHANICAL REPAIR WORK: FIRE PROTECTION INSTALLATIONS							R -



## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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INSTALLATION 740: MECHANICAL REPAIR WORK: WET SERVICES			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
AD 01 - AD 07	740,00	<u>WET SERVICES (DOMESTIC COLD AND HOT WATER SUPPLY)</u>				
AD 03	740,01	Inspection and report on existing installations				
AD 05.01	.01	Domestic cold water supply pipes, fittings, accessories, etc.	Sum	1	R	-
AD 05.01	.02	Domestic hot water supply pipes, fittings, accessories, etc.	Sum	1	R	-
AD 05.01	.03	Hot water generating installations	Sum	1	R	-
AD 04	740,02	<u>SERVICING, CLEANING AND REPAIR OF DOMESTIC WATER PIPE INSTALLATIONS</u>				
	.01	Copper piping Class 1 SANS 460 with capillary soldered type joints for hot and cold-water piping in voids inclusive of bracketing:				
AD 05.11	.01	22mm dia including fittings	m	500	R	-
AD 05.11	.02	15mm dia including fittings	m	300	R	-
	.02	Copper piping Class 1 SANS 460 with capillary soldered type joints for cold and hot-water piping chased in walls inclusive of . wrapping with builders paper, chasing, reinstatement of chased surfaces, bracketing, lagging and cladding:				
AD 05.11	.01	22mm dia including fittings	m	800	R	-
AD 05.11	.02	15mm dia including fittings	m	200	R	-
AD 04	740,03	<u>SUPPLY OF PIPES, FITTINGS, ACCESSORIES, ETC.</u>				
	.01	Copper piping Class 1 SANS 460 with capillary soldered				
AD 05.06	.01	22mm dia pipe	m	120	R	-
AD 05.06	.02	15mm dia pipe	m	90	R	-
AD 05.06	.03	22mm coupler & coupler slip	No.	50	R	-
AD 05.06	.04	15mm coupler & coupler slip	No.	50	R	-
AD 05.06	.05	90 Elbow 22mm dia	No.	50	R	-
AD 05.06	.06	90 Elbow 15mm dia	No.	50	R	-
AD 05.06	.07	Tee 22mm dia	No.	50	R	-
AD 05.06	.08	Tee 15mm dia	No.	50	R	-
CARRIED FORWARD						

CARRIED OVER							
		.02	Copper piping Class 1 SANS 460 with capillary soldered type joints for cold and hot-water piping chased in walls inclusive of , wrapping with builders paper, chasing, reinstatement of chased surfaces, bracketing, lagging and cladding:				
AD 05.06		.01	22mm dia pipe	m	120	R	-
AD 05.06		.02	15mm dia pipe	m	90	R	-
AD 05.06		.03	22mm coupler & coupler slip	No.	50	R	-
AD 05.06		.04	15mm coupler & coupler slip	No.	50	R	-
AD 05.06		.05	90 Elbow 22mm dia	No.	50	R	-
AD 05.06		.06	90 Elbow 15mm dia	No.	50	R	-
AD 05.06		.07	Tee 22mm dia	No.	50	R	-
AD 05.06		.08	Tee 15mm dia	No.	50	R	-
		.03	Supply and installation of class 6 pressure HDPE piping, including fittings, jointing and testing				
AD 05.06		.01	20mm dia HDPE pipe, including fittings	m	200	R	-
AD 05.06		.02	32mm dia HDPE pipe, including fittings	m	100	R	-
AD 04	740,04	SERVICING, CLEANING AND REPAIRS OF DOMESTIC GEYSERS					
AD 05.12		.01	Servicing, cleaning and repair of domestic geysers, including replacement of element, thermostat, safety valve and vacuum breakers and rectifying of pipe work where necessary	No.	40	R	-
AD 04	740,05	SUPPLY OF GEYSERS COMPONENTS:					
AD 05.15		.01	3kW Geyser element	No.	50	R	-
AD 05.15		.02	Thermostat	No.	50	R	-
AD 05.15		.03	Vacuum breaker	No.	50	R	-
AD 05.15		.04	Safety Valve	No.	50	R	-
AD 04	740,06	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:					
AD 05.15		.01	SANS151 dual 150 litre, 3 kW 600kPa approved geyser	No	20		
CARRIED TO SUMMARY: MECHANICAL REPAIR WORK: WET SERVICES INSTALLATIONS							R -

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BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

BILL OF QUANTITIES

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INSTALLATION 750: MECHANICAL MAINTENANCE: HVAC			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
FA 01 - 14	750,00	<b>HVAC INSTALLATION</b>				
FA 13 SA 06	750,01	<b>Maintenance of AC Units</b>				
FA.14.02(a)	.01	Maintenance of split, wall-mounted, packaged units and ducting. The units to be maintained to optimally returned to normal operation performance and meet original design and operation specifications. The work to include but not limited to maintenance of fans & fan motors, cooling coils, controllers, compressors, electrical connections, regassing, mounting and supports, expansion valves, insulations, damages to the sheets metal and air terminals such as diffusers, return air grills, mounting and supports, filters etc.	point	360		R -
SA 06 FA 13	750,02	<b>Mandatory periodical services not included in preventative maintenance items listed above:</b>				
FA.14.02(b)	.01	Provide full service of Air-conditioning units according to manufacturer's specifications (Bi-Annually)	PC Sum	-	-	R 600 000,00
	.02	Charge required by Contractor on sub item .01 above	%	R 600 000,00	10%	R 60 000,00
SA 06	750,03	<b>Payment Reduction</b>				
SA 06	.01	Payment reduction due to exceeding of maximum allowable down time during emergency breakdown.	Day	-	-R 2 000,00	rate only
SA 06	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500,00	rate only
SA 06	.03	Payment reduction due to exceeding of maximum allowable down-time during operational damage breakdown	Day	-	-R 500,00	rate only
CARRIED TO SUMMARY: MECHANICAL MAINTENANCE: HVAC INSTALLATIONS						

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## BILL OF QUANTITIES

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			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
FC 01 - 13	760	<u>KITCHEN EQUIPMENT</u>				
FC 11 SA 06	760,01	<u>Maintenace of Kitchen equipment</u>				
FC.13.02(a)	.01	Maintenance of kitchen equipment	point	360		R -
SA 06	760,02	<u>Special Testing of Installation</u>				
FC.13.02(b)	.01	Special testing of an installation where ordered by the Engineer.	Sum	1		R -
	760,03	<u>Payment Reduction</u>				
SA 06	.01	Payment reduction due to exceeding of maximum allowable down time during fatal break down	Hour	-	-R 2 500,00	rate only
SA 06	.02	Payment reduction due to exceeding of maximum allowable down time during emergency breakdown.	Day	-	-R 2 000,00	rate only
SA 06	.03	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500,00	rate only
CARRIED TO SUMMARY: MECHANICAL MAINTENANCE: KITCHEN EQUIPMENT AT BARRACKS						

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BILL OF QUANTITIES

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INSTALLATION 770: MECHANICAL MAINTENANCE: INCINERATOR			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
FB 01 - 16	770	<u>INCINERATORS INSTALLATION</u>				
FB 15 SA 06	770,01	<u>Maintenace of Incinerator equipment</u>				
FB.16.02(a)	.01	Maintenance of Incinerator installation	point	360		R -
SA 06	770,02	<u>Payment Reduction</u>				
SA 06	.01	Payment reduction due to exceeding of maximum allowable down time during fatal break down	Hour	-	-R 2 500,00	rate only
SA 06	.02	Payment reduction due to exceeding of maximum allowable down time during emergency breakdown.	Day	-	-R 2 000,00	rate only
SA 06	.03	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500,00	rate only
CARRIED TO SUMMARY: MECHANICAL MAINTENANCE: INCINERATOR INSTALLATIONS						

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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<u>INSTALLATION 780: MECHANICAL MAINTENANCE: FIRE PROTECTION</u>				CONTRACTOR		
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
FD 01 - 08	780	<u>FIRE PROTECTION INSTALLATION</u>				
FD 07 SA 06	780,01	<u>Maintenance of Fire Protection</u>				
FD.08.02(a)	.01	Maintenance of Fire Protection Installations during maintenance phase.	point	360		R -
SA 06	780,03	<u>Special Testing of Installation</u>				
FD.08.02(b)	.01	Special testing of an installation where ordered by the Engineer.	Sum	1		R -
FD 07 SA 06	780,04	Mandatory periodical servicing and cleaning not included in preventative maintenance items listed above:				
FD.08.02(c)	.01	Statutory annual servicing of 4.5kg DCP Fire extinguishers	No.	135		R -
FD.08.02(c)	.02	Statutory annual servicing of 5kg CO <sub>2</sub> Fire extinguishers	No.	45		R -
FD.08.02(c)	.03	Statutory annual servicing of 9kg DCP Fire extinguishers	No.	135		R -
FD.08.02(c)	.04	Statutory annual servicing of fire hydrants	No.	60		R -
FD.08.02(c)	.05	Statutory annual servicing of 30m long, 25mm diameter fire hose-reels	No.	90		R -
SA 06	780,05	<u>Payment Reduction</u>				
SA 06	.01	Payment reduction due to exceeding of maximum allowable down time during emergency breakdown.	Day	-	-R 2 000,00	rate only
SA 06	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500,00	rate only
SA 06	.03	Payment reduction due to exceeding of maximum allowable down-time during operational damage breakdown.	Day	-	-R 500,00	rate only
CARRIED TO SUMMARY: MECHANICAL MAINTENANCE: FIRE PROTECTION INSTALLATIONS						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

BILL OF QUANTITIES

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INSTALLATION 790: MECHANICAL MAINTENANCE: WET SERVICES			CONTRACTOR			
PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
AD 01 -AD 07	790,00	<u>MAINTENANCE OF WET SERVICES INSTALLATIONS AT OPERATIONAL AND RESIDENTIAL BUILDINGS</u>				
SA 05 AD 06	790,01	<b>Maintenance of a complete installation:</b> The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specification for Plumbing Installations: Domestic Water Distribution and Reticulation Systems, Sanitary and Brassware Equipment, shall consist of at least, but not limited to: <ul style="list-style-type: none"> <li>- Plumbing</li> <li>- Water distribution including:                             <ul style="list-style-type: none"> <li>• Pipes</li> <li>• Isolation</li> <li>• Non-return valves</li> <li>• Control valves</li> <li>• Air release valves</li> <li>• Other valves</li> <li>• Strainers</li> </ul> </li> <li>- Sanitary ware mountings, etc.</li> </ul> • Fixing of leaks and replacing of materials and components, etc:				
AD 05.20	.01	Beitbridge: Maintenance work: Plumbing, drainage,wet	point	360		R
	790,02	<u>Payment reduction:</u>				
SA.06	.01	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	-R 2 000,00	rate only
SA.06	.02	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	-R 500,00	rate only
SA.06	.03	Payment reduction due to exceeding of maximum allowable down-time during damage repair	days	-	-R 500,00	rate only
CARRIED TO SUMMARY: MECHANICAL MAINTENANCE: WET SERVICES INSTALLATIONS						



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INSTALLATION 800: ELECTRICAL SERVICES RELATED REPAIR WORKS				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
GG.10.4(b)	800,00	<b>INSTALLATION ELECTRICAL SERVICES RELATED REPAIR WORKS</b>				
	800,01	<b>LIGHTING INSTALLATION</b>				
		Service luminaire				
		.01 Type B (2 x 36W open channel fluorescent luminaire)	No	100	R	-
		.02 Type B1 (1 x 36W open channel fluorescent luminaire)	No	20	R	-
		.03 Type K (2 x 9W round bulkhead luminaire (Lascon B10))	No	300	R	-
		.04 Type M (1 x 11W bowl type luminaire with opal glass diffuser)	No	300	R	-
		.05 Type N (1 x 9W cheese type bulkhead luminaire with opal diffuser)	No	250	R	-
		.06 Type S (1 x 70W bulkhead luminaire with diffuser (Lascon B40))	No	35	R	-
		.07 Type L (2 x 18W round bulkhead luminaire )	No	35	R	-
		.08 Type O (1 x 9W oval bulkhead luminaire)	No	35	R	-
GG.10.4(a)	800,02	.09 PR214 25W Vapour Proof LED Grey	No	72	R	-
		<b>Re-Lamp</b>				
		.01 21W Dulux EL ECO Lamps (E27 BC)	No	200	R	-
		.02 21W Dulux EL ECO Lamps (E27 ES)	No	200	R	-
		.03 9W Compact Fluorescent Lamps	No	200	R	-
		.04 2D 16 W Lamps	No	200	R	-
		.50 2TC 9W Lamps	No	200	R	-
		.60 18W T-CD Lamps	No	200	R	-
		.07 26W T-CD Lamps	No	200	R	-
		.08 36W Fluorescent Lamps	No	200	R	-
		.09 58W Fluorescent Lamps	No	200	R	-
		.10 70W High Pressure Sodium Lamps	No	200	R	-
		.11 80W Mercury Vapor Lamps	No	200	R	-
		.12 125W Mercury Vapor Lamps	No	200	R	-
		.13 250W High Pressure Sodium Lamps	No	250	R	-
		.14 400W High Pressure Sodium Lamps	No	150	R	-
		.15 1000W High Pressure Sodium Lamps	No	12	R	-
		.16 Hire a cherry-picker including transportation to site	Day	20	R	-
CARRIED FORWARD					R	-

CARRIED OVER					R	-
GG.10.4(c)	800,03	<b>Replace Light fittings</b>				
		.01 LED B/head 16W luminaire with IP65 rating	No	16	R	-
		.02 LEDTEC S Lowbay LED -143W	No	25	R	-
		.03 1200mm x 600mm Recessed Double Parabolic Fluorescent Reflector	No	20	R	-
		.04 600mm x 600mm Recessed Double Parabolic Fluorescent Reflector	No	15	R	-
		.05 PR48 Xin LED High Bay with 2m Suspension Chain. E40, 85W. White and shiney aluminium	No	20	R	-
		.06 Open Channel Fluorescent ECG with 38W T8 lamp	No	80	R	-
		.07 Open Channel Fluorescent ECG with 2 x 38W T8 lamp	No	80	R	-
		.08 250W E40 HPS HID Street Light IP66	No	4	R	-
		.09 C9A Round Bathroom Ceiling Light - White (40W)	No	6	R	-
		.10 XIN LED wall light toilet 8W 4000K Grey	No	2	R	-
		.11 LED Insect Killer(30W) White/Grey	No	30	R	-
GC 13	800,04	<b><u>OVERHEAD RETICULATION INSTALLATION</u></b>				
GC 13.03(a)		.01 Service of overhead distribution system	m	900	R	-
GC 13.03(b)		.02 Replace insulators	No	32	R	-
GC 12.03(a)		.03 Service of distribution kiosk	No	10	R	-
GC 12.03(e)		.04 Replace of distribution kiosk	No	4	R	-
GC 13.03(d)		.05 Supply and install of 11m wooden poles	No	30	R	-
GC 13.03(h)		.06 25mm² ABC aluminium conductors	m	2 500	R	-
GC 13.03(i)		.07 Termination of ABC aluminium conductors	No	16	R	-
	800,05	<b><u>POLE MOUNTED POWER TRANSFORMERS</u></b>				
GD.11.3(a)		.01 Service transformer-50kVA -200kVA	No	16	R	-
GD.11.3(b)		.02 Oil Test for Pole top transformer	No	16	R	-
GD.11.3(f)		.03 Add additional Transformer oil	L	500	R	-
GD.11.3(d)		.04 Supply and Install new silica gel air drier	No	12	R	-
	800,06	<b><u>SUBSTATION NO1 AND NO2</u></b>				
GD.11.3(g)		.01 Repair 500kVA transformer for oil leakages	No	1	R	-
GA.11.3(a)		.02 Service 11kV Switchgear- existing Alstom11kV 90A	No	6	R	-
GA.11.3(b)		.03 Service battery and charger set	No	6	R	-
GA 11.3(c)		.03 Check Protection Relays O/C&EF	No	6	R	-
GD.11.3(a)		.04 Service transformer 500kVA	No	9	R	-
GD.11.3(b)		.05 Oil test	No	9	R	-
CARRIED FORWARD					R	-

CARRIED OVER					R	-
GD.11.3(d)		.06 Replace. Supply and install Silica gel air drier	No	6	R	-
GB.10.03.01		.07 Repair work to plant room	No	2	R	-
GC.11.03(a)		.08 Service main LV distribution board	No	6	R	-
	800,07	<b><u>DISTRIBUTION BOARDS</u></b>				
GG.10.03(a)	800,08	<b><u>Service distribution board</u></b>				
		.01 Main distribution board:	No	2	R	-
		.02 Sub distribution boards:	No	5	R	-
		.03 Main distribution board-Houses in town	No	28	R	-
		.04 Main distribution board-Houses at the boarder	No	30	R	-
		.05 Sub distribution board-Houses in town	No	28	R	-
		.06 Sub distribution board-Houses at the boarder	No	30	R	-
GG.10.03(b)	800,09	<b><u>Repair distribution board</u></b>				
		.01 Sub distribution boards:	No	10	R	-
GG.10.03(c)	800,10	<b><u>Replace distribution board</u></b>				
		.01 Sub distribution boards: DB 600x400mm	No	10	R	-
		.02 Main distribution board-DB-House (600 x 350)	No	12	R	-
		.03 Sub distribution board-DB-Garage(400 x 350)	No	12	R	-
		.04 Metering distribution board (350 x 350)	No	12	R	-
GG.10.03(n)	800,11	<b><u>Supply and install SABS approved circuit breakers</u></b>				
		.01 10-40A, 5kA single pole	No	25	R	-
		.02 45-63A, 5kA single pole	No	10	R	-
		.03 10-40A, 5kA double pole	No	25	R	-
		.04 10-40A, 5kA triple pole	No	25	R	-
		.05 45-63A, 5kA triple pole	No	25	R	-
		.06 80A 5kA, triple pole	No	8	R	-
		.07 125A 25kA, triple pole	No	4	R	-
		.08 250A 25kA, triple pole	No	8	R	-
GG.10.03(o)	800,12	<b><u>Supply and install approved isolators</u></b>				
		.01 20-40A 5kA double pole	No	15	R	-
		.02 63A, 5kA double pole	No	18	R	-
GG.10.03(p)	800,13	<b><u>Supply and install contactors</u></b>				
		.01 15A, 3 pole	No	4	R	-
		.02 30A, 3 pole	No	4	R	-
		.03 80A, 4 pole	No	2	R	-
CARRIED FORWARD					R	-

CARRIED OVER					R	-
GG.10.03(q)	800,14	<u>Supply and install SAT-R-Clip in timer</u>	No	6	R	-
GG.10.03(r)	800,15	<u>Supply and install approved earth leakage units</u>				
		.01 63A double pole	No	30	R	-
		.02 63A triple pole	No	2	R	-
GG.10.3(s)	800,16	<u>Supply and install 0-30A HRC fuses</u>	No	6	R	-
GG.10.03(t)	800,17	<u>Supply and install SABS approved surge arrestors</u>				
		.01 3P 60kA Maximum Surge Current Lightning Arrestor, DIN Rail	No	1	R	-
		.02 3PH+N CL2 SPD 40KA 400V	No	1	R	-
		.03 4-Pole 20KA Data 24V + Aux	No	1	R	-
		.04 SPD 4-pole with status indicators	No	60	R	-
GG.10.03(g)	800,18	<u>Provide Heavy duty padlocks</u>	No	40	R	-
	800,19	<u>LOW VOLTAGE CABLE INSTALLATIONS</u>				
GC.12.03(h)	800,20	<u>Supply and install low voltage PVC/SWA/PVC</u>				
		.01 25 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	m	300	R	-
		.02 16 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	m	2 000	R	-
		.03 10 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	m	100	R	-
		.04 6 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	m	150	R	-
		.05 4 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	m	150	R	-
		.06 2.5 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	m	125	R	-
GC.12.03(i)	800,21	<u>Termination of low voltage PVC/SWA/PVC Cu Cables</u>				
		.01 25 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	No	2	R	-
		.02 16 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	No	20	R	-
		.03 10 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	No	4	R	-
		.04 6 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	No	2	R	-
		.05 4 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	No	2	R	-
		.06 2.5 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	No	2	R	-
GC.12.03(j)	800,22	<u>Jointing of low voltage PVC/SWA/PVC Cu Cables</u>				
		.01 25 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	No	1	R	-
		.02 16 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	No	6	R	-
		.03 10 mm <sup>2</sup> x 4-core PVC/SWA/PVC CU	No	1	R	-
		.04 6 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	No	1	R	-
		.05 4 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	No	1	R	-
		.06 2.5 mm <sup>2</sup> x 3-core PVC/SWA/PVC CU	No	1	R	-
GC.12.03(l)	800,23	<u>Supply and installation bare copper earth conductor</u>				
		.01 70 mm <sup>2</sup> BCEW	m	120	R	-
		.02 16 mm <sup>2</sup> BCEW	m	20	R	-
CARRIED FORWARD					R	-

CARRIED OVER					R	-	
GC.12.03(m)	800,24	.03 10 mm² BCEW	m	20	R	-	
		.04 6 mm² BCEW	m	20	R	-	
		.05 4 mm² BCEW	m	30	R	-	
		<u>Termination of bare copper earth conductor</u>					
		.01 70 mm² BCEW	No	1	R	-	
		.02 16 mm² BCEW	No	6	R	-	
		.03 10 mm² BCEW	No	1	R	-	
GC.12.03(k)	800,25	.04 6 mm² BCEW	No	1	R	-	
		.05 4 mm² BCEW	No	1	R	-	
		<u>Cable Trenches and Accessories</u>					
		.01 Excavate in all material for trenches, back fill, compact and dispose of surplus material	m3	65	R	-	
		GC.12.03(q)	800,26	<u>Supply and install Cables sleeves</u>			
.01 110mm	m			100	R	-	
.02 32mm	m			100	R	-	
GG.10.3(j)	800,27	<u>Supply and install plastic warning tape</u>		m	200	R	-
GG.10.3(e)	800,28	<u>WIRING</u>					
	800,29	<u>Replace wiring</u>					
		.01 6 mm² PVC	m	300	R	-	
		.02 4 mm² PVC	m	300	R	-	
		.03 2.5 mm² PVC	m	2 000	R	-	
		.04 2.5 mm² BCEW	m	1 000	R	-	
		.05 1.5 mm² PVC	m	2 000	R	-	
		.06 1.5 mm² BCEW	m	1 000	R	-	
GG.10.5 (r)	800,30	<u>Replace domestic stove components</u>					
		.01 150-160 dia solid plate	No	43	R	-	
		.02 170-190 dia solid plate	No	36	R	-	
		.03 200-220 dia solid plate	No	36	R	-	
		.04 Stove control knob	No	45	R	-	
		.05 Five/six heat switch	No	36	R	-	
		.06 Oven bottom element	No	36	R	-	
		.07 Oven top element	No	36	R	-	
GG.10.5(t)	800,31	<u>Replace domestic stoves</u>					
		.01 Fit and supply of domestic four plate stove with conventional oven	No	50	R	-	
CARRIED FORWARD					R	-	

CARRIED OVER					R	-
GG.10.5(g)	800,32	<u>POWER OUTLETS AND SWITCHES</u>				
	800,33	<u>Service Outlet Socket</u>				
		.01 16A, Single SSO, Cabtree	No	60	R	-
		.02 16A, Double SSO, Cabtree	No	60	R	-
		.03 16A, Single SSO, IP55	No	20	R	-
GG.10.5(a)		.04 32A, 3P Legrand Type 592 11	No	10	R	-
	800,34	<u>Replace, supply and install Outlet Socket</u>				
		.01 16A, Single SSO, Cabtree	No	60	R	-
		.02 16A, Double SSO, Cabtree	No	60	R	-
		.03 16A, Single SSO, IP55	No	20	R	-
GG.10.5(h)		.04 32A, 3P Legrand Type 592 11	No	15	R	-
	800,35	<u>Service Isolators</u>				
		.01 60A 3 pole	No	20	R	-
		.02 30A 3 pole	No	20	R	-
		.03 20A 3 pole	No	32	R	-
GG.10.5(b)	800,36	<u>Replace, supply and install Isolators</u>				
		.01 60A 3 pole	No	20	R	-
		.02 30A 3 pole	No	40	R	-
		.03 20A 3 pole	No	80	R	-
		<u>Provide connection for fixed equipment via galvanized sprague and 3 x 6mm2 wiring eg. Stove</u>	No	20	R	-
GG.10.5(f)	800,37					
GG.10.5(f)		<u>Provide connection for fixed equipment via galvanized sprague and 4 x 6mm2 wiring eg. Coldroom compressors</u>	No	20	R	-
GG.10.5(c)	800,39	<u>Replace plug tops</u>				
		.01 3-pin single phase	No	22	R	-
		.02 5-pin CEE form	No	15	R	-
GG.10.4(g)	800,40	<u>Service light switches</u>				
		.01 1-Lever 2-Way Complete Switch (4x2)	No	80	R	-
		.02 2-Lever 1-Way Complete Switch (4x2)	No	75	R	-
		.03 3-Lever 1-Way Complete Switch (4x2)	No	32	R	-
GG.10.04(d)	800,41	<u>Replace, supply and install light switches</u>				
		.01 1-Lever 2-Way Complete Switch (4x2)	No	75	R	-
		.02 2-Lever 1-Way Complete Switch (4x2)	No	75	R	-
		.03 3-Lever 1-Way Complete Switch (4x2)	No	75	R	-
CARRIED FORWARD					R	-

CARRIED OVER						R	-
GG.10.5 (d)	800,42	<u>WIREWAYS, CONDUITS AND ACCESSORIES</u>					
	800,43	<u>Replace conduit</u>					
		.01 20mm dia PVC	m	3 000		R	-
		.02 25mm dia PVC	m	1 000		R	-
		.03 20mm dia Galvinised steel	m	1 000		R	-
		.04 25mm dia Galvanised steel	m	350		R	-
GG.10.5 (e)		.05 25mm dia Hospital saddles	No	50		R	-
		.06 20mm dia Hospital saddles	No	50		R	-
	800,44	<u>Replace wiring channel</u>	m	30		R	-
		.01 O-Line OL 9000, 127 x 76 mm					
		.02 O-Line OL 9000, 100 x 76 mm	m	30		R	-
		.03 Legrand white PVC	m	20		R	-
GG.10.5 (i)	800,45	<u>Replace Power Skirting</u>					
		.01 3 tier powder coated galvanised steel	m	40		R	-
		.02 3 tier white Legrand PVC	m	30		R	-
GG.10.5 (j)	800,46	<u>Supply and intall Pratley boxes</u>					
		.01 83mm dia- back entry	No	4		R	-
GG.10.5 (k)	800,47	<u>Supply and instal draw boxes</u>					
		.01 50 x 100mm galvanised steel	No	25		R	-
		.02 100 x 100 mm galvanised steel	No	25		R	-
		.03 50 x 100 mm PVC	No	32		R	-
		.04 100 x 100 mm PVC	No	32		R	-
GG.10.5 (l)	800,48	<u>Supply and install draw box cover plates</u>					
		.01 80 x 100 mm galvanised steel	No	20		R	-
		.02 100 x 100 mm galvanised steel	No	20		R	-
	800,49	<u>EARTHING AND BONDING</u>					
GG.10.6 (a)	800,50	<u>Supply and install earthing and bonding</u>					
		.01 SAPS Barracks	Sum	10		R	-
		.02 SAPS charge offcie	Sum	10		R	-
GG.10.6 (b)	800,51	Earthing inspection,testing and certification by a specialist contractor					
		.01 SAPS Barracks	Sum	10		R	-
		.02 SAPS Charge office	Sum	10		R	-
CARRIED FORWARD						R	-



CARRIED OVER					R	
	800,52	<u>LIGHTING PROTECTION</u>				
GG.10.6 (c)	800,53	<u>Supply and install earth electrodes</u>				
		.01 16 mm dia 1.2m long Cu	No	30	R	-
GG.10.6 (d)	800,54	<u>Provide cadweld joint to 70mm² cable</u>	No	30	R	-
GG.10.6 (e)	800,55	<u>Earth building roof structure</u>	No	22	R	-
GG.10.6 (b)	800,56	<u>Testing and certification as per SANS</u>	Sum	3	R	-
GG.10.7	800,57	<u>Inspection of Electrical Installation</u>	Sum	25	R	-
	800,58	<u>GENERATORS</u>				
		<u>Supply, Installation and testing for a fully operational</u>				
GB 10.03.16	800,59	<u>Diesel Engine including batteries and all related accessories</u>				
		0.1 Supply, install and testing 20kVA diesel engine including batteries and with all related accessories	PC SUM	1	R 250 000,00	R 250 000,00
		.02 Charge required by Contractor on sub item .01 above	%			R -
		.03 Supply, Installation and testing for a fully operational Diesel Engine including batteries, 6spm galvanized ducting and all related accessories	PC SUM	1		R -
		.03 Charge required by Contractor on sub item .01 above	%			R -
GB 10.03.17	800,60	Decommissioning existing diesel engines	No	2	R	-
GB 10.03.01	800,61	Clean and Repair genset plant room	No	6	R	-
GB 10.3.09	800,62	<u>Tools and Spares</u>				
		.01 HD diesel oil	L	180	R	-
		.02 12V diesel jockey pump	No	4	R	-
		.04 UPS cabinet key	No	2	R	-
		.05 Distribution board key	No	3	R	-
		.06 Distribution board key face plate square key	No	3	R	-
		.07 Alarm panel key	No	1	R	-
		.08 changeover contact coil	No	1	R	-
		.09 Oil funnel	No	4	R	-
		.10 Distilled water	L	25	R	-
		.11 20mm dia diesel hose	m	50	R	-
GB 10.3.4	800,63	<u>Replace starter battery</u>	No	10	R	-
GB 10.3.5	800,64	<u>Dummy load test</u>	No	8	R	-
GB 10.3.6	800,65	<u>Change-over switchgear service</u>	No	6	R	-
	800,66	<u>Repair Exhaust</u>	No	4	R	-
CARRIED FORWARD						

CARRIED OVER					R	-
GB 11.3.1	800,67	<u>Service UPS electronic and battery cabinet</u>				
		.01 Tower 20kVA single phase UPS unit	No	1	R	-
		.02 Tower 10kVA single phase UPS unit	No	3	R	-
		.03 Meissner 5kVA single phase UPS Unit	No	2	R	-
GB 11.3.2	800,68	<u>Dummy load test</u>				
		.01 Tower 20kVA single phase UPS unit	No	1	R	-
		.02 Tower 10kVA single phase UPS unit	No	3	R	-
		.03 Meissner 5kVA single phase UPS Unit	No	2	R	-
	800,69	<u>Replace, Supply and Install UPS batteries</u>				
		.01 120V Lead-acid battery	No	6	R	-
	800,70	<u>Replace, Supply and Install UPS Unit</u>				
		.01 20kVA single phase UPS unit	No	1	R	-
		.02 10kVA single phase UPS unit	No	1	R	-
		.03 5kVA single phase UPS Unit	No	1	R	-
	800,71	<u>AREA AND SECURITY LIGHTING</u>				
GE 9.3 (h)	800,72	<u>Replace photocell</u>				
		.01 National Plug-in Type	No	160	R	-
		.02 National 16A unit with bracket	No	80	R	-
GE 9.3 (g)	800,73	<u>Replace, Supply and Install area light pole</u>				
		.01 25m stainless steel	No	2	R	-
		.02 11m Fiberglass Poles	No	30	R	-
		.03 9m Fiberglass Poles	No	22	R	-
		.04 4.1m Fiberglass Poles	No	50	R	-
		.05 Access door pole cover	No	70	R	-
	800,74	<u>FIRE DETECTION SYSTEM</u>				
GF.6.3 (b) &GF.6.3 (d)	800,75	<u>Servicing of fire detection system</u>				
		.01 Site audit and reporting	SUM	1	R	-
		.02 Fire panel	No	4	R	-
		.03 smoke detectors	No	72	R	-
		.04 Addressable Manual call point	No	12	R	-
		.05 Sounder Strobe	No	14	R	-
GF.6.3(a)	800,76	Replace, supply, install and testing of fire detection devices and cabling				
		.01 Twisted pair fire retardant cabling	m	1000	R	-
		.02 Fire panel	No	4	R	-
CARRIED FORWARD					R	-

CARRIED OVER					R	-
GF.6.3 (b) &GF.6.3 (d)	800,77	.03 smoke detector	No	15	R	-
		.04 Manual Call point	No	4	R	-
		.05 Sounder strobe	No	4	R	-
		<b>OPTICAL BEAM DETECTION</b>				
		<b>Supply, installation and testing:</b>				
	800,78	.01 Transmitter head (5-120m) and Mirror	No	3	R	-
		.02 Low Level Controller with LCD display with power supply	No	3	R	-
		.03 TH30 cabling	m	6	R	-
		.04 Power Supply	No	3	R	-
		.05 Interface Equipment	No	3	R	-
GF.6.3 (g)	800,79	.06 Testing, Commissioning and certification	sum	1	R	-
CARRIED TO SUMMARY: ELECTRICAL SERVICES RELATED REPAIR WORKS					R	-

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

BILL OF QUANTITIES

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

**INSTALLATION 810 : IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	810,00	Maintenance of an installation				
	810,01	<u>Maintenance of installation 810</u>	Point	360		R -
	810,02	Payment reduction				
SA 06.03	810,03	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA 06.04	810,04	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA 06.05	810,05	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
SA 06.06	810,06	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	R 500,00	Rate only
	810,07	Emergency Breakdown				
	810,08	Call out for repair of Emergency Breakdown 24Hour response	No	5		R -
CARRIED TO SUMMARY: IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS					R	-

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

BILL OF QUANTITIES

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**INSTALLATION 820 : IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	820,00	Maintenance of an installation				
	820,01	Maintenance of installation 820		360		R -
	820,02	Payment reduction				
SA 06.03	820,03	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA 06.04	820,04	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA 06.05	820,05	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
SA 06.06	820,06	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	R 500,00	Rate only
SA 06	820,07	Emergency Breakdown				
	820,08	Call out for repair of Emergency Breakdown 24Hour resp	No	5		R -
CARRIED TO SUMMARY: IMMIGRATIONS AND CUSTOMS, PUBLIC TOILETS, HRM SAPS, SAPS LOGISTICS, SUBSTATION NO1 & AGRICULTURAL/ POLICE STATION BUILDINGS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS					R	-

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

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**INSTALLATION 830 : LIGHT VEHICLE INSPECTION, CONTROL POINT AND PUBLIC TOILETS - BUILDING ELECTRICAL SERVICES RELATED**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	CONTRACTOR		
				QUANTITY	RATE	AMOUNT
SA 06.01	830,00	Maintenance of an installation				
	830,01	Maintenance of installation 830	Point	360		R -
	830,02	Payment reduction				
SA 06.03	830,03	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA 06.04	830,04	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA 06.05	830,05	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
SA 06.06	830,06	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	R 500,00	Rate only
	830,07	Emergency Breakdown				
	830,07	Call out for repair of Emergency Breakdown 24Hour resp	No	5		R -
CARRIED TO SUMMARY: LIGHT VEHICLE INSPECTION, CONTROL POINT AND PUBLIC TOILETS - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS						R -

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

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**INSTALLATION 840 : SAPS BARRACKS, CELLS AND ADMIN OFFICE  
AND BULK WATER PURIFICATION BUILDING - BUILDING**

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	CONTRACTOR		
				QUANTITY	RATE	AMOUNT
SA 06.01	840,00	Maintenance of an installation				
	840,01	Maintenance of installation 840	Point	360		R -
	840,02	Payment reduction				
SA 06.03	840,03	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA 06.04	840,04	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA 06.05	840,05	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
SA 06.06	840,06	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	R 500,00	Rate only
	840,07	Emergency Breakdown				
	840,08	Call out for repair of Emergency Breakdown 24Hour res	No	5		R -
CARRIED TO SUMMARY: SAPS BARRACKS, CELLS AND ADMIN OFFICE AND BULK WATER PURIFICATION BUILDING - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS					R	-



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**BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)**

**BILL OF QUANTITIES**

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**INSTALLATION 850 : MAIN ENTRANCE CANOPY, LIGHT VEHICLE INSPECTION, PUBLIC INSPECTION AND PEDESTRIAN LUGGAGE SEARCH - BUILDING ELECTRICAL SERVICES RELATED**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	850,00	Maintenance of an installation				
	850,01	Maintenance of installation 850	Point	360,00		R -
	850,02	Payment reduction				
SA 06.03	850,03	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA 06.04	850,04	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA 06.05	850,05	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
SA 06.06	850,06	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	R 500,00	Rate only
	850,07	Emergency Breakdown				
	850,08	Call out for repair of Emergency Breakdown 24Hour response	No	R 5,00		R -
CARRIED TO SUMMARY: MAIN ENTRANCE CANOPY, LIGHT VEHICLE INSPECTION, PUBLIC INSPECTION AND PEDESTRIAN LUGGAGE SEARCH - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS						R -

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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**INSTALLATION 860 : WASTE WATER TREATMENT PLANT & WATER PUMP SCHEME - BUILDING ELECTRICAL SERVICES RELATED**

				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 06.01	860,00	Maintenance of an installation				
	860,01	Maintenance of installation 860	Point	360		R -
	860,02	Payment reduction				
SA 06.03	860,03	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA 06.04	860,04	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA 06.05	860,05	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
SA 06.06	860,06	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	R 500,00	Rate only
	860,07	Emergency Breakdown				
	860,08	Call out for repair of Emergency Breakdown 24Hour response	No	5		R -
CARRIED TO SUMMARY: WASTE WATER TREATMENT PLANT & WATER PUMP SCHEME - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS						R -

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

BILL OF QUANTITIES

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<b>INSTALLATION 870: RESIDENTIAL HOUSES - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS</b>				<b>CONTRACTOR</b>		
<b>PAYMENT REFERS TO</b>	<b>ITEM NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
SA 06.01	870	Maintenance of an installation				
	870,01	Maintenance of installation 870	Point	360		R -
	870,02	Payment reduction				
SA 06.03	870,03	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour		R 2 500,00	Rate only
SA 06.04	870,04	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day		R 2 500,00	Rate only
SA 06.05	870,05	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day		R 500,00	Rate only
SA 06.06	870,06	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day		R 500,00	Rate only
	870,07	Emergency Breakdown				
	870,08	Call out for repair of Emergency Breakdown 24Hour response	No	5		R -
<b>CARRIED TO SUMMARY: RESIDENTIAL HOUSES - BUILDING ELECTRICAL SERVICES RELATED MAINTENANCE WORKS</b>						<b>R -</b>

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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

<b>INSTALLATION 880: STANDBY POWER SYSTEMS MAINTENANCE WORK</b>				<b>CONTRACTOR</b>		
<b>PAYMENT REFERS TO</b>	<b>ITEM NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
SA 06.01	<b>880</b>	Maintenance of an installation 880				
GB 12.04.01 & GB 12.04.02	<b>880,01</b>	Maintenance of Standby Power Systems	Point	360		R -
	<b>880,02</b>	Payment reduction				
	<b>880,03</b>	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA 06.04	<b>880,04</b>	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA 06.05	<b>880,05</b>	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
	<b>880,06</b>	Emergency Breakdown				
	<b>880,07</b>	Call out for repair of Emergency Breakdown 24Hour response	No	5		R -
	<b>880,08</b>	Generator Services				
GB 10.03.02	<b>880,09</b>	Service new 250kVA Generator at Sub No1	Sum	3		R -
GB 10.03.02	<b>880,10</b>	Service 150kVA Perkins Generator at Sub No2	Sum	3		R -
GB 10.03.02	<b>880,11</b>	Service new 60kVA Generator at WWTP	Sum	3		R -
GB.10.3.3	<b>880,12</b>	Service new 20kVA diesel engine at Bulkwater services	Sum	4		R -
GB 10.03.02	<b>880,13</b>	Service new 60kVA Mobile Generator	Sum	3		R -
GB 10.03.08	<b>880,14</b>	Supply Diesel fuel	L	25 000		R -
GB 10.03.12	<b>880,15</b>	Fuel water separator	No	3		R -
CARRIED TO SUMMARY: STANDBY POWER SYSTEMS MAINTENANCE WORK						R -

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

**BEITBRIDGE PORT OF ENTRY:** Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

## BILL OF QUANTITIES

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

<b>INSTALLATION 890: EXTERNAL LIGHTING MAINTENANCE WORK</b>				<b>CONTRACTOR</b>		
<b>PAYMENT REFERS TO</b>	<b>ITEM NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
SA.01	<b>890</b>	<b>Maintenance of the completed installation:</b>				
GE 11.04	<b>890,01</b>	Maintenance of installation External Lighting	Point	360		R -
	<b>890,02</b>	Payment reduction:				
SA.04	<b>890,03</b>	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA.05	<b>890,04</b>	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA.06	<b>890,05</b>	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
SA.07	<b>890,06</b>	Payment reduction due to exceeding of maximum allowable down-time during malicious damage repair	day	-	R 500,00	Rate only
	<b>890,07</b>	<b>Emergency Breakdown</b>				
	<b>890,08</b>	Call out for repair of Emergency Breakdown 24Hour response	No	5		R -
<b>CARRIED TO SUMMARY: EXTERNAL LIGHTING MAINTENANCE WORK</b>						<b>R -</b>

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)

BILL OF QUANTITIES

NE TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

INSTALLATION 900: POWER RETICULATION MAINTENANCE WORK				CONTRACTOR		
PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	900	<u>General Maintenance</u>				
SA.06.01	900,01	Maintenance of Power Reticulation	Point	360		R -
	900,02	<u>Payment Reduction</u>				
SA.06.04	900,03	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA.06.05	900,04	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	days	-	R 2 500,00	Rate only
SA.06.06	900,05	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	days	-	R 500,00	Rate only
SA.06.07	900,06	Payment reduction due to exceeding of maximum allowable down-time during malicious damage repair	days	-	R 500,00	Rate only
SA.06.01 & GB 12.06	900,07	Maintenance of completed UPS	Point	360		R -
	900,08	<u>Emergency Breakdown</u>				
	900,09	Call out for repair of Emergency Breakdown 24Hour response	No	5		R -
CARRIED TO SUMMARY: POWER RETICULATION MAINTENANCE WORK					R	-

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

Tender No: H21/016 AI

**BEITBRIDGE PORT OF ENTRY: Maintenance and repairs of buildings, civil, electrical and mechanical infrastructure and installations for the period of 36 months (Appointment of the Contractor)**

## BILL OF QUANTITIES

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<b>INSTALLATION 910: FIRE DETECTION SYSTEM</b>				<b>CONTRACTOR</b>		
<b>PAYMENT REFERS TO</b>	<b>ITEM NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
SA 06.01	910	<u>Maintenance of an installation</u>				
	910.01	Maintenance of installation 910	Point	360		R -
SA 06	910.02	<u>Special Testing of installation</u>				
	.01	Special testing of the installation where ordered by the engineer	Sum	3		R -
	910.03	Payment reduction				
SA 06.03	910.04	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	hour	-	R 2 500,00	Rate only
SA 06.04	910.05	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	day	-	R 2 500,00	Rate only
SA 06.05	910.06	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	day	-	R 500,00	Rate only
SA 06.06	910.07	Payment reduction due to exceeding of maximum down-time during malicious damage repair	day	-	R 500,00	Rate only
SD 06	910.08	Training				
	910.09	Presenting a training course for operators	Sum	1		R -
<b>CARRIED TO SUMMARY: FIRE DETECTION SYSTEM</b>						<b>R -</b>