

PROVISIONAL BILLS OF QUANTITIES

FOR

REFURBISHMENTS AND UPGRADES TO MERAPE TRAIN STATION

AT

SOWETO, JOHANNESBURG

Sept-22

SECTION NO.1 : PRELIMINARIES

Item No	Quantity	Rate	Amount R
<u>SECTION NO. 1</u>			
<u>PRELIMINARIES AND GENERAL</u>			
<u>BILL NO. 1</u>			
<u>BUILDING AGREEMENT AND PRELIMINARIES</u>			
<p>The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described</p> <p>The JBCC Principal Building Agreement contract data form an integral part of this agreement</p> <p>The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described</p> <p>The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause</p> <p>The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only</p> <p>Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable"</p> <p>Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents</p>			
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Section No. 1 Preliminaries Contract Part C2: Pricing Data			

SECTION A: PRINCIPAL BUILDING AGREEMENT

Interpretation (A1-A7)

- 1 Clause 1.0 - Definitions and interpretation
- 2 Clause 2.0 - **Law**, regulations and **notices**
- 3 Clause 3.0 - Offer and acceptance

F:..... V:.....
T:.....

- 4 Clause 4.0 - Cession and assignment

F:..... V:.....
T:.....

- 5 Clause 5.0 - Documents

F:..... V:.....
T:.....

- 6 Clause 6.0 - **Employer's agents**

F:..... V:.....
T:.....

- 7 Clause 7.0 - Design responsibility

F:..... V:.....
T:.....

Insurances and securities (A8-A11)

- 8 Clause 8.0 - **Works** risk

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9	<p>Clause 9.0 - Indemnities</p> <p>F:..... V:..... T:.....</p>	Item		
10	<p>Clause 10.0 - Insurances</p> <p>F:..... V:..... T:.....</p>	Item		
11	<p>Clause 11.0 - Securities</p> <p><u>Execution (A12 - A17)</u></p>			
12	<p>Clause 12.0 - Obligations of the parties</p> <p>F:..... V:..... T:.....</p>	Item		
13	<p>Clause 13.0 - Setting out</p> <p>F:..... V:..... T:.....</p>	Item		
14	<p>Clause 14.0 - Nominated subcontractors</p> <p>F:..... V:..... T:.....</p>	Item		
15	<p>Clause 15.0 - Selected subcontractors</p> <p>F:..... V:..... T:.....</p>	Item		
16	<p>Clause 16.0 - Direct contractors</p> <p>Attendance on direct contractors</p> <p>In respect of direct contractors the contractor shall:</p> <p>1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials</p>			
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	<p>2. Allow the use of personnel welfare facilities, where provided</p> <p>3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation</p> <p>4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right, while it remains erected on the site [16.1]</p> <p>F:..... V:..... T:.....</p>				
17	<p>Clause 17.0 - Contract instructions</p> <p>Site instructions</p> <p>Instructions issued on site are to be recorded in a site instruction book which is to be supplied and maintained on site by the contractor</p> <p>F:..... V:..... T:.....</p> <p><u>Completion (A18 - A24)</u></p>	Item			
18	Clause 18.0 - Interim completion	N/A			
19	<p>Clause 19.0 - Practical completion</p> <p>F:..... V:..... T:.....</p>	Item			
20	Clause 20.0 - Completion in sections				
21	Clause 21.0 - Defects liability period and final completion				
22	<p>Clause 22.0 - Latent defects liability period</p> <p>F:..... V:..... T:.....</p>	Item			
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23	<p>Clause 23.0 - Revision of the date for practical completion</p> <p>Substitution of materials and goods</p> <p>The removal or substitution of any materials and goods which do not conform to the specification or the contract drawings shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value [17.1.8; 23.1 & 2]</p> <p>F:..... V:..... T:.....</p>	Item		
24	<p>Clause 24.0 - Penalty for late or non-completion</p> <p>F:..... V:..... T:.....</p> <p><u>Payment (A25 - A27)</u></p>	Item		
25	<p>Clause 25.0 - Payment</p> <p>Prices submitted</p> <p>Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing</p> <p>F:..... V:..... T:.....</p>	Item		
26	<p>Clause 26.0 - Adjustment of the contract value and final account</p> <p>Fluctuations in costs</p> <p>All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor [26.9.5]</p>			
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27	<p>Clause 27.0 - Recovery of expense and/or loss</p> <p>F:..... V:..... T:.....</p> <p><u>Suspension and termination (A28 - A29)</u></p>	Item		
28	<p>Clause 28.0 - Suspension by the contractor</p> <p>F:..... V:..... T:.....</p>	Item		
29	<p>Clause 29.0 - Termination</p> <p>F:..... V:..... T:.....</p> <p><u>Dispute resolution (A30)</u></p>	Item		
30	<p>Clause 30.0 - Dispute resolution</p> <p>F:..... V:..... T:.....</p>	Item		
31	<p><u>Agreement</u></p> <p>The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties</p> <p>F:..... V:..... T:.....</p>	Item		
32	<p><u>Contract data</u></p> <p>F:..... V:..... T:.....</p> <p><u>SECTION B: GENERAL PRELIMINARIES</u></p> <p><u>Definitions and interpretation (B1)</u></p>	Item		
33	<p>Clause 1.1 - Definitions</p> <p>F:..... V:..... T:.....</p>	Item		
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34	<p>Clause 1.2 - Interpretation</p> <p>F:..... V:..... T:.....</p> <p><u>Documents (B2)</u></p>	Item		
35	<p>Clause 2.1 - Checking of documents</p> <p>F:..... V:..... T:.....</p>	Item		
36	<p>Clause 2.2 - Provisional bills of quantities</p> <p>F:..... V:..... T:.....</p>	Item		
37	<p>Clause 2.3 - Availability of construction information</p> <p>F:..... V:..... T:.....</p>	Item		
38	<p>Clause 2.4 - Ordering of materials and goods</p> <p>F:..... V:..... T:.....</p> <p><u>Previous work and adjoining properties (B3)</u></p>	Item		
39	<p>Clause 3.1 - Previous work - dimensional accuracy</p> <p>F:..... V:..... T:.....</p>	Item		
40	<p>Clause 3.2 - Previous work - defects</p> <p>F:..... V:..... T:.....</p>	Item		
41	<p>Clause 3.3 - Inspection of adjoining properties</p> <p>F:..... V:..... T:.....</p>	Item		
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	<u>The site (B4)</u>			
42	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item		
43	Clause 4.2 - Enclosure of the works	Item		
44	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item		
45	Clause 4.4 - Encroachments F:..... V:..... T:.....	Item		
46	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item		
47	Clause 4.6 - Services - known F:..... V:..... T:.....	Item		
	<u>Management of contract (B5)</u>			
48	Clause 5.1 - Management of the works F:..... V:..... T:.....	Item		
49	Clause 5.2 - Progress meetings F:..... V:..... T:.....	Item		
50	Clause 5.3 - Technical meetings F:..... V:..... T:.....	Item		
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<u>Samples, shop drawings and manufacturer's instructions (B6)</u>					
51	Clause 6.1 - Samples of materials F:..... V:..... T:.....	Item			
52	Clause 6.2 - Workmanship samples F:..... V:..... T:.....	Item			
53	Clause 6.3 - Shop drawings F:..... V:..... T:.....	Item			
54	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item			
<u>Deposits and fees (B7)</u>					
55	Clause 7.1 - Deposits and fees F:..... V:..... T:.....	Item			
<u>Temporary services (B8)</u>					
56	Clause 8.1 - Water F:..... V:..... T:.....	Item			
57	Clause 8.2 - Electricity F:..... V:..... T:.....	Item			
58	Clause 8.3 - Ablution and welfare facilities F:..... V:..... T:.....	Item			
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59	<p>Clause 8.4 - Communication facilities</p> <p>F:..... V:..... T:.....</p> <p><u>Prime cost amounts (B9)</u></p>	Item		
60	<p>Clause 9.1 - Responsibility for prime cost amounts</p> <p><u>Attendance on subcontractors (B10)</u></p>			
61	<p>Clause 10.1 - General attendance</p> <p><u>User note</u></p> <p><i>General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement</i></p> <p>F:..... V:..... T:.....</p>	Item		
62	Clause 10.2 - Special attendance			
63	<p>Clause 11.1 - Protection of the works</p> <p>F:..... V:..... T:.....</p>	Item		
64	<p>Clause 11.2 - Protection/isolation of existing works and works occupied in sections</p> <p>F:..... V:..... T:.....</p>	Item		
65	<p>Clause 11.3 - Security of the works</p> <p>F:..... V:..... T:.....</p>	Item		
66	<p>Clause 11.4 - Notice before covering work</p> <p>F:..... V:..... T:.....</p>	Item		
67	Clause 11.5 - Disturbance			
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68	Clause 11.6 - Environmental disturbance				
69	Clause 11.7 - Works cleaning and clearing F:..... V:..... T:.....	Item			
70	Clause 11.8 - Vermin F:..... V:..... T:.....	Item			
71	Clause 11.9 - Overhand work F:..... V:..... T:.....	Item			
72	Clause 11.10 - Tenant installations F:..... V:..... T:.....	Item			
73	Clause 11.11 - Advertising F:..... V:..... T:.....	Item			
	<u>SECTION C: SPECIFIC PRELIMINARIES</u>				
74	Site instructions Contract Instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the contractor F:..... V:..... T:.....	Item			
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75	<p>Warranties for material and workmanship</p> <p>Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent on the final completion of the contract. The warranty shall state that workmanship, materials and installation are warranted for a specified period from the date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the contractor</p> <p>F:.....V:.....T:.....</p>				
		Item			
76	<p>Co-operation of contractor for cost management</p> <p>It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget. The principal agent undertakes to make available to the contractor all budgetary allowances and cost assessments/reports to enable the proper procedure to be implemented and the contractor shall attend all cost plan review and cost management meetings. The contractor undertakes to extend these procedures, as necessary, to all subcontractors</p> <p>F:.....V:.....T:.....</p>				
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77	<p>Propping of floors below</p> <p>The contractor is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of materials and goods and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the principal agent and the cost thereof shall be borne by the contractor</p> <p>F:..... V:..... T:.....</p>				
		Item			
78	<p>Testing of windows for watertightness</p> <p>Each window shall be tested for watertightness with water sprayed on using adequate pressure. If in the opinion of the principal agent, the pressure proves to be inadequate, then the pressure shall be boosted by means of compressed air or other approved means</p> <p>F:..... V:..... T:.....</p>				
		Item			
79	<p>Testing of flat roof waterproofing for watertightness</p> <p>Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the principal agent, flooded with water and kept "ponded" for at least 36 hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing</p> <p>F:..... V:..... T:.....</p>				
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HIV/AIDS AWARENESS

It is required of the Contractor to thoroughly study the HIV/AIDS Specification 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 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 **Principal Agent**, notwithstanding the provisions of Clause A 31 of "Section 1: Preliminaries (Section A)" or any other clauses to the contrary, reserve 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.

80

AWARENESS CHAMPION

Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification.

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81	<p>AWARENESS WORKSHOPS</p> <p>Selection and appointment of a competent Service Provider approved by the principal agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multimedia techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification.</p> <p>F:..... V:..... T:.....</p>	Item		
82	<p>POSTERS, BOOKLETS, VIDEOS, ETC.</p> <p>Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification.</p> <p>F:..... V:..... T:.....</p>	Item		
83	<p>ACCESS TO CONDOMS</p> <p>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, all in accordance with the HIV/AIDS Specification.</p> <p>F:..... V:..... T:.....</p>	Item		
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84	<p>MONITORING</p> <p>Monitoring HIV/AIDS awareness of workers, providing the principal 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, all in accordance with the HIV/AIDS Specification.</p> <p>F:..... V:..... T:.....</p> <p><u>SOCIO-ECONOMIC DELIVERABLES</u></p>	Item		
85	<p>It is required that the contractor shall adhere to all Socio-Economic Deliverables.</p> <p>Provision for pricing of all the main contractor's costs as stipulated in the deliverables is made under this clause and are deemed to be priced hereunder and no additional claims in this regard shall be entertained</p> <p>F:..... V:..... T:.....</p> <p><u>EMPLOYMENT OF SMME SUB-CONTRACTORS AS A CONDITION OF TENDER</u></p>	Item		
86	<p>It is required that the contractor shall sub-contract 30% of the contract value (Excluding VAT, Escalation, Contingencies, HT equipment provisions and Socio-Economic provisions) of the contract including labour and material to EME's and QSE's</p> <p>Provision for pricing of all the main contractor's costs is made under this clause and are deemed to be priced hereunder and no additional claims in this regard shall be entertained</p> <p>F:..... V:..... T:.....N/A</p>	Item		
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OCCUPATIONAL HEALTH AND SAFETY ACT

87 The contractor shall comply with all the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act no.85 Of 1993)

It is required of the contractor to thoroughly study the Health and Safety Specification.

The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, 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.

Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

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ENVIRONMENTAL HEALTH AND SAFETY

88 The contractor shall comply with all the requirements set out in the Environmental Health and Safety Specification

It is required of the contractor to thoroughly study the Enviromental Health and Safety Specification

The contractor must take note that compliance with the Environmental Health and Safety is compulsory.

Provision for pricing of the Environmental Health and Safety is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

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SUMMARY OF CATEGORIES

Category: Fixed R

Category: Value R

Category: Time R

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Refurbishments and Upgrades to Merafe Train Station Prasa South Gauteng Region Corridor 3

Section No. 1			
Preliminaries			
Bill No. 1			
Preliminaries			
<u>COLLECTION PAGE</u>			
	Page No		Amount R
Total Brought Forward from Page No.	1		
Total Brought Forward from Page No.	2		
Total Brought Forward from Page No.	3		
Total Brought Forward from Page No.	4		
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SECTION NO.2 : BUILDING WORK

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 1</u></p> <p><u>ALTERATIONS</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions and preambles in other bills</u></p> <p>Reference shall be made to other trades and preambles for preambles and full descriptions of items not fully described in this trade which shall apply equally to the work in this trade, unless otherwise described.</p> <p><u>General</u></p> <p>The Tenderer is advised to visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for a compensation event in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p> <p>The attention of tenderers is drawn to the fact that unless otherwise stated loose furniture, kitchen equipment, apparatus, machinery, etc. is to remain the property of the Chief Director and does not fall within the scope of this contract.</p>			
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<p>Section No. 2 Alterations Contract Part C2: Pricing Data</p>			

Tenderers are advised that parts of the existing buildings on the site, including the existing water supply and sanitary systems will be in use during the progress of the Works and any disconnections, etc. that may be necessary must be made as directed by the Project Manager and in such a manner as to cause the minimum of inconvenience to the occupants of the buildings

Notices

Special care shall be exercised during the progress of the work to ensure that any electrical installations, water supply pipes, telephone and other services which may be encountered are not interfered with and notice shall be given to the Project Manager if any disconnection or alterations become necessary

Demolitions

All demolitions work shall be carried out in accordance with the Local By-laws and to the requirements of the Local Health Authorities. The Contractor shall take all precautions necessary to prevent any nuisance from dust whilst carrying out the work, including watering of the works with a jet or spray

Old materials to become the property of the Contractor

Old materials from alterations, except where described to be re-used or handed over to the Project Manager, become the property of the Contractor

Old materials from the alterations, except where described to be re-used or handed over to the Project Manager, as well as all rubbish, etc., must be regularly carted from site and not be allowed to accumulate on or around the site.

Old materials not to be re-used

None of the old materials is to be used for new work except where specifically described as being set aside for re-use

Carried to Collection

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Section No. 2
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Handing over of materials

Where certain materials or articles from demolitions or alterations are described as to be handed over by the Contractor to the Project Manager such materials or articles shall be properly stored by the Contractor, until handing over thereof.

The Contractor must obtain an official receipt listing the materials or articles and dates of handing over. If the Contractor fails to submit the receipt when requested, it shall be deemed that the materials or articles are still in his possession and he will be liable to the Chief Director for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor

Protection

In taking down and removing existing work the utmost care is to be observed to avoid any structural or other damage to the remaining portions of the building and the work is to be carried out in a workmanlike, practical and safe manner under the constant supervision of a competent foreman

The contractor must also protect all work not removed such as walls, floors, doors, windows, or other joinery, loose and fixed fittings and electrical appliances, etc. from damage during the progress of the work and provide all necessary materials for doing so

The Contractor will be held solely responsible for any damage to persons or property and for the safety of the structure throughout the whole of this contract and must make good at his own expense any damage that may occur. He shall allow for protecting and indemnifying persons using or passing through the existing buildings from injury and by necessary barriers, signs, etc

Making good damaged work

The Contractor shall make good in all trades to existing work where damaged or disturbed through the alterations with all necessary new materials to match the existing. The works shall be left complete and perfect in every respect

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Pulling down

Pulling down walls shall include for dead shoring under existing concrete slabs, beams, roof members, etc., for pulling down face brick, tiled or plastered walls and concrete beams or lintels occurring in same, for removing skirtings, quadrants, cornices, etc, fixed to same for hacking up flooring in openings and making good as previously described to walls, floors, ceilings, etc, unless otherwise described

Junction of new and existing

Making good at the junction of new and existing work shall include for piercing out, cutting through or removing short lengths of existing material, for supplying short lengths of new material and for jointing to match existing

Existing and adjoining buildings, etc.

In taking down and removing existing work the utmost care must be observed to avoid any structural or other damage to the remaining portions of the building or adjoining buildings, boundary walls, pavings, roadways, etc, and the Contractor shall provide all shoring, needling, strutting, etc, to ensure the stability of all structures during demolition or alteration work. The Contractor must cover up and protect from damage all work not removed and must make good at his own expense any damage that may occur

Forming new openings or altering openings in existing walls

Descriptions for forming new openings or altering openings in existing walls shall be deemed to include breaking out for and forming new brick, in-situ concrete or pre-stressed concrete lintels including all reinforcement, formwork, turning pieces, etc, building up jambs or portions of openings as described with brickwork or blockwork properly toothed and bonded to existing, building cavities or hollow walls solid where necessary and making good finishes all round on both sides and into reveals as described

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Building up openings

Descriptions of building up existing openings, where given in number, shall be deemed to include preparing existing surfaces all round, brickwork or blockwork, properly toothed and bonded to existing, wedging up and making good finishes on both sides as described

Site works

Hacking up gravel, concrete, bituminous or other paving shall include for grubbing up the sub-base and brick or concrete kerb

Pulling down boundary, retaining walls, fencing, etc, shall include for grubbing up all bricks, concrete and reinforced concrete foundations, bases, etc

All voids in ground consequent upon the pulling or cutting down are to be filled in with clean earth, well consolidated and rammed up to finished ground level

Plant and Scaffolding

The Contractor shall provide, maintain and remove from site if no longer required, all plant and scaffolding for the proper execution of the works

Dimensions

The Contractor is advised to take all dimensions affecting the existing buildings on the site, as he will be held solely responsible for all new work being of the correct sizes

Removal of ceilings

The Contractor is to ensure compliance with all relevant by-laws and legislation in terms of taking down, temporary storing on site, loading and final removal from site of ceilings with asbestos cement content

NOTE:

All sizes and dimensions stated herein are approximate and deemed only sufficient to identify the item of work concerned

Carried to Collection

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All new finishes are measured in the relevant trades for new work

REMOVAL OF EXISTING WORK

Taking up and removing pavers, etc

1	Concrete pavers laid loose on compacted subbase	m²	20	
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Taking out and removing doors, windows, etc including thresholds, sills, etc (building up openings elsewhere)

2	Glazed window approximate size 850 x 750mm high	No	9	
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Take off and remove doors from existing frames including preparing frame to receive new door leaves (elsewhere measured)

3	Timber single door not exceeding 2,5m2	No	39	
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Taking down and removing roofs, floors, panelling, ceilings, partitions, etc

4	Corrugated iron roof covering and timber purlins, inspect and repair roof trusses to receive new covering.	m²	677	
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5	Gypsum plasterboard ceilings including cornices, timber bandering, etc	m²	412	
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Taking out and removing sundry joinery work

6	Timber skirtings from brickwork	m		Rate Only
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Taking out and removing joinery fittings etc

7	Timber kitchen sink cupboard approximately 1000 x 600 x 890mm high	No	1	
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Taking up and removing vinyl floor coverings, carpeting, etc

8	Carpet floor covering including preparing screed for new floor covering	m²		Rate Only
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**Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3**

<u>Take off and remove existing ironmongery from doors, including making good and prepare to receive new ironmongery (elsewhere measured)</u>					
9	Mortice lockset complete with handles from timber door	No	36		
10	Door closer from timber door	No			Rate Only
<u>Taking out and removing ironmongery</u>					
11	Stainless steel toilet roll holder	No	14		
12	Paper towel dispenser	No	6		
13	Liquid dispenser	No	6		
<u>Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screeds, plaster, etc</u>					
14	30mm Thick screed from floors	m ²			Rate only
<u>Hacking up/off and removing ceramic tile floor and wall finishes including removing mortar bed or backing and preparing concrete or brick surfaces for new screed, plaster or tile finishes</u>					
15	Tiles to floors	m ²	708		
16	Tiles to walls	m ²	75		
17	Tile skirting	m	611		
<u>Carefully take out existing sanitary fittings and hand over to Client, or store in demarcated area on site, as directed by the Project Manager</u>					
18	Stainless steel single bowl sink	No	4		
19	Vitreous china wash hand basin	No	16		
20	Vitreous china WC pan with cistern	No	14		
21	Vitreous china wall mounted urinal	No	7		
22	Paraplegic grab and flush rails	No	6		
Carried to Collection				R	
Section No. 2 Alterations Contract Part C2: Pricing Data					

**Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3**

23	Floor drain	No	6		
24	15mm Chromium plated built-in type shower cubicle set comprising: 1x undertile shower mixer with square pattern taps and backplate, 1x overhead shower arm and vandal proof swivel action shower head	No	1		
	<u>Taking out and removing glass and mirrors</u>				
25	Glass from steel windows including cleaning out rebates and preparing for new glass	m ²	8		
26	Mirror size 450 x 600mm high from wall	No	13		
	<u>Taking out and removing street furniture:</u>				
27	Steel seats	No	10		
28	Steel bins	No	6		
	<u>PREPARATORY WORK TO EXISTING SURFACES</u>				
29	Making good defects in existing screeded floors with an approved cementious compound	m ²			Rate Only
	<u>REPAIRING PLASTER</u>				
	<u>General Notes</u>				
	All plaster repair admixtures are to be applied strictly in accordance with the manufacturer's requirements. Break out all loose and hollow plaster at least 200mm wide all around loose plaster area, brush clean of all loose material, treat exposed area with adhesive slurry and plaster with an admixture of 3:1 sand/cement and 3:1 water/adhesive slurry				
	All work is deemed to be in patches				
	<u>Prepare and apply 3:1 plaster admixture as described</u>				
30	On brick walls	m ²			Rate Only
31	On narrow widths	m ²			Rate Only
	Carried to Collection			R	
	Section No. 2 Alterations Contract Part C2: Pricing Data				

CONCRETE CRACK REPAIRS

General Notes

Preparation of surfaces

Surfaces shall be dry and clean, free of dust, sand, grit and flaking particles, rust, scale, marine growths, laitance and loose matter, contaminants such as oil, grease, etc. Cracks to be cleaned and widened by hand or mechanical means. Where applicable, surfaces shall not have a moisture content exceeding 4%. The cleaning of surfaces to be done by means of high speed pneumatic rotary wire brush. Oil, grease, animal fats, etc to be removed with suitable product to be applied in strict accordance with the manufacturer's instructions. Once clean, surfaces to be profiled mechanically (Vacublasting, scarifying or grinding) by means of acid etching (one part concrete etchant thinned with two parts water applied at the rate of 2m²/1 litre in strict accordance with the manufacturer's instructions)

CONCRETE REPAIRS

Prepare cracked concrete surfaces as described and apply two component epoxy putty

32	On soffits of slabs	m ²			Rate Only
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CLEANING OF WALLS

Cleaning of surfaces

33	Sandblasting painted brick surfaces	m ²			Rate Only
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Carried to Collection

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Section No. 2
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SEALING OF EXISTING ROOF SHEETING

Inspect, clean and seal existing corrugated metal roof sheeting by tightening all existing screws and replacing missing or damaged screws with new, seal all screw heads and laps with an approved sealant to ensure a leak free roof, all to the approval of the Project Manager. (Re-painting elsewhere measured)

34	Roof with a pitch not exceeding 25 degrees	m²	2 032		
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SERVICE AND REPAIR

Inspect and service

35	Roller shutter door 2600 x 2400mm high including ironmongery	No	14		
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36	Roller shutter door 4200 x 2400mm high including ironmongery	No	2		
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37	Roller shutter door 4000 x 2400mm high including ironmongery	No	4		
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38	Roller shutter door 1400 x 2400mm high including ironmongery	No	6		
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39	Roller shutter door 0.85 x 1100mm high including ironmongery	No	9		
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Carried to Collection

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Refurbishments and Upgrades to Merafe Train Station Prasa South Gauteng Region Corridor 3

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Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 2</u>			
	<u>WATERPROOFING</u>			
	<u>PREAMBLES</u>			
	Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	Waterproofing Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs			

	<u>DAMPPROOFING OF WALLS AND FLOORS</u>			
	<u>Approved waterproofing to shower floors and side walls</u>			
40	On shower floors and walls under tiles	m ²	8	
	<u>WATERPROOFING TO FLAT SCREEDED ROOFS</u>			
	<u>Two layers of 4mm thick Torch-on polyester based sheeting inclusive of additional membrane dressing around fullbores, pipes, etc</u>			
41	On flat roofs	m ²	30	
	<u>PROTECTIVE ROOFING PAINT</u>			
	<u>Two coats bituminous aluminium paint</u>			
42	On waterproofing to roofs	m ²	30	
	Carried Forward to Summary of Section No. 2			R
	Section No. 2			
	Waterproofing			
	Contract			
	Part C2: Pricing Data			

Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 3</u>			
	<u>ROOF COVERINGS ETC</u>			
	<u>PREAMBLES</u>			
	Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Straight cutting</u>			
	Descriptions of all roof coverings are deemed to include for all straight cutting			

	<u>PROFILED METAL SHEETING AND ACCESSORIES</u>			
	<u>0.58mm Z275 spelter galvanised ribbed sheet steel with chromadek finish on one side in single lengths and accessories, fixed to steel purlins using approved clips and fasteners all in accordance with manufacturer's recommendations and specifications.</u>			
43	Roof covering with pitch not exceeding 25 degrees	m ²	677	
44	Ridge covering 462mm girth	m	124	
	Carried Forward to Summary of Section No. 2			R
	Section No. 2			
	Roof Coverings			
	Contract			
	Part C2: Pricing Data			

Item No	Quantity	Rate	Amount R
<u>SECTION NO. 2</u>			
<u>BILL NO. 4</u>			
<u>CARPENTRY AND JOINERY</u>			
<u>PREAMBLES</u>			
Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
<u>SUPPLEMENTARY PREAMBLES</u>			
Plate nailed timber roof truss construction			
The following is applicable in respect of roof trusses:			
Trusses are at maximum 1,20m centres. Roof covering is 0,58mm Corrugated sheeting on 50 x 75mm purlins. Ceilings are 6,4mm skimmed gypsum plasterboard sheeting on 38 x 38mm brandering. The dimensions in the descriptions of the trusses are nominal and actual measurements shall be obtained from the architect and/or the site before design or fabrication commences			
Joinery			
Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc			
Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes			
Fixing			
Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete			
Decorative laminate finish			
Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish			
Carried to Collection			R
Section No. 2 Carpentry and Joinery Contract Part C2: Pricing Data			

SKIRTINGS

Wrought meranti

45	20 x 120mm Skirtings	m	73
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DOORS, ETC

**Semi-solid flush panel door with concealed
hardwood edges and commercial veneer on both
sides, hung to steel frames**

46	44mm Thick single door size 813 x 2100mm high	No	17
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47	44mm Thick double door size 915 x 2100mm high	No	38
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**Solid core flush panel doors with concealed
hardwood edge strips with solid chipboard core
cladded with commercial veneer facing on both
sides and hung to steel frames (Steel frames
measured elsewhere)**

48	44mm Thick single door size 915 x 2100mm high	No	3
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JOINERY FITTINGS

Budgetary Allowance

49	Provide a sum of R100 000.00 (One Hundred Thousand Rand) for joinery installations	Item	
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Carried to Collection

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Section No. 2
Carpentry and Joinery
Contract
Part C2: Pricing Data

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Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 5</u></p> <p><u>CEILINGS, PARTITIONSAND ACCESS FLOORING</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete</p> <p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted", the bolts are measured elsewhere</p> <p><u>Proprietary suspended ceilings</u></p> <p>Electric light fittings, diffusers, panels, etc generally are "lay in" units of the same dimensions as the suspension grid described and allowance shall be made accordingly for their support, inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing shall take cognisance thereof)</p> <p>-----</p> <p><u>CEILINGS, ETC</u></p>			
<p style="text-align: right;">Carried to Collection</p>			R
<p>Section No. 2 Ceilings, Partitions and Access Flooring Contract Part C2: Pricing Data</p>			

<u>Approved insulation</u>					
50	50mm Insulation closely fitted and laid on top of brandering between roof timbers, etc	m ²	412		
<u>SUSPENDED CEILINGS</u>					
<u>12.5mm Vinyl Faced Gypsum Ceiling Panels, face- covered with white embossed vinyl, size 1200 x 600mm, laid on fire rated exposed demountable suspension system including galvanised main tees, cross tees, etc., all suspended with galvanised hangers at centres not exceeding 1200mm, all installed to manufacturer's instructions.</u>					
51	Horizontal ceilings, including 38 x 38mm sawn softwood brandering at 450mm centres	m ²	139		
<u>1200 x 600 x 15mm biologically absorbable mineral wool fire rated ceiling tiles, with square-edge and white painted finish, laid on fire rated exposed demountable suspension system, comprising galvanised main tees and cross tees with main tees suspended by means of galvanised hangers at centres not exceeding 1200mm with ceiling perimeter</u>					
52	Horizontal ceilings suspended not exceeding 1m below timber or steel soffits	m ²	274		
<u>Cornices to suspended ceilings</u>					
53	Pre-painted cornices, nailed and plugged	m	257		
<u>PARTITIONS</u>					
<u>Budgetary Allowance</u>					
54	Provide a sum of R50 000.00 (Fifty Thousand Rand) for partitioning		Item		
Carried to Collection				R	
Section No. 2 Ceilings, Partitions and Access Flooring Contract Part C2: Pricing Data					

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Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 6</u>			
	<u>FLOOR COVERINGS, WALL LININGS, ETC</u>			
	<u>PREAMBLES</u>			
	Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Fixing</u>			
	Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc			

	<u>FLOOR COVERINGS</u>			
	<u>100% Stainproof (Polypropylene) structured needlepunch with class 3 fire rating, heavy commercial carpet tiles, size 500 x 500 x 8,5mm thick, all installed by approved installer</u>			
55	On floors	m²	76	
	<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC</u>			
56	Natural anodised aluminium edge strips between different floor finishes	m	2	
	Carried Forward to Summary of Section No. 2			R
	Section No. 2 Floor Coverings and Wall Linings Contract Part C2: Pricing Data			

Item No	Quantity	Rate	Amount R
<u>SECTION NO. 2</u>			
<u>BILL NO. 7</u>			
<u>IRONMONGERY</u>			
<u>PREAMBLES</u>			
Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Finishes to ironmongery</u>			
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded			
<u>NOTE:</u>			
<u>ALL LOCKS TO BE ON A MASTER AND GRAND MASTER KEY SYSTEM</u>			

<u>HINGES, BOLTS, ETC</u>			
<u>Grade 304 Stainless steel</u>			
57	WC indicator bolt	No 17	
58	Disabled indicator bolt, fixed to surface with matching stainless steel screws.	No 3	
Carried to Collection			R
Section No. 2 Ironmongery Contract Part C2: Pricing Data			

LOCKS

Grade 304 Stainless steel

59	Euro profile Mortice sash lock with reversible latch and deadbolt. Fore end to be stainless steel	No	39
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PUSH PLATES AND KICKING PLATES

Grade 304 Stainless steel plates counter sunk screwed along edges at not exceeding 200mm centres

60	813 x 200mm Kick plate	No	17
61	900 x 200mm Kick plate	No	25

HANDLES

Grade 304 Stainless steel

62	Round D pull handle on 19 x 200 mm backplate	Pairs	39
63	Round D pull handle on 19 x 300 mm backplate	Pairs	3

DOOR CLOSERS

Approved

64	Approved delayed action door closer	No	19
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LETTERS, NAMEPLATES, ETC

Stainless steel

65	152 x 152 x 2mm Thick engraved with female pictogram	No	3
66	152 x 152 x 2mm Thick engraved with male pictogram	No	3
67	152 x 152 x 2mm Thick engraved with paraplegic pictogram	No	3
68	152 x 152 x 2mm Thick engraved with Unisex pictogram	No	2

Carried to Collection

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Section No. 2
Ironmongery
Contract
Part C2: Pricing Data

Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3

69	152 x 152 x 2mm Thick engraved with kitchen and breakroom pictogram	No	3		
70	152 x 152 x 2mm Thick engraved with cleaning store pictogram	No	2		
<u>SUNDRIES</u>					
<u>Approved</u>					
71	Stainless steel door stop	No	19		
72	Hat and coat hook	No	17		
<u>BATHROOM FITTINGS</u>					
73	Satin stainless steel recessed toilet roll holders for single or two rolls, plugged and screwed to the wall with stainless steel screws.	No	13		
74	Satin stainless steel sanitary towel disposal bins with capacity of min 10 litres, free standing or wall mounted (plugged and screwed to the wall with stainless steel screws)	No	4		
75	Satin stainless steel waste disposal bins with capacity of plus minus 40 litres and with a frame inside the dispenser to hold a liner, plugged and screwed to the wall with stainless steel screws.	No	6		
76	Satin stainless steel waste disposal bins with capacity of plus minus 20 litres and with a frame inside the dispenser to hold a liner, plugged and screwed to the wall with stainless steel screws.	No	2		
77	Satin stainless steel towel rings, plugged and screwed to the wall with stainless steel screws.	No	2		
78	Satin stainless steel soap dispensers with a replaceable and refillable 1 litre container, cylinder lock , plugged and screwed to the wall with stainless steel screws.	No	8		
79	Satin stainless steel paper towel dispenser with min 600 folded paper towels and cylinder lock, plugged and screwed to the wall with stainless steel screws.	No	8		
Carried to Collection				R	
Section No. 2					
Ironmongery					
Contract					
Part C2: Pricing Data					

Refurbishments and Upgrades to Merafe Train Station Prasa South Gauteng Region Corridor 3

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Item No	Quantity	Rate	Amount R
<u>SECTION NO. 2</u>			
<u>BILL NO. 8</u>			
<u>METALWORK</u>			
<u>PREAMBLES</u>			
Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Descriptions</u>			
Descriptions of bolts shall be deemed to include nuts and washers			
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described			

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Section No. 2 Metalwork Contract Part C2: Pricing Data			

GALVANISED STEEL WELDED SCREENS

Gates formed of 50 x 6mm flat section outer frame and 25 x 25 x 3mm angle section inner frame welded to outer frame, filled in with approved expanded metal panel fixed all round to inner frame with 20 x 20 x 3mm angle section fixing beads bolted on with and including 6mm diameter bolts at 500mm centres and fitted with a pair of suitable hinges welded to post

- 84 Double gate 900 x 2100mm high with and including two 16mm expansion bolts for fixing gate, with hasp and staple and 12mm drop bolt welded on (Refuse area)

No

3

ALUMINIUM /STEEL WINDOWS, ETC

Budgetary allowance

- 85 Provide a sum of R35 000.00 (Thirty Five Thousand Rand) for servicing and or replacement of windows, burglar bars e.t.c

Item

STEEL RECORDROOM AND STRONGROOM DOORS, VENTILATORS, ETC

Level G3 bullet resistant Anti-bandit door, complete with 100 x 50 x 3mm gauge mild steel rectangular frame and 25 x 25 x 3mm MS angle rebates in powder coating and or galvanised cladding with peep hole, supplied with a 6 pin tumbler key system, mortice dead lock with an additional heavy duty magnetic lock and striker including key switch and surface mounted casing, 6 Amp power supply, push buttons and interlock system, heavy duty aluminium continuous hinge, aluminium slam bar with heavy duty door closer and D-style pull handles. Door to comply to SABS 1658-1996

- 86 Anti Bandit bullet resistant door and frame 920 x 2100mm high

No

1

Carried to Collection

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Section No. 2
Metalwork
Contract
Part C2: Pricing Data

	<p><u>Level G2 bullet resistant Anti-bandit door, complete with 100 x 50 x 3mm gauge mild steel rectangular frame and 25 x 25 x 3mm MS angle rebates in powder coating and or galvanised cladding with peep hole, supplied with a 6 pin tumbler key system, mortice dead lock with an additional heavy duty magnetic lock and striker including key switch and surface mounted casing, 6 Amp power supply, push buttons and interlock system, heavy duty aluminium continuous hinge, aluminium slam bar with heavy duty door closer and D-style pull handles. Door to comply to SABS 1658-1996</u></p>			
87	Anti Bandit bullet resistant door and frame 920 x 2100mm high	No	1	
	<p>Section No. 2 Metalwork Contract Part C2: Pricing Data</p>		R	

Carried to Collection

SECURITY PAYROLL WINDOWS

Level G3 bullet resistant glazed & natural anodised aluminium transaction window with 30mm deep stainless steel dish tray and speech transfer posts (interior applications only), overall size to details, glazed in 38mm thick clear glass with 32mm post formed granite counter top.

88	Bullet resistant glass transaction window 750 x 1100mm high	No	9
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RECYCLING BINS

Stainless steel furniture

89	Recycling bin formed of GRC and stainless steel . Overall size 1010mm wide x 1140mm high.	No	2
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Carried to Collection

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Section No. 2
Metalwork
Contract
Part C2: Pricing Data

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Item No		Quantity	Rate	Amount R
<u>SECTION NO. 2</u>				
<u>BILL NO. 9</u>				
<u>TILING</u>				
<u>PREAMBLES</u>				
Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities				
<u>SUPPLEMENTARY PREAMBLES</u>				
Descriptions Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding				

<u>WALL TILING</u>				
<u>600 x 300mm x 12mm Thick glazed full bodied porcelain tiles fixed to internal wall plaster backing with tile adhesive mixed with bonding liquid in lieu of water with joints continuous in both directions and grouted with tile grout (Wall plaster measured elsewhere).</u>				
90	On walls	m²	195	
91	On narrow widths	m²	6	
<u>600 x 300mm x 12mm Thick matt full bodied porcelain tiles fixed to internal wall plaster backing with tile adhesive mixed with bonding liquid in lieu of water with joints continuous in both directions and grouted with tile grout (Wall plaster measured elsewhere).</u>				
92	On walls in isolated panels, splashbacks, etc	m²	3	
Carried to Collection				R
Section No. 2 Tiling Contract Part C2: Pricing Data				

FLOOR TILING

600 x 600 x 10mm Thick slip rated full Bodied Porcelain tiles, mineralised with 3mm grouting lines, bedded in and including waterproof tiling cement and waterproof tile grouting to joints and fixed to screeds

93	On floors and landings	m²	632
94	Skirting 100mm high	m	611
<u>Unglazed ceramic mosaic tiles fixed with adhesive to screed (screed measured elsewhere) and flush pointed with an approved grout</u>			
95	On screeded floors to falls	m²	1

Carried to Collection

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Section No. 2
Tiling
Contract
Part C2: Pricing Data

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Item No	Quantity	Rate	Amount R
<u>SECTION NO. 2</u>			
<u>BILL NO. 10</u>			
<u>PLUMBING AND DRAINAGE</u>			
<u>PREAMBLES</u>			
Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
<u>SUPPLEMENTARY PREAMBLES</u>			
Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings unless hailguards are allowed for in the bills of quantities			
<u>Stainless steel basins, sinks, wash troughs, urinals, etc</u>			
Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)			
Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)			
Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)			
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable			
<u>Waste unions</u>			
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings			
<u>Sealing of edges</u>			
Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone			
Carried to Collection			R
Section No. 2 Plumbing and Drainage Contract Part C2: Pricing Data			

uPVC pipes and fittings

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings

uPVC pressure pipes and fittings

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained

Fixing of pipes

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level

Disinfection of water pipework

Water pipework is to be disinfected at completion in accordance with SANS 1200L (provision for disinfection elsewhere)

Carried to Collection

R

Section No. 2
Plumbing and Drainage
Contract
Part C2: Pricing Data

Petrolatum anti-corrosion tape

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with 30% overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

Laying, backfilling, bedding, etc of pipes

Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

SANS 1200L : Medium-pressure pipelines

SANS 1200LD : Sewers

SANS 1200LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes)

Unless otherwise described bedding of rigid pipes shall be Class B bedding

Carried to Collection

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Section No. 2
Plumbing and Drainage
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Part C2: Pricing Data

General

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to uPVC pipes, etc are given separately)

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catch pits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site

Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)

Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)

Exposed concrete surfaces

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster

Excavations

No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling

"Soft rock" and "hard rock" shall be as defined in "Earthworks"

Carried to Collection

R

Section No. 2
Plumbing and Drainage
Contract
Part C2: Pricing Data

SOIL AND STORMWATER DRAINAGE

Budgetary Allowances

Sewer

- 96 Provide a sum of R50 000.00 (Fifty Thousand Rand) for replacing damaged and missing manhole covers and clearing pipe blockages

Item

Stormwater

- 97 Provide a sum of R100 000.00 (One Hundred Thousand Rand) for replacing damaged and missing manhole covers and clearing pipe and open drain blockages

Item

SANITARY FITTINGS

1.6mm Stainless steel type 304 (18/10)

- 98 Single end bowl inset sink, overall size 800 x 460mm wide with one 340 x 370 x 150mm deep bowl, fitted onto cupboard (elsewhere measured) including 38mm waste fitting and PVC trap (trap elsewhere measured).

No

4

White glazed vitreous china

- 99 Vitreous china top flush toilet suite comprising 90° outlet open rim pan with top flush cistern and flush mechanism and normal close seat

No

5

- 100 High quality non-corrosive 6/3 liter dual flush concealed cistern with inlet/outlet connector for floor mounted applications

No

11

- 101 Vitreous china approved security pan (Cistern measured elsewhere)

No

8

- 102 Vitreous china wall hung closed rim pan with soft close seat (Cistern measured elsewhere)

No

3

Carried to Collection

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Section No. 2
Plumbing and Drainage
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3**

103	Vitreous china lavatory basin, size 510 x 405mm with one taphole including integrated overflow and chainstay hole bolted to wall with two x 10mm bolts and including Universal half pedestal with hanger springs and sealed with silicone sealant where basin meets wall.	No	2		
104	Vitreous china drop-in vanity basin size 420 x 420mm fitted into opening in granite vanity top (elsewhere measured) and sealed with silicone sealant where basin rim meets vanity top.	No	5		
105	Vitreous china lavatory basin, size 440 x 380mm with one taphole including integrated overflow and chainstay hole bolted to wall with two x 10mm bolts sealed with silicone sealant where basin meets wall.	No	11		
106	Vandal Resistant Urinal with automatic flush sensors or manual flush valve	No	7		
	<u>Acrylic</u>				
107	1000 x 1000 x 150mm shower tray with waste outlet, bedded in position	No	1		
108	5mm Cast Acrylic Perspex saloon doors (Colour: Frosted White) or 4mm Compact High Pressure Laminate (colour White) slotted in to the extrusion and a nylon hinge system. Overall size 900 x 1800mm high	No	1		
	<u>WASTE UNIONS ETC</u>				
109	38mm Bath or sink waste union	No	4		
	<u>TRAPS ETC</u>				
110	40mm Deep seal "P" or "S" trap	No	4		
111	Chromium plated bottle trap	No	16		
	<u>Brass</u>				
112	40mm rough brass shower P trap with shallow seal and chrome plated square grating.	No	1		
	<u>Floor drain</u>				
113	Floor drain square brass including trap	No	8		
Carried to Collection				R	
Section No. 2 Plumbing and Drainage Contract Part C2: Pricing Data					

**Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3**

TAPS, VALVES, ETC

114	15mm ball type angle valve	No	18
115	15mm Chrome plated single lever basin mixer with square type handles and cast fixed spout	No	5
116	Chrome plated self-closing push button metering spout, pillar type with non-hold open feature for cold water only	No	11
117	Medical elbow action pillar tap with high waist or equal approved, chrome finish	No	2
118	15mm chrome plated deck mounted sink mixer with overarm swivel outlet and adjustable flanges	No	4
119	15mm Ø BSP built-in sleeve, brass urinal flush valve with internal flow control, strainer and no-hold feature for single bowl urinal.	No	7
120	15mm Chromium plated built-in type shower cubicle set comprising: 1x undertile shower mixer with square pattern taps and backplate, 1x overhead shower arm and vandal proof swivel action shower head	No	1

Carried to Collection

R

Section No. 2
Plumbing and Drainage
Contract
Part C2: Pricing Data

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**Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 15</u>			
	<u>GLAZING</u>			
	<u>PREAMBLES</u>			
	Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			

	<u>GLAZING TO STEEL WITH PUTTY</u>			
	<u>4mm Clear float glass</u>			
121	Panes not exceeding 0,1 m2	m ²	8	
	<u>GLAZING TO WOOD WITH PINNED-ON BEADS</u>			
	<u>4mm Clear float glass</u>			
122	Panes exceeding 0,1m2 and not exceeding 0,5m2	m ²		Rate Only
	<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>			
	<u>4mm Silvered float glass copper backed mirrors with polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>			
123	Mirror size 600 x 900mm high	No	18	
	Carried Forward to Summary of Section No. 2			
	Section No. 2			R
	Glazing			
	Contract			
	Part C2: Pricing Data			

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 12</u></p> <p><u>PAINTWORK</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>DESCRIPTIONS</u></p> <p>Descriptions of paintwork shall be deemed to include for all cutting in</p> <p><u>PREPARATORY WORK TO EXISTING WORK</u></p> <p>Previously painted plastered surfacesSurfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth</p> <p>Previously painted metal surfacesSurfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p> <p>Previously painted wood surfacesSurfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth</p> <p>-----</p> <p><u>PAINTWORK, ETC TO NEW WORK ON</u></p> <p><u>WOOD SURFACES WITH:</u></p>			
<p>Carried to Collection</p>			R
<p>Section No. 2 Paintwork Contract Part C2: Pricing Data</p>			

<u>One coat pink wood primer, one coat universal undercoat and two coats super universal high gloss enamel paint on</u>					
124	Doors	m ²	152		
<u>Three coats polyurethane suede varnish on</u>					
125	Skirtings, rails, etc not exceeding 300mm girth	m	73		
<u>PAINTWORK, ETC TO PREVIOUSLY PAINTED WORK ON</u>					
General					
All works are to be executed in strict accordance with the paint specifications of the manufacturer for the preparation of previously painted surfaces					
Primer (first) coats may be thinned in accordance with the specifications of the manufacturer to aid the absorption of the paint					
All surfaces must be sound, clean and have a moisture content of less than 12%					
Previously painted plastered surfaces					
Surfaces shall be thoroughly washed down to remove dirt and other contaminants and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler, and sanded smooth					
Previously painted metal surfaces					
Surfaces shall be thoroughly rubbed and cleaned down to remove dirt and other contaminants and sanded lightly to provide a key for subsequent coats. Blistered or peeling paint shall be completely removed down to bare metal and any rust encountered shall be removed					
Previously painted wood surfaces					
Carried to Collection				R	
Section No. 2					
Paintwork					
Contract					
Part C2: Pricing Data					

	Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with a filler as described and sanded smooth				
	<u>BRICK OR QUARRY TILE SURFACES WITH</u>				
	<u>Two coats brick dressing on</u>				
126	Recessed pointed faced walls	m ²			Rate Only
	<u>FLOATED PLASTER SURFACES WITH</u>				
	General				
	Prepare and repair as specified, brush to remove all loose contaminants, rinse and apply one coat alkali resistant primer to bare substrate areas, one coat universal undercoat and two coats non-drip polyurethane enamel paint on existing alkyd-based painted surfaces				
	<u>Two coats modified acrylic fine textured emulsion paint on work in poor condition on</u>				
127	External walls and columns	m ²	2 679		
128	External walls in narrow widths	m ²	120		
	<u>One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint on</u>				
129	Internal walls	m ²	3 179		
130	Ceilings and beams	m ²	30		
	<u>ON SMOOTH CONCRETE</u>				
	<u>Two coats modified acrylic fine textured emulsion paint on work in poor condition on</u>				
131	Concrete tables	m ²	20		
	<u>METAL SURFACES WITH</u>				
Carried to Collection					R
Section No. 2					
Paintwork					
Contract					
Part C2: Pricing Data					

**Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3**

	<u>One coat multisurface primer and two coats gloss enamel paint on work in sound condition on steel</u>				
132	Door frames	m ²	89		
133	On windows	m ²	627		
134	On steel sections	m ²	92		
135	On eaves gutters not exceeding 300 mm girth	m	458		
	<u>One coat of waterprime, one coat of universal undercoat and two coats of gloss enamel on work in sound condition on steel</u>				
136	On walkway and bridge balustrades (both sides measured over the full flat area)	m ²	1 565		
	<u>Wash down thoroughly with degreaser and rinse with water removing all traces of degreaser. Allow to dry and prime with one coat primer and two coats polyurethane enamel paint on steel:</u>				
137	Roller shutter doors	m ²	418		
	<u>Spot priming bare metal surfaces with zinc chromate primer and applying two coats acrylic roof paint in colours which have a value of 7 or less on the Munsell system in accordance with SANS 1091 on previously painted steel in bad condition</u>				
138	On profiled roof sheeting (measured on flat)	m ²	2 032		
	<u>WOOD SURFACES WITH:</u>				
	<u>Remove all loose and flaking paint to sound substrate, stop, fill holes and cracks with wood filler, sand down, spot prime bare wood with primer for wood and apply one coat universal undercoat and two coats high gloss enamel paint on existing alkyd-based paint surfaces on:</u>				
139	Doors	m ²	13		
Carried to Collection				R	
Section No. 2 Paintwork Contract Part C2: Pricing Data					

Section No. 2

Bill of Quantities

Bill No. 12

Paintwork

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Section No. 2

Paintwork

Contract

Part C2: Pricing Data

Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 13</u>			
	<u>PROVISIONAL SUMS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>General</u>			
	Work for which budgetary allowances are provided will be measured and valued in accordance with the JBCC Principal Building Agreement and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances			
	Prime cost amounts and provisional sums are net. Prime cost amounts shall include for delivery to site of all articles concerned			
	Provisional sums are for material and equipment supplied and installed complete by firms of specialists			
	<u>Profit</u>			
	Where stated, the contractor may allow for profit if required			
	<u>PROVISIONAL AMOUNTS</u>			
	<u>COMMUNITY LIASON OFFICER</u>			
140	Allow the amount of R54,000.00 (Fifty Four Thousand Rand) for the employment of a Community Liaison Officer for the entire duration of construction activities on site, to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		54 000.00
141	Allow for general attendance		%	
142	Allow for profit		%	
	Carried to Collection		R	
	Section No. 2 Provisional Amounts Contract Part C2: Pricing Data			

**Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3**

EPWP TRAINING

143	Allow the amount of R200,000.00 (Two Hundred Thousand Rand) Expanded Public Works Programme Training, to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		200 000.00
144	Allow for general attendance		%	
145	Allow for profit		%	

BUDGETARY AMOUNTS

HOLDING CELL

146	Allow the amount of R55 000.00 (Fifty Five Thousand Rand) for provision of a holding cell to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		55 000.00
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SIGNAGE

147	Allow the amount of R50 000.00 (Fifty Thousand Rand) Station signage to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		50 000.00
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PLATFORM BRIDGE AND STAIRCASE REPAIRS

148	Allow the amount of R100 000.00 (One Hundred Thousand Rand) for repairing platform bridge and staircases to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		100 000.00
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Section No. 2
Provisional Amounts
Contract
Part C2: Pricing Data

Section No. 2

Bill of Quantities

Bill No. 13

Provisional Amounts

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Part C2: Pricing Data

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SECTION NO.3 : CIVIL WORK

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO. 1</u></p> <p><u>PLATFORM RESURFACING</u></p> <p>Unless otherwise described, the preambles and full descriptions of the items in the preceeding Bills are to apply equally to this Bill</p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions and Preambles</u></p> <p>Wherever possible abridged descriptions have been used for those items in the bill which appear under the main trade headings in previous bills. The full descriptions of these items and the Model Preambles are to, and do, apply equally to this section.</p> <p><u>Testing of material and filling</u></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p> <p><u>PAVING ETC</u></p> <p><u>300 x 300mm Tac-Pave in-situ system, yellow colour, applied to existing surfaces all in accordance to manufacturer's instructions.</u></p>			
1	Paving to platform surfaces	m ²	330	
	<p>Carried Forward to Summary of Section No. 3</p> <p>Section No. 3</p> <p>Platforms</p> <p>Contract</p> <p>Part C2: Pricing Data</p>			

Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 3</u>			
	<u>BILL NO 2</u>			
	<u>STREET FURNITURE</u>			
	<u>FOLLOWING IN PLATFORM FURNITURE</u>			
	<u>Galvanised steel furniture</u>			
2	Perforated galvanised steel seat 1800mm long with two legs mounted to 500 x 500 x 500mm 25 Mpa concrete base including excavation, carting away and concrete. Including filling both steel legs with concrete as per Architectural detail	No	10	
3	Perforated galvanised steel litter bin 497mm Diameter x 815mm high with one leg mounted to 500 x 500 x 500mm 25 Mpa concrete base including excavation, Carting away and concrete. Including filling both steel legs with concrete as per Architectural detail	No	6	
Carried Forward to Summary of Section No. 3				R
Section No. 3				
Street Furniture				
Contract				
Part C2: Pricing Data				

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 3</u></p> <p><u>BILL NO. 3</u></p> <p><u>PARKING AND KERBING</u></p> <p><u>PREAMBLES</u></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Descriptions and Preambles</u></p> <p>Wherever possible abridged descriptions have been used for those items in the bill which appear under the main trade headings in previous bills. The full descriptions of these items and the Model Preambles are to, and do, apply equally to this section.</p> <p><u>Testing of material and filling</u></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p> <p><u>Precast concrete block road surfacing</u></p> <p>Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications</p> <p>Paving shall be laid to herringbone pattern on 20mm thick (thickness after final compaction) clean river sand (preparation of ground or filling elsewhere)</p> <p>Clean sand shall be swept into joints between roadstones at completion</p> <p>-----</p>			
<p>Carried to Collection</p>			R
<p>Section No. 3 Roads and Paving Contract Part C2: Pricing Data</p>			

EARTHWORKS (BULK EXCAVATION, FILLING ETC)

Excavation not exceeding 2m deep

4	In roadways and parking to reduce levels for layerworks and depositing excavated material in prescribed stock piles including haulage not exceeding 200m from perimeter of excavations	m ³	23	
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Extra over excavations for carting away

5	Surplus material from stock piles on site to a dumping site to be located by the contractor	m ³	23	
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Keeping excavations free of water

6	Keeping excavations free of water		Item	
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Earth filling supplied by the contractor under pavings and roads or in soil mattress, etc as drawings 102472-CIV-005 and 006

7	Subbase course under roads and parking compacted to 95% Mod AASHTO density (G5 material with CBR to be minimum 45% at 95% Mod AASHTO density, maximum PI to be 10 in accordance with SANS 1200M)	m ³	8	
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8	Subbase course under roads and parking compacted to 95% Mod AASHTO density (C4 material stabilized with approximately 3% Portland blast furnace cement with UCS to be 750KPa at 100% Mod AASHTO density)	m ³	8	
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9	Base course under roads and parking compacted to 85% apparent density (G2 graded crushed stone material)	m ³	8	
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Compaction of surfaces

10	Compaction of ground surface (G7 material) under roads and parking, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% of Mod AASHTO density	m ²	50	
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Carried to Collection

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Section No. 3
Roads and Paving
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3**

	<u>Additional prescribed density tests on filling as requested by the principal agent</u>				
11	Relative compaction test in accordance with methods A1, A10b and A17 of TMH1	No	2		
	<u>Approved weedkiller mixed in the proportion and applied as specified by the manufacturer</u>				
12	Under block paving, etc	m²	50		
	<u>60mm standard grey double zig zag interlocking roadstone paving on 25mm thick cement/riversand bed with sand and cement mixture swept into joints and hosed down</u>				
13	Paving to islands and yards	m²	50		
	<u>PAVING</u>				
	<u>300 x 300 x 30 mm Guidance tactile pavers on 20mm - 30mm thick compacted cement/riversand bed n base course and subgrade, conforming to SANS 1200</u>				
14	Paving to walkways	m²	285		
Carried to Collection					R
Section No. 3 Roads and Paving Contract Part C2: Pricing Data					

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Item No		Quantity	Rate	Amount R
	SECTION NO. 3			
	BILL NO. 4			
	FENCING			
	PREAMBLES			
	Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			

	<u>Pressed high density line galvanised mesh panel fence, reinforced with 4 x 50mm "V" formation horizontal recessed bands and 2 x 75mm 70 degree flanges along sides, with 150mm post, gates, etc including galvanised steel bolts, etc, site clearance and preparation of ground</u>			
15	Fence 1200mm high with and including galvanised posts and topped with galvanised "castle type" spike rails, bolted to 50mm wide mesh flange bent along fence to	m	21	
16	Double gate 3.2 x 2.4m high made with galvanised square tubing elements, reinforced mesh type or similar approved with galvanised wheels all as per structural engineer's specifications	No	1	
17	Single gate 1.6 x 2.4m high made with galvanised square tubing elements, reinforced mesh type or similar approved with galvanised wheels all as per structural engineer's specifications	No	1	
	Carried Forward to Summary of Section No. 3		R	
	Section No. 3			
	Fencing			
	Contract			
	Part C2: Pricing Data			

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SECTION NO.4 : ELECTRICAL WORK

Refurbishments and Upgrades to Merafe Train Station Prasa South Gauteng Region Corridor 3

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PRASA MERAFAE STATION ELECTRICAL PROVISIONAL BOQ					
LV Reticulation					
Item	Description	Unit	QTY	Cost	Total Cost
	<p align="center">Distribution Boards</p> <p>Refurbish the following distribution boards, including all equipment, complete with all accessories. Installation shall include fixing, accessories and earthing.</p> <p>The price shall include for all fixing materials, circuit terminations, lugs, cable straps and any other items necessary for the complete installation. The price shall also include liaison with the board manufacturer, obtaining shop drawings for approval by the engineer, and the preparation and provision of detailed legend cards, as per the specification.</p>				
1	Main Security DB - PC	Lot	1	R100 000,00	R 100 000,00
2	Ticket Office - 18 Way	Lot	2		
3	Security Office DB 18 Way	Lot	1		
4	160A MDB Refurb - PC	Lot	1	R 55 000,00	R 55 000,00
5	Stall Distribution Boards refurb	Lot	8		
6	Toilet Distribution Boards	Lot	2		
7	Platform Distribution Boards	Lot	2		
	<p align="center">Power Cabling</p> <p>Supply and install the following cables laid on cable tray, pulled in a sleeve or in a trench, including all fixings and accessories. The cables shall be 600/1000V/ PVC/SWA/PVC/ECC with copper conductors. Complete with terminations</p>				
8	50mm ² x 4 core ecc cable	m	200		
9	35mm ² x 4 core ecc cable	m	30		
10	25mm ² x 4 core ecc cable	m	30		
11	16mm ² x 4 core ecc cable	m	2500		
12	Joining Kits PC Sum	Lot	1	R 20 000,00	R 20 000,00
	<p align="center">Standby Generator</p> <p>Supply, Rig and Install following Standby Generator, including all equipment, complete with all accessories. Installation shall include fixing, plinth, accessories and earthing.</p>				
13	Containerized 100kVA complete with Day tank and Automatic Transfer Switch	Lot	1		

14	Full Tank of Diesel upon Commissioning	Lot	1		
Total Ex VAT					

PRASA MERAPE STATION ELECTRICAL PROVISIONAL BOQ					
LIGHTING					
Item	Description	Unit	QTY	Cost	Total Cost
	LIGHTING				
1	16 Amp, single lever light Switch	Lot	30		
2	5 Amp, 3 pin, unswitched socket outlet to fit deep round conduit boxes	Lot	100		
3	LED panel Sidelift flicker free driver + PMMA LG + Prisma Diffuser - 4000 Lumens - 600x600 Recessed	Lot	50		
4	LED panel Sidelift flicker free driver + PMMA LG + Prisma Diffuser - 4000 Lumens - 600x600 Recessed with Battery Backup	Lot	30		
5	1578mm Surface Mounted fitting 53W LED complete with microwave sensor with 70'000hr operation warranty	Lot	80		
6	Led Industrial Bulkhead fitting with unpainted marine grade high pressure die cast aluminium backing with non discolouring injection moulded high impact acrylic diffuser, IP66. 4370 lm 32W, Neutral white 740 with 10kv surge protection	Lot	60		
7	LED Pole Top with aluminium Spigot and Cover, high impact Acrylic Protector, IP55 rated, 3506-5219lm output, 37-54W with 142 Efficacy, Neutral white 740, complete with 5m Pole with 2m Stub	Lot	25		
8	Bridge Lighting Solar type 40W LED Street Lamp	Lot	12		
9	Exit Sign/Running Man c/w battery backup including lamps	Lot	9		
10	2,5mm² x 3 (Red, Black & Green) - Housewire	m	2500		
11	25mm diameter PVC conduit	lot	300		
Total Ex VAT					

PRASA MERAFAE STATION ELECTRICAL PROVISIONAL BOQ					
SMALL POWER					
Item	Description	Unit	QTY	Cost	Total Cost
	SMALL POWER				
1	16 Amp, single Switched Socket Outlet - white	No	25		
2	16 Amp, single Switched Socket Outlet - white on Power Skirting	No	45		
3	20 Amp, DP Isolator - complete with conduit to outlet box below-	No	12		
4	4mm ² x 3 (Red, Black & Green) - Housewire	m	1000		
5	25mm diameter PVC conduit	lot	200		
6	2 compartment PVC Power Skirting	m	100		
7	500VA single phase UPS	Lot	8		
8	To provide the earthing and testing of the electrical installation in accordance with the General Specification, regulations and the requirements of the local authority. All circuits shall be earthed in accordance with the wiring code. Where the earth conductor is joined at the terminal block, the wires shall be soldered together so that removal of the equipment shall not result in an interruption of the earth continuity of the conductors.	Lot	1		
Total Ex VAT					

PRASA MERAFAE STATION ELECTRICAL PROVISIONAL BOQ

SUMMARY

Item	Description	Cost
1	LV Reticulation	
2	Lighting	
3	Small Power	
Sub Total Ex VAT		
VAT @ 15%		
Total Inc VAT		

SECTION NO.5 : MECHANICAL WORK

Refurbishments and Upgrades to Merafe Train Station Prasa South Gauteng Region Corridor 3

[illegible]

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 5</u> <u>BILL NO. 1</u> <u>HVAC INSTALLATION</u>				
1,0	Supply and install the following AC units (<i>DX system</i>) , complete with matching refrigerant tubing, condensate drainage, mounting brackets, thermostats, remote controllers, security expanded metal cage, electronic and electrical wiring up to isolator supplied by electrical contractor and ALL MOUNTING ACCESSORIES NECESSARY				
1,1	Inverter type Wall mounted units, cooling load 2.2kW, heating load 2.5kW with outdoor unit, refrigerant tubing, condensate drainage and all necessary accessories.				
	Supply	No	5		
	Install	No	5		
1,2	Inverter type Wall mounted units, cooling load 3.5kW, heating load 3.2kW with outdoor unit, refrigerant tubing, condensate drainage and all necessary accessories.				
	Supply	No	1		
	Install	No	1		
2,0	Supply and install the following extract air fan complete with electronic and electrical wiring up to isolator supplied by electrical contractor, speed controllers, support brackets, AND ALL NECESSARY MOUNTING ACCESSORIES				
2,1	FAN EF - 120 l/s wall mounted fans				
	Supply	No	2		
	Install	No	2		
3,0	General				
3,1	Testing and commissioning of the above system to the complete satisfaction of the Mechanical engineer and client	item	1		
3,2	Preparation and supply of handover documents	item	1		
3,3	Production of shop drawings and schematics	item	1		
TOTAL					
VAT @ 15%					
GRAND TOTAL					

ITEM NO.	DESCRIPTION	UNIT	QTY	TOTAL RATE	AMOUNT R c
	<u>SECTION NO. 5</u> <u>BILL NO. 2</u> <u>FIRE INSTALLATION</u>				
1.	<u>General</u>				
1,1	Allow for Client instruction in the use and maintenance of all fire services equipment as required by the Manufacturers and the specification	Item	1		
1,2	Allow for the Production and submittal of Operation & Maintenance Manuals and record information, workshop drawings and 'As-Built' drawings.	Item	1		
2	<u>Fire Plan</u> Design, manufacture, works testing, supply and delivery to site, moving into position, erection, connecting up, site testing, witness testing, proving to the inspectors, demonstrating to the Employer and maintenance of the complete installation as per conditions of contract and the specification and on drawings.				
	<u>Fire Hydrants</u>				
2,1	65mm hydrant valve with handwheel opening mechanism & fittings.	No.	6		
	Supply	No.	6		
	Install				
	<u>Fire Hose Reels</u>				
2,2	Standard Wall Mounted Type Fire Hose Reel to comply with SANS 543 Fire hose reels shall be fitted with a 30m long reinforced red rubber hose of internal diameter of 20mm nominal bore, with a 4.8mm internal diameter chromium plated brass nozzle and isolating valve. Fire hose reel pipes above ground shall be colour coded signal red A11. Complete with double door hose reel cabinet				
	Supply	No.	6		
	Install	No.	6		
2,3	Galvanised mild steel pipe treated with galvafoird paint and two coats of firemen red signal paint A11. Pipework to be complete with supports, bends, unions to make a complete installation				
2.3.1	25mm	m	60		
2.3.2	50mm	m	75		
2.3.3	100mm	m	500		
3,0	<u>Fire extinguishers</u>				
3,1	Fire extinguishers complete with supports & fittings. 4,5kg DCP fire extinguishers				
	Supply	No.	6		
	Install	No.	6		
3,2	Fire extinguishers complete with supports & fittings. 5kg CO2 fire extinguishers				
	Supply	No.	4		
	Install	No.	4		

4,0	<u>Statutory Fire Signage</u> Supply and install photoluminescent signs (in Anodised aluminium frames) on all areas indicating the escape routes and equipment location. The installation shall comply to SANS 1186. The signs shall be mechanically fixed on walls and soffits.				
4,1	E1/E2 (190mm high)	No.	16		
4,2	E3 (190mm high)	No.	8		
4,3	E6 (190mm high)	No.	6		
4,4	F5/F6 (190mm high)	No.	6		
4,5	F13 (190mm high)	No.	8		
4,6	F30 (190mm high)	No.	6		
Total to Summary Page					
vat 15%					
Grand Total					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p><u>SECTION NO. 5</u> <u>BILL NO. 3</u> <u>PLUMBING AND DRAINAGE</u></p> <p>All rates supplied in this Bill of Quantities will be deemed to include scaffolding to any height and fixing of cold and hot water pipes up to and including roof height. All pipes suspended from concrete slabs, roof, ceiling, etc. shall be deemed to include in the rates, all necessary hanger brackets, threaded rod (irrespective of the suspension length), nuts, washers, anchors and drilling of holes in the concrete slab. For the complete supply, delivery and installation of supply piping, as specified, piping to include piping between geysers on roof. All cold and hot water pipes are to be chased into walls except where pipes are to be surface-mounted on wall face or run in ceiling voids or inside ducts, and fixed with standard type pipe saddlers and brackets at 1000mm maximum.</p> <p>HOT & COLD WATER PIPING</p> <p>Hard drawn copper pipes to SANS 460 and SANS 1067 with capillary type soldered joints to SANS 1067 done in accordance with the manufacturer's specifications, and installed in accordance with SANS 10400 and SANS 10252-1:2004, including couplers in the running length, and all necessary supports, fixing, brackets, saddlers, holderbats, etc, and colour-coded in accordance with SANS 10140-3:2003: Straight hot water copper piping not chased in walls but surface-mounted fixed to walls, or in ceiling voids or in service ducts are to be insulated with thermaflex material, clad in 0,5mm galvanised muffs secured with 10mm galvanised strapping and seal, throughout the length of pipe inclusive of fittings. Valves, strainers and flanges will not be insulated.</p>				
1	PIPING - COPPER				
1.1	Ø28mm pipe	m	150		
1.2	Ø22mm pipe	m	240		
1.3	Ø15mm pipe	m	120		
2	FITTINGS				
	Extra over copper pipework for capillary type soldered fittings				
2.1	Ø28mm Equal T-piece	No	4		
2.2	Ø22mm Equal T-piece	No	20		
2.3	Ø28mm Elbow: 90°	No	8		
2.4	Ø22mm Elbow: 90°	No	16		
2.5	Ø15mm Elbow: 90°	No	90		
2.6	Reducer: Ø28mm x Ø22mm	No	4		
2.8	Reducer: Ø28mm x Ø15mm	No	0		
2.9	Reducer: Ø22mm x Ø15mm	No	16		

2.10	Pipe clamps and hangers	Sum	1		
2,11	Hot water pipe insulation	Sum	1		
3	VALVES - COPPER				
3.1	Ø25mm isolating ball valve with lever on cold and hot water main pipes	No	2		
3.2	Ø20mm isolating ball valve with lever on cold and hot water main pipes	No	4		
3.3	Flexible connector to sanitary fittings	No	45		
3.4	15mm diameter stopcock/angle valve on cold and hot water pipe to sanitary appliance or sink	No	45		
4	ELECTRIC GEYSER				
4.1	Supply and install a vertical electric water geyser , mounted in ceiling void, complete with copper piping, pressure control valves, draincock, vacuum breakers, thermostat, expansion relief valve, strainers, lever ball valves, drip tray, hot water pipe insulation, mixing valve and all necessary accessories and fittings, as specified Capacity: 150 litres Element Rating: 3 kW	Set	2		
5	Instant boiling water unit with White Epoxy Powder Coated outer case, and a two-way tap, complete with twin-chamber technology. Unit to be installed in accordance with manufacturer's installation instruction manual and (optional) equipped with Water Filtration Kit. Capacity: 15 litres Element Rating: 2.4 kW	Set	2		
5,1					
6	STORAGE TANKS				
6,1	Supply and install a 1 000 litres vertical Jojo pvc tank mounted on a concrete plinth and install complete with all valve accessories.	Sum	1		
6,2	Allow for connection of the Jojo tank to the water reticulation for domestic use.	Sum	1		
6,3	1.5 l/s @ 4.5 bars domestic water pumps duty and standby are required to be installed complete with the necessary suction/ delivery pipework, valves, control equipment, pressure switches control panel and pressure vessel. Mounted on a concrete plint with an expanded metal cage for security.	Sum	1		
SUBTOTAL					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION NO. 5</u> <u>BILL NO. 1</u> <u>PLUMBING AND DRAINAGE</u> These bills of quantities form part of and must be read in conjunction with the Technical Specifications and Drawings, which contain the full descriptions of the work to be done and material and equipment to be used. Unless otherwise described in these bills of quantities, reference should be made to the Technical Specifications for the full meaning of descriptions of work to be done and materials and equipment to be used in this service. All materials, equipment, fixings, brackets, etc, are to be supplied by the Contractor unless otherwise stated. SANITARY DRAINAGE PIPING Polyvinyl Chloride (PVC) pipe including couplers in the running length, installed in accordance with SANS 10400 and SANS 10252-2:2004				
1	PIPING				
1.1	Ø50mm uPVC pipe	m	96		
1.2	Ø110mm uPVC pipe	m	250		
2	FITTINGS				
2.1	Ø50mm fitting; 90°elbow	No	84		
2.2	Ø110mm fitting; 45°elbow	No	36		
2.3	Ø110mm x Ø110mm x Ø110mm fitting; 87.5° swept entry, lateral branch junction	No	12		
2.4	Ø50mm vent one way valve	No	8		
2.5	Ø110mm x Ø50mm fitting; concentric reducer	No	8		
3	WASTE TRAPS				
3.1	40mm flexi rubber "P" trap complete with coupling clamps.	No	28		
4	AS BUILT DRAWINGS				
4.1	Submission of 3off 'As Built' drawings indicating the final positioning and layout of the entire sanitary drainage installation as installed on site by the Contractor	Sum	1		
	SUBTOTAL				
	TOTAL CARRIED FORWARD TO SUMMARY				

PRASA MERAPE STATION MECHANICAL PROVISIONAL BOQ		
SUMMARY		
Item	Description	Cost
1	HVAC	
2	Fire Installation	
3	Plumbing and Drainage	
VAT @ 15%		
Total Inc VAT		

SECTION NO.6 : ELECTRONICS

Refurbishments and Upgrades to Merafe Train Station Prasa South Gauteng Region Corridor 3

[illegible]

PRASA MERAPE STATION ELECTRONICS PROVISIONAL BOQ					
FIRE DETECTION					
Item	Description	Unit	QTY	Cost	Total Cost
	Fire Detection				
1	Addressable Smoke Detectors	Lot	45		
2	Addressable Smoke Detectors + Void LED	Lot	21		
3	Addressable Heat Detectors	Lot	4		
4	Addressable Manual Call Point (Breakglass)	Lot	10		
5	Addressable Relay Unit	Lot	8		
6	Addressable Loop Beacon	Lot	4		
7	Addressable Loop Sounder	m	5		
8	Power Supply 24V	Lot	4		
9	Fire Cables - PH30/30 minutes rated	m	1900		
10	Fire Cables - PH120/120 minutes rated	m	500		
11	4 Loop Fire Panel	Lot	2		
12	Installation & Commissioning	Lot	1		
Total Ex VAT					

PRASA MERAFAE STATION ELECTRONICS PROVISIONAL BOQ					
EQUIPMENT					
Item	Description	Unit	QTY	Cost	Total Cost
	Equipment				
1	Digital Voice Evac/PA System compliant with Prasa Railcom System complete with 40 x 30W Outdoor Speakers and all mounting Brackets. Include 43U Mounting Rack	No	1		
2	5M steel Mounting poles complete with 2 m Stubs for mounting of Voice Evac/PA System Speakers	Lot	20		
3	PH30 Voice Evacuation Cabling including IP66 Rated Junction Boxes	m	5400		
4	Integration of Detection System with other Services/System - Engineer AutoFill	No	1		
5	Alarm System complete with 6 x panic buttons - Ticket Office - Engineer Autofill	Lot	2		
6	Ticket Office Counter Inductive Loop complete with goose neck counter top microphone, driver, amplifier and signage in compliance with IEC60118-4:2014. Loop to be in PVC Conduit in floor screed under tiling where client stands	Lot	2		
7	Intrusion Detection System with Infrared Motion sensors in Ticket Offices complete with 8 zone control panel, Led Keypad with Battery Backup, 6 x panic Buttons and Internal Siren	Lot	2		
Total Ex VAT					

PRASA MERAFAE STATION ELECTRONICS PROVISIONAL BOQ

SUMMARY

Item	Description	Cost
1	Fire Detection	
2	Equipment	
Sub Total Ex VAT		
VAT @ 15%		
Total Inc VAT		

SECTION NO.7 : ACCESS CONTROL

Refurbishments and Upgrades to Merafe Train Station Prasa South Gauteng Region Corridor 3

[illegible]

PROVISIONAL BOQ MERAFAE STATION

PRELIMINARY AND GENERAL

Item	Description	QTY	Cost	Total Cost
1	Tansport	1		
2	Labour Monday -Friday- Rate Only	80		
3	Delivery of turnstile	1		
4	Brownfield Fees	1		
Total Ex VAT				

PROVISIONAL BOQ MERAFAE STATION

CABLING

Item	Description	QTY	Cost	Total Cost
1	Connector - RJ 45 for CAT 5	120		
2	Server Racks Cabinets 42U - Lockable	1		
3	Connector Boot - RJ45 Grey	120		
4	Cable - CAT 6E U/UTP BC 500m	5		
5	Cable CAT6E UTP 0.57mm Solid Copper	1		
Total Ex VAT				

PROVISIONAL BOQ MERAFAE STATION

EQUIPMENT

Item	Description	QTY	Cost	Total Cost
1	2MP IR IP Lite Eyeball 1080P IR 30m 2.8mm Network Camera, 1/2.7" CMOS image sensor, low illuminance, high image definition, Outputs 2MP (1920 × 1080)@25/30 fps, H.265 codec, high compression ration, ultra-low bit rate, Built-in IR LED, max IR distance: 30 m, ROI, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments, Rotation mode, DWDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes, Intelligent detection: Intrusion, tripwire, Abnormality detection: Motion detection, video tampering, no SD card, SD card full, SD card error, network disconnected, IP conflict, illegal access, voltage detection, Supports max. 256 GB Micro SD card, built-in Mic, 12V DC/PoE power support, IP67 protection	88		
2	2MP IRIP Lite Bullet 1080P IR 30m 2.8mm Intrusion, tripwire Network Camera, 2MP, 1/2.7" CMOS image sensor, low illuminance, high image definition, Outputs 2MP (1920 × 1080)@25/30 fps, H.265 codec, high compression rate, ultra-low bit rate, Built-in IR LED, max IR distance: 30m, ROI, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments, Rotation mode, DWDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes, Intelligent detection: Intrusion, tripwire, Abnormality detection: Motion detection, video tampering, no SD card, SD card full, SD card error, network disconnected, IP conflict, illegal, access, voltage detection, Supports max. 256 GB Micro SD card, 12V DC/POE power support, IP67 protection	28		
3	NVR 32 Ch 16 PoE 4K AI+SMD+ANPR. Rack mounted complete with all relevant Software	4		
4	Surveillance Hard Drive 6TB.	5		
5	Rack Mountable 10KVA UPS complete with 1 hour full load capacity on non corrosive batteries - 1 duty and other standby	1		
6	55 Inch HD Monitor Wall Mounted	1		
7	16 Port 10/100 Managed PoE + 2GB TP	8		
8	Full height, bi directional single turnstile - Single turnstile - Polyester exterior grade powder cost - charcoal blue - Fail Secure	6		

9	Biometric/fingerprint reader mounting bracket - Polyester exterior grade powder coat - charcoal blue	12		
10	Battery backup 24 Volt DC with 12V rechargeable batteries	6		
11	LED indicator lights (red and green - 80mm diameter) for full height turnstile - 2 units, one for entry and one for exit	6		
12	Security gate 970mm wide x 2 125mm high - mortice lock (843mm clear opening) - Polyester exterior grade powder coat - charcoal blue	2		
	Total Ex VAT			

PROVISIONAL BOQ MERAFAE STATION		
SUMMARY		
Item	Description	Cost
1	P & G	
2	Cabling - Building Cost	
3	Equipment	
Sub Total Ex VAT		
Vat @ 15%		
Total Inc VAT		

Refurbishments and Upgrades to Merafe Train Station
Prasa South Gauteng Region Corridor 3

Section No	<u>SUMMARY OF SECTIONS</u>	Page No	Amount R
1	Preliminaries	20	
2	Building Work	71	
3	Civil Work	79	
4	Electrical Work	80	
5	Mechanical Work	81	
6	Electronics Work	82	
7	Access Control	83	
	Sub Total	R	
<u>CONTINGENCY</u>			
ADD: Construction Contingency (10%)		Item	
Sub Total		R	
ADD: Value added Tax at 15%		R	
TOTAL CARRIED TO FORM OF TENDER		R	
Contract Part C2: Pricing Data			