

PROVISIONAL BILLS OF QUANTITIES

FOR

REFURBISHMENTS AND UPGRADES TO NALEDI TRAIN STATION

AT

SOWETO, JOHANNESBURG

Jul-22

SECTION NO.1 : PRELIMINARIES

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 1</u></p>			
<p><u>PRELIMINARIES AND GENERAL</u></p>			
<p><u>BILL NO. 1</u></p>			
<p><u>BUILDING AGREEMENT AND PRELIMINARIES</u></p>			
<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>			
<p>Carried to Collection</p>			R
<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>			

SECTION A: PRINCIPAL BUILDING AGREEMENT

Interpretation (A1-A7)

1 Clause 1.0 - Definitions and interpretation
2 Clause 2.0 - **Law**, regulations and **notices**

Item

Item

3 Clause 3.0 - Offer and acceptance
F:..... V:.....
T:.....

Item

4 Clause 4.0 - Cession and assignment
F:..... V:.....
T:.....

Item

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:.....

Item

Insurances and securities (A8-A11)

8 Clause 8.0 - **Works** risk
F:..... V:.....
T:.....

Item

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

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>		
	Carried to Collection		R
	<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>		

	<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>Completion (A18 - A24)</p>	Item		
18	<p>Clause 18.0 - Interim completion</p>	Item		
19	<p>Clause 19.0 - Practical completion</p> <p>F:..... V:..... T:.....</p>	N/A		
20	<p>Clause 20.0 - Completion in sections</p>	Item		
21	<p>Clause 21.0 - Defects liability period and final completion</p>			
22	<p>Clause 22.0 - Latent defects liability period</p> <p>F:..... V:..... T:.....</p>	Item		
Carried to Collection				R
<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>				

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>Payment (A25 - A27)</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>			
	Carried to Collection			R
	<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>			

27	<p>Clause 27.0 - Recovery of expense and/or loss</p> <p>F:..... V:..... T:.....</p>	Item	
<u>Suspension and termination (A28 - A29)</u>			
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>	Item	
<u>Dispute resolution (A30)</u>			
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>	Item	
<u>SECTION B: GENERAL PRELIMINARIES</u>			
<u>Definitions and interpretation (B1)</u>			
33	<p>Clause 1.1 - Definitions</p> <p>F:..... V:..... T:.....</p>	Item	
Carried to Collection			R
<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>			

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

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

<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		
Carried to Collection				
Section No. 1 Preliminaries Contract Part C2: Pricing Data			R	

Samples, shop drawings and manufacturer's instructions (B6)

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

Deposits and fees (B7)

55 Clause 7.1 - Deposits and fees

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

Item

Temporary services (B8)

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

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

59	Clause 8.4 - Communication facilities			
	F:..... V:..... T:.....	Item		
	<u>Prime cost amounts (B9)</u>			
60	Clause 9.1 - Responsibility for prime cost amounts			
	<u>Attendance on subcontractors (B10)</u>			
61	Clause 10.1 - General attendance			
	<u>User note</u>			
	<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>			
	F:..... V:..... T:.....	Item		
62	Clause 10.2 - Special attendance			
63	Clause 11.1 - Protection of the works			
	F:..... V:..... T:.....	Item		
64	Clause 11.2 - Protection/isolation of existing works and works occupied in sections			
	F:..... V:..... T:.....	Item		
65	Clause 11.3 - Security of the works			
	F:..... V:..... T:.....	Item		
66	Clause 11.4 - Notice before covering work			
	F:..... V:..... T:.....	Item		
67	Clause 11.5 - Disturbance			
	Carried to Collection			R
	Section No. 1 Preliminaries Contract Part C2: Pricing Data			

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

SECTION C: SPECIFIC PRELIMINARIES

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

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

75 **Warranties for material and workmanship**

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**

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

Item

76 **Co-operation of contractor for cost management**

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

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

Item

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

77 **Propping of floors below**

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**

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

Item

78 **Testing of windows for watertightness**

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

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

Item

79 **Testing of flat roof waterproofing for watertightness**

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

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

Item

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

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.

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

Item

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

81 **AWARENESS WORKSHOPS**

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.

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

Item

82 **POSTERS, BOOKLETS, VIDEOS, ETC.**

Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification.

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

Item

83 **ACCESS TO CONDOMS**

Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification.

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

Item

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

84 **MONITORING**
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.

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

Item

SOCIO-ECONOMIC DELIVERABLES

85 It is required that the contractor shall adhere to all Socio-Economic Deliverables.

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

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

Item

EMPLOYMENT OF SMME SUB-CONTRACTORS AS A CONDITION OF TENDER

86 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

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

F:..... V:..... T:.....N/A

Item

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

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.

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

Item

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

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 Environmental 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.

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

Item

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

SUMMARY OF CATEGORIES

Category: Fixed R

Category: Value R

Category: Time R

Carried to Collection

R

Section No. 1
Preliminaries
Contract
Part C2: Pricing Data

**Refurbishments and Upgrades to Naledi 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	
Total Brought Forward from Page No.	5	
Total Brought Forward from Page No.	6	
Total Brought Forward from Page No.	7	
Total Brought Forward from Page No.	8	
Total Brought Forward from Page No.	9	
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Total Brought Forward from Page No.	16	
Total Brought Forward from Page No.	17	
Total Brought Forward from Page No.	18	
Total Brought Forward from Page No.	19	
Carried to Final Summary		R
Section No. 1		
Preliminaries		
Contract		
Part C2: Pricing Data		

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>			
Carried to Collection			R
<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

R

Section No. 2
Alterations
Contract
Part C2: Pricing Data

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

Carried to Collection

R

Section No. 2
Alterations
Contract
Part C2: Pricing Data

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

Carried to Collection

Section No. 2
Alterations
Contract
Part C2: Pricing Data

R

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

R

Section No. 2
Alterations
Contract
Part C2: Pricing Data

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

TEMPORARY BARRIERS, SCREENS, ETC

Temporary barriers, screens, etc including removal

1	Dust screen 2600mm high between concrete floor and ceiling formed of suitable timber framing with 375 micron polyethylene sheeting stapled on including corners, ends, etc	m	5	
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REMOVAL OF EXISTING WORK

Breaking down and removing brickwork etc

2	Half brick wall	m ²	3	
3	One brick wall	m ²	53	

Taking up and removing pavers, etc

4	Concrete pavers laid loose on compacted subbase	m ²	3	
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Taking out and removing doors, windows, etc from brickwork to be demolished

5	Timber single door and frame not exceeding 2,5m ²	No	3	
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Taking out and removing doors, windows, etc including thresholds, sills, etc (building up openings elsewhere)

6	Timber single door and frame not exceeding 2,5m ²	No	3	
7	Timber single door and frame exceeding 2,5m ² but not exceeding 5m ²	No	1	
8	Galvanised roller shutter window approximate size 3500 x 1100mm high	No	1	
9	Glazed window approximate size 950 x 750mm high	No	1	

Carried to Collection

R

Section No. 2
Alterations
Contract
Part C2: Pricing Data

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

<u>Take off and remove doors from existing frames including preparing frame to receive new door leaves (elsewhere measured)</u>			
10	Timber single door not exceeding 2,5m2	No	22
11	Steel single door not exceeding 2,5m2	No	1
<u>Taking down and removing roofs, floors, panelling, ceilings, partitions, etc</u>			
12	Corrugated iron roof covering and timber purlins, inspect and repair roof trusses to receive new covering.	m ²	3 096
13	Gypsum plasterboard ceilings including cornices, timber brandering, etc	m ²	244
14	Gutters and downpipes complete with fittings	m	85
15	Fibre cement fascia and badge boards	m	114
<u>Taking out and removing sundry joinery work</u>			
16	Timber skirtings from brickwork	m	Rate Only
<u>Taking out and removing joinery fittings etc</u>			
17	Timber kitchen sink cupboard approximately 1380 x 600 x 890mm high	No	1
18	Timber kitchen sink cupboard approximately 1325 x 600 x 890mm high	No	1
19	Timber kitchen wall cupboard approximately 1380 x 450 x 890mm high	No	1
20	Timber kitchen wall cupboard approximately 1325 x 450 x 890mm high	No	1
<u>Taking up and removing vinyl floor coverings, carpeting, etc</u>			
21	Carpet floor covering including preparing screed for new floor covering	m ²	Rate Only
Carried to Collection			R
Section No. 2 Alterations Contract Part C2: Pricing Data			

**Refurbishments and Upgrades to Naledi 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>				
22	Mortice lockset complete with handles from timber door	No	27	
23	Door closer from timber door	No	1	
<u>Taking out and removing ironmongery</u>				
24	Stainless steel toilet roll holder	No	20	
25	Paper towel dispenser	No	6	
26	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>				
27	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>				
28	Tiles to floors	m ²	261	
29	Tiles to walls	m ²	611	
30	Tile skirting	m	397	
<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>				
31	Stainless steel single bowl sink	No	2	
32	Vitreous china wash hand basin	No	21	
33	Vitreous china WC pan with cistern	No	22	
34	Vitreous china wall mounted urinal	No	6	
35	Paraplegic grab and flush rails	No	6	
Carried to Collection				R
Section No. 2 Alterations Contract Part C2: Pricing Data				

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

36	Floor drain	No	4		
	<u>Taking out and removing glass and mirrors</u>				
37	Glass from steel windows including cleaning out rebates and preparing for new glass	m ²	4		
38	Mirror size 450 x 600mm high from wall	No	8		
	<u>Servicing of existing fire equipment</u>				
39	2,5kg Carbon dioxide fire extinguisher including inspection, replacement of all worn parts, etc. to the satisfaction of the Project Manager	No	1		
40	4,5kg Dry chemical powder fire extinguisher including inspection, replacement of all worn parts, etc. all to the satisfaction of the Project Manager	No	1		
41	Fire hose reel including inspection, replacement of all worn parts, etc. and leave it in perfect working condition to the satisfaction of the Project Manager	No	1		
	<u>Taking out and removing street furniture:</u>				
42	Steel seats	No	12		
43	Steel bins	No	6		
	<u>BUILDING UP OPENINGS</u>				
	<u>Brickwork in NFP bricks in class II mortar in building up openings</u>				
44	Half brick walls	m ²	1		
45	One brick walls	m ²	6		
	<u>Sundries</u>				
46	Cutting toothings and bonding new brickwork to existing	m ²	5		
	<u>PREPARATORY WORK TO EXISTING SURFACES</u>				
47	Making good defects in existing screeded floors with an approved cementious compound	m ²			Rate Only
	Carried to Collection				R
	Section No. 2 Alterations Contract Part C2: Pricing Data				

MAKING GOOD OF FINISHES ETC

48	Making good brickwork at end of 230mm brick wall	m		Rate Only
49	Making good brickwork to face of wall where 230mm brick cross wall was removed	m	3	

REPAIRING PLASTER

General Notes

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

Prepare and apply 3:1 plaster admixture as described

50	On brick walls	m ²		Rate Only
51	On narrow widths	m ²		Rate Only

CONCRETE CRACK REPAIRS

General Notes

Carried to Collection

R

Section No. 2
Alterations
Contract
Part C2: Pricing Data

	<u>Preparation of surfaces</u>				
	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 2m ² /1 litre in strict accordance with the manufacturer's instructions)				
	<u>CONCRETE REPAIRS</u>				
	<u>Prepare cracked concrete surfaces as described and apply two component epoxy putty</u>				
52	On soffits of slabs	m ²			Rate Only
	<u>Making good defects in concrete with an approved cementious compound</u>				
53	On edges of concrete stairs	m	80		
	<u>CLEANING OF WALLS</u>				
	<u>Cleaning of surfaces</u>				
54	Facebrick walls	m ²	111		
55	Sandblasting painted brick surfaces	m ²	200		
	Carried to Collection				R
	Section No. 2 Alterations Contract Part C2: Pricing Data				

<u>OPENINGS THROUGH EXISTING WALLS ETC</u>					
<u>Breaking out for and forming openings through brick walls for new doors and frames including necessary precast concrete lintels and making good plaster on both sides and into reveals with steel trowelled finish (new doors and frames and making good paintwork elsewhere)</u>					
56	Opening for door with steel frame 813 x 2032mm high overall through one brick wall	No	1		
<u>Breaking out for and forming openings through brick walls for new window and frames including necessary precast concrete lintels and making good plaster on both sides and into reveals with steel trowelled finish (new doors and frames and making good paintwork elsewhere)</u>					
57	Opening for window size 1180 x 1360mm high overall through one brick wall	No	1		
<u>SEALING OF EXISTING ROOF SHEETING</u>					
<u>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)</u>					
58	Roof with a pitch not exceeding 25 degrees	m ²	1 850		
<u>SERVICE AND REPAIR</u>					
<u>Inspect and service</u>					
59	Roller shutter door 2600 x 2400mm high including ironmongery	No	21		
60	Roller shutter door 4200 x 2400mm high including ironmongery	No	2		
Carried to Collection					R
Section No. 2 Alterations Contract Part C2: Pricing Data					

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

61	Roller shutter door 4000 x 2400mm high including ironmongery	No	2		
62	Roller shutter door 1400 x 2400mm high including ironmongery	No	4		
Carried to Collection					R
<p>Section No. 2 Alterations Contract Part C2: Pricing Data</p>					

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 2</u></p> <p><u>EARTHWORKS</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>Nature of ground</u></p> <p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".</p> <p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".</p> <p>The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".</p> <p>Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.</p> <p>A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured</p>			
Carried to Collection			R
<p>Section No. 2 Earthworks Contract Part C2: Pricing Data</p>			

Carting away of excavated material

Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site

Filling

Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

Testing

Prices for filling are to include for all necessary density tests in accordance with SANS 1200D

Carried to Collection

R

Section No. 2
Earthworks
Contract
Part C2: Pricing Data

<u>SITE CLEARANCE ETC</u>					
<u>Site clearance</u>					
63	Stripping average 150mm thick layer of top soil and depositing material in prescribed stock piles on site	m ²	9		
64	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m ²	9		
<u>EXCAVATIONS</u>					
<u>Excavation in earth not exceeding 2m deep</u>					
65	Reduced levels under floors.	m ³	1		
66	Trenches	m ³	22		
<u>EXCAVATIONS IN STRATA OF A MORE DIFFICULT CHARACTER</u>					
<u>Extra over excavation in earth for excavation in</u>					
67	Soft rock	m ³	2		
68	Hard rock	m ³	1		
<u>Extra over all excavations for carting away</u>					
69	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m ³	17		
<u>Risk of collapse of excavations</u>					
70	Sides of trench and hole excavations not exceeding 1,5m deep	m ²	60		
<u>Keeping excavations free of water</u>					
71	Keeping excavations free of all water other than subterranean water		Item		
Carried to Collection					R
Section No. 2 Earthworks Contract Part C2: Pricing Data					

<u>FILLING ETC</u>					
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>					
72	Backfilling to trenches, holes, etc	m ³	11		
<u>Earth filling supplied by the contractor, compacted to 95% Mod AASHTO density</u>					
73	Under floors	m ³	1		
<u>Compaction of surfaces</u>					
74	Compaction of ground surface under strip footings and bases, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m ²	25		
75	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m ²	9		
<u>SOIL POISONING</u>					
<u>Soil insecticide in accordance with SANS 5859</u>					
76	Under floors etc, including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m ²	9		
77	To bottoms of trenches etc	m ²	25		
<u>Prescribed density tests on filling</u>					
78	Modified AASHTO Density test	No	2		
Carried to Collection					
Section No. 2 Earthworks Contract Part C2: Pricing Data				R	

Section No. 2

Bill of Quantities

Bill No. 2

Earthworks

COLLECTION PAGE

Total Brought Forward from Page No.

**Page
No**

35

**Amount
R**

Total Brought Forward from Page No.

36

Total Brought Forward from Page No.

37

Total Brought Forward from Page No.

38

Carried Forward to Summary of Section No. 2

R

Section No. 2
Earthworks
Contract
Part C2: Pricing Data

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 3</u></p> <p><u>CONCRETE, FORMWORK AND REINFORCEMENT</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>Cost of tests The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor and to the approval of the architect. (Test cubes are measured separately)</p> <p>Formwork Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use. The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.</p>			
	Carried to Collection			R
	<p>Section No. 2 Concrete, Formwork and Reinforcement Contract Part C2: Pricing Data</p>			

Formwork to soffits of (solid) slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described

Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design purposes. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"

Carried to Collection

Section No. 2
Concrete, Formwork and Reinforcement
Contract
Part C2: Pricing Data

R

**REINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

25MPa/19mm concrete

79	Strip footings	m ³	5		
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REINFORCED CONCRETE

25MPa/19mm concrete

80	Surface beds on waterproofing including thickenings	m ³	1		
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81	Slabs including upstand beams	m ³	1		
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TEST CUBES

82	Making and testing 150 x 150 x 150mm concrete strength test cubes	No	1		
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CONCRETE SUNDRIES

Finishing top surfaces of concrete smooth with a steel trowel

83	Top of surface beds	m ²	9		
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84	Top of slabs and beams	m ²	9		
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SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth formwork to soffits

85	Slabs not exceeding 250mm thick propped up exceeding 1,5m and not exceeding 3,5m high	m ²	9		
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Smooth formwork to sides

86	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	12		
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Carried to Collection

R

Section No. 2
Concrete, Formwork and Reinforcement
Contract
Part C2: Pricing Data

MOVEMENT JOINTS ETC

Isolation joints with 10mm "Jointex" filler between vertical concrete surfaces or between vertical concrete and brickwork surfaces

87	10mm joints not exceeding 300mm high	m	30
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REINFORCEMENT

Fabric reinforcement

88	Type 193 fabric reinforcement in concrete surface beds	m ²	9
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Mild and high tensile steel reinforcement to structural concrete work

89	All diameter bars	t	0.30
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Carried to Collection

R

Section No. 2
Concrete, Formwork and Reinforcement
Contract
Part C2: Pricing Data

Section No. 2
Bill of Quantities
Bill No. 3
Concrete, Formwork and Reinforcement

COLLECTION PAGE

Total Brought Forward from Page No.
Total Brought Forward from Page No.
Total Brought Forward from Page No.
Total Brought Forward from Page No.

**Page
No**

**Amount
R**

40
41
42
43

Carried Forward to Summary of Section No. 2

Section No. 2
Concrete, Formwork and Reinforcement
Contract
Part C2: Pricing Data

R

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 4</u></p> <p><u>MASONRY</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>BRICKWORK</u></p> <p><u>Sizes in descriptions</u></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><u>Hollow walls</u></p> <p>Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole</p> <p><u>Face bricks</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p style="text-align: center;">-----</p>			
	Carried to Collection			R
	<p>Section No. 2 Masonry Contract Part C2: Pricing Data</p>			

	<u>BRICKWORK</u>				
	<u>FOUNDATIONS</u>				
	<u>Brickwork of NFX bricks in class 1 mortar</u>				
90	Half brick walls	m ²	1		
91	One brick walls	m ²	28		
	<u>SUPERSTRUCTURE</u>				
	<u>Brickwork of NFP bricks in class 1 mortar</u>				
92	Half brick walls	m ²	22		
93	Half brick walls in beam filling	m ²	8		
94	One brick walls	m ²	95		
	<u>BRICKWORK SUNDRIES</u>				
	<u>Brickwork reinforcement</u>				
95	75mm Wide reinforcement built in horizontally	m	111		
96	150mm Wide reinforcement built in horizontally	m	481		
	<u>Prestressed fabricated lintels</u>				
97	110 x 75mm Lintels in lengths not exceeding 3m	m	16		
	<u>Galvanised hoop iron cramps, ties, etc</u>				
98	30 x 1,2mm Wall tie 500mm long with one end shot pinned to concrete and other end bent to form a right angle and built into brickwork	No	6		
	<u>FACE BRICKWORK</u>				
	<u>External facings in approved face bricks (FBX) pointed with flush horizontal and vertical joints</u>				
99	Extra over brickwork for face brickwork	m ²	136		
100	Extra over brickwork for face brickwork in foundations	m ²	55		
	Carried to Collection				R
	Section No. 2				
	Masonry				
	Contract				
	Part C2: Pricing Data				

Section No. 2

Bill of Quantities

Bill No. 4

Masonry

COLLECTION PAGE

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page
No**

**Amount
R**

45

46

47

Carried Forward to Summary of Section No. 2

R

Section No. 2
Masonry
Contract
Part C2: Pricing Data

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 5</u></p> <p><u>WATERPROOFING</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>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</p> <p>-----</p> <p><u>DAMPPROOFING OF WALLS AND FLOORS</u></p> <p><u>One layer of 375 micron embossed damp proof course</u></p>			
106	In walls	m ²	6	
	<p><u>One layer of 250 micron waterproof sheeting sealed at laps with pressure sensitive tape</u></p>			
107	Under surface beds	m ²	4	
	<p><u>WATERPROOFING TO FLAT SCREEDED ROOFS</u></p> <p><u>Two layers of 4mm thick Torch-on polyester based sheeting inclusive of additional membrane dressing around fullbores, pipes, etc</u></p>			
108	On flat roofs	m ²	9	
	Carried to Collection			R
	Section No. 2 Waterproofing Contract Part C2: Pricing Data			

Section No. 2

Bill of Quantities

Bill No. 5

Waterproofing

COLLECTION PAGE

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page
No**

49

50

**Amount
R**

Carried Forward to Summary of Section No. 2

R

Section No. 2
Waterproofing
Contract
Part C2: Pricing Data

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 6</u></p> <p><u>ROOF COVERINGS ETC</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>Straight cutting</u></p> <p>Descriptions of all roof coverings are deemed to include for all straight cutting</p> <p style="text-align: center;">-----</p> <p><u>PROFILED METAL SHEETING AND ACCESSORIES</u></p> <p><u>0.58mm Z275 spelter galvanised ribbed sheet steel with chromadek finish on one side in single lengths and accessories, fixed to timber purlins using approved clips and fasteners all in accordance with manufacturer's recommendations and specifications.</u></p>			
111	Roof covering with pitch not exceeding 25 degrees	m ²	540	
112	Ridge covering 462mm girth	m	38	
113	Apex flashing 462mm girth	m	38	
	Carried to Collection			R
	Section No. 2 Roof Coverings Contract Part C2: Pricing Data			

Section No. 2

Bill of Quantities

Bill No. 6

Roof Coverings

COLLECTION PAGE

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page
No**

52

53

**Amount
R**

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
<p><u>SECTION NO. 2</u></p>			
<p><u>BILL NO. 7</u></p>			
<p><u>CARPENTRY AND JOINERY</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>Plate nailed timber roof truss construction</p>			
<p>The following is applicable in respect of roof trusses:</p>			
<p>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 branderling. 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</p>			
<p>Joinery</p>			
<p>Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc</p>			
<p>Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes</p>			
<p>Fixing</p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete</p>			
<p>Decorative laminate finish</p>			
<p>Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish</p>			
<p>Carried to Collection</p>			R
<p>Section No. 2 Carpentry and Joinery Contract Part C2: Pricing Data</p>			

		<u>ROOFS, ETC</u>			
		<u>Supply and install complete plate nailed roof truss construction</u>			
116	Double pitched roof 8,7m2 overall on plan, including part trusses, jack rafters, permanent bracing, 50 x 76mm purlins at centres for roof sheeting.	No		1	
		<u>Sundries</u>			
117	Two coats wood preservative applied hot on sawn and wrought exposed timbers at eaves	m ²		1	
		<u>EAVES, VERGES, ETC</u>			
		<u>Medium density plain fibre-cement plain fascias and barge boards</u>			
118	12 x 300mm Fascias and barge boards, including aluminium H-profile joiners	m		129	
		<u>SKIRTINGS</u>			
		<u>Wrought meranti</u>			
119	20 x 120mm Skirtings	m		26	
		<u>DOORS, ETC</u>			
		<u>Semi-solid flush panel door with concealed hardwood edges and commercial veneer on both sides, hung to steel frames</u>			
120	44mm Thick single door size 813 x 2100mm high	No		5	
121	44mm Thick double door size 915 x 2100mm high	No		7	
122	44mm Thick double door size 915 x 2100mm high with and including an aluminium louvre size 450 x 450mm	No		1	
123	44mm Thick single sliding door size 960 x 2400mm high including a sliding gear and steel angle cap size 1860 x 250mm high	No		1	
		Carried to Collection			R
Section No. 2 Carpentry and Joinery Contract Part C2: Pricing Data					

124	<p><u>Solid core flush panel doors with concealed hardwood edge strips with solid chipboard core clad with commercial veneer facing on both sides and hung to steel frames (Steel frames measured elsewhere)</u></p> <p>44mm Thick single door size 915 x 2100mm high</p>	No	14	
<p><u>JOINERY FITTINGS</u></p>				
<p><u>General</u></p>				
<p>The following fittings have been measured as complete units i.e. the components of the units have not been separately measured. The descriptions, therefore, of such units shall be deemed to include all components, assembling, housing, notching, glueing, blocking, planting on and screwing with countersunk screws, edge strips, decorative plastic finish, glass, ironmongery, metalwork, paint or varnish finishes, etc</p>				
<p><u>KITCHEN CUPBOARDS</u></p>				
<p><u>22mm Thick white melamine carcass base and shelves with masonite backing and black painted chipboard kickplates complete with and including timber bearers, melawood impact post formed wrapped doors fitted with appropriate hinges and all ironmongery</u></p>				
125	<p>Floor standing cupboard 1650mm long x 600mm wide x 900mm high complete with back, divisions, drawers, filler pieces etc for supporting counter (counter measured elsewhere)</p>	No	1	
126	<p>Floor standing cupboard 1380mm long x 600mm wide x 900mm high complete with back, divisions, drawers, filler pieces etc for supporting counter (counter measured elsewhere)</p>	No	1	
127	<p>Floor standing cupboard 1325mm long x 600mm wide x 900mm high complete with back, divisions, drawers, filler pieces etc for supporting counter (counter measured elsewhere)</p>	No	1	
128	<p>Wall cupboard 1650mm long x 450mm wide x 700mm high complete with back, divisions etc</p>	No	1	
<p>Carried to Collection</p>				<p>R</p>
<p>Section No. 2 Carpentry and Joinery Contract Part C2: Pricing Data</p>				

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

129	Wall cupboard 1380mm long x 450mm wide x 700mm high complete with back, divisions etc	No	1						
130	Wall cupboard 1325mm long x 450mm wide x 700mm high complete with back, divisions etc	No	1						
Carried to Collection							R		

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

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

Section No. 2

Bill of Quantities

Bill No. 7

Carpentry and Joinery

COLLECTION PAGE

Total Brought Forward from Page No.

**Page
No**

55

**Amount
R**

Total Brought Forward from Page No.

56

Total Brought Forward from Page No.

57

Total Brought Forward from Page No.

58

Carried Forward to Summary of Section No. 2

R

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

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 8</u></p> <p><u>CEILING, PARTITIONS AND 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>CEILING, ETC</u></p> <p><u>Approved insulation</u></p>			
131	50mm Insulation closely fitted and laid on top of brander between roof timbers, etc	m ²	284	
	Carried to Collection			R
	Section No. 2 Ceilings, Partitions and Access Flooring Contract Part C2: Pricing Data			

SUSPENDED CEILINGS

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.

132	Horizontal ceilings, including 38 x 38mm sawn softwood branderling at 450mm centres	m ²	40
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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

133	Horizontal ceilings suspended not exceeding 1m below timber or steel soffits	m ²	244
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Cornices to suspended ceilings

134	Pre-painted cornices, nailed and plugged	m	208
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Carried to Collection

R

Section No. 2
Ceilings, Partitions and Access Flooring
Contract
Part C2: Pricing Data

Section No. 2
 Bill of Quantities
 Bill No. 8
 Ceilings, Partitions and Access Flooring

COLLECTION PAGE

Total Brought Forward from Page No.

**Page
No**

60

**Amount
R**

Total Brought Forward from Page No.

61

Carried Forward to Summary of Section No. 2

R

Section No. 2
 Ceilings, Partitions and Access Flooring
 Contract
 Part C2: Pricing Data

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 9</u></p> <p><u>FLOOR COVERINGS, WALL LININGS, ETC</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>Fixing</u></p> <p>Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc</p> <p>-----</p> <p><u>FLOOR COVERINGS</u></p> <p><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></p>			
135	On floors	m ²	52	
	<p><u>CORNER PROTECTORS, DIVIDING STRIPS, ETC</u></p>			
136	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
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 10</u></p> <p><u>IRONMONGERY</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>Finishes to ironmongery</u></p> <p>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</p> <p><u>NOTE:</u></p> <p><u>ALL LOCKS TO BE ON A MASTER AND GRAND MASTER KEY SYSTEM</u></p> <p style="text-align: center;">-----</p> <p><u>HINGES, BOLTS, ETC</u></p> <p><u>Grade 304 Stainless steel</u></p>			
137	WC indicator bolt	No	9	
138	Disabled indicator bolt, fixed to surface with matching stainless steel screws.	No	6	
139	88 x 100mm High overall bush bearing butt hinge	No	10	
	Carried to Collection			R
	Section No. 2 Ironmongery Contract Part C2: Pricing Data			

LOCKS

Grade 304 Stainless steel

140	Euro profile Mortice sash lock with reversible latch and deadbolt. Fore end to be stainless steel	No	46
141	Security Deadlock with a Deadcase plate in the door frame with Master key functioning.	No	1

PUSH PLATES AND KICKING PLATES

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

142	813 x 200mm Kick plate	No	6
143	900 x 200mm Kick plate	No	14

HANDLES

Grade 304 Stainless steel

144	Round D pull handle on 19 x 200 mm backplate	Pairs	47
145	Round D pull handle on 19 x 300 mm backplate	Pairs	6

DOOR CLOSERS

Approved

146	Approved delayed action door closer	No	8
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LETTERS, NAMEPLATES, ETC

Stainless steel

147	152 x 152 x 2mm Thick engraved with female pictogram	No	2
148	152 x 152 x 2mm Thick engraved with male pictogram	No	2
149	152 x 152 x 2mm Thick engraved with paraplegic pictogram	No	4

Carried to Collection

R

Section No. 2
Ironmongery
Contract
Part C2: Pricing Data

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

150	152 x 152 x 2mm Thick engraved with Unisex pictogram	No	3
151	152 x 152 x 2mm Thick engraved with kitchen and breakroom pictogram	No	3
152	152 x 152 x 2mm Thick engraved with cleaning store pictogram	No	2
<u>SUNDRIES</u>			
<u>Approved</u>			
153	Stainless steel door stop	No	4
154	Hat and coat hook	No	4
<u>BATHROOM FITTINGS</u>			
155	Satin stainless steel recessed toilet roll holders for single or two rolls, plugged and screwed to the wall with stainless steel screws.	No	18
156	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	5
157	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	5
158	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	5
159	Satin stainless steel towel rings, plugged and screwed to the wall with stainless steel screws.	No	5
160	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	12
161	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	10

Carried to Collection

R

Section No. 2
Ironmongery
Contract
Part C2: Pricing Data

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

162	Satin stainless steel full automatic industrial hand dryer with 2 vandal proof lock screws and key wrench, plugged and screwed to the wall with stainless steel screws. 2500 W motor with automatic power cut off after 90 second and a 5 year warranty.	No	10
163	Paraplegic Rails dog leg grab rail with 3 supports with brushed grade 304 stainless steel finish, overall size 750 x 750mm, plugged and screwed to wall with stainless steel screws.	No	6
164	Paraplegic Rails flush valve grab rail with brushed grade 304 stainless steel finish, overall size 842mm long, plugged and screwed to wall with stainless steel screws.	No	6

VERTICAL LOUVRE BLINDS

Budgetary allowance

165	Provide a sum of R30 000.00 (Thirty Thousand Rand) for Window blinds		Item
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Carried to Collection

R

Section No. 2
Ironmongery
Contract
Part C2: Pricing Data

Section No. 2

Bill of Quantities

Bill No. 10

Ironmongery

COLLECTION PAGE

Total Brought Forward from Page No.

**Page
No**

64

**Amount
R**

Total Brought Forward from Page No.

65

Total Brought Forward from Page No.

66

Total Brought Forward from Page No.

67

Carried Forward to Summary of Section No. 2

R

Section No. 2
Ironmongery
Contract
Part C2: Pricing Data

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p>			
<p><u>BILL NO. 11</u></p>			
<p><u>METALWORK</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 bolts shall be deemed to include nuts and washers</p>			
<p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p>			
<p>Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described</p> <p>-----</p>			
<p align="center">Carried to Collection</p>			R
<p>Section No. 2 Metalwork Contract Part C2: Pricing Data</p>			

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

166	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	8
167	Double gate 1830 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	1

PRESSED STEEL DOOR FRAMES

1,2mm Thick double rebated frames suitable for half brick walls complete with hoop iron anchors welded to frame, one adjustable chromium plated steel striking plate suitable for cylinder locks, three rubber shock absorbers in rebate and one and a half pair 100mm knuckle loose pin steel hinges welded to frame

168	Frame for door size 813 x 2100mm high	No	4
169	Frame for door size 960 x 2400mm high	No	1
<u>1,2mm Thick double rebated frames suitable for one brick walls complete with hoop iron anchors welded to frame, one adjustable chromium plated steel striking plate suitable for cylinder locks, three rubber shock absorbers in rebate and one and a half pair 100mm knuckle loose pin steel hinges welded to frame</u>			
170	Frame for door size 813 x 2100mm high	No	2
171	Frame for door size 915 x 2100mm high	No	1

Carried to Collection

R

Section No. 2
Metalwork
Contract
Part C2: Pricing Data

172	<p><u>GALVANISED PRESSED STEEL DOORS</u></p> <p>Door 813 x 2032mm high for one brick wall and with 3 lever mortice lock</p> <p><u>ALUMINIUM SHOP FRONTS, DOORS, WINDOWS, ETC</u></p> <p><u>Aluminium shop fronts, doors, windows, etc</u></p> <p>The proposed direct contractor is to submit proof of AAAMSA membership before the subcontract may be awarded. This subcontract might not be awarded if such proof of membership cannot be submitted</p> <p>Shop fronts, doors and windows shall comply with AAAMSA design criteria</p> <p>Glazing shall comply with SAGGA regulations. Glass shall be Code 1 laminated performance glass unless otherwise stated as shown on the window and door schedules. The installer of the safety glazing material shall ensure all panes are marked with the glaziers name and the relevant glass code. Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings</p> <p>Shop fronts, doors and windows are to be supplied complete with subframes, glass, sealing, etc, and pricing must take cognisance thereof. All doors to be supplied with and including ironmongery as indicated on the architect's drawings.</p> <p>Shop fronts, doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed</p> <p>The following certificates shall be provided prior to commencement of site work:</p> <p>1 Test A copy of the relevant AAAMSA Performance Certificate from the manufacturer/contractor supplying the architectural aluminium product</p> <p>2 A Certificate of Conformance confirming that anodizing or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively</p> <p style="text-align: center;">Carried to Collection</p> <p>Section No. 2 Metalwork Contract Part C2: Pricing Data</p>	No	1	R
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3	A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 10137, ensuring that safety glazing materials			
that has	have been installed in the mandatory areas and each individual pane of safety glazing materials been permanently marked			
4	A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for			
a	period of not less than five years			
<u>Powder coated aluminium windows double glazed with 6,5mm thick clear laminated safety glass complete with ironmongery and fittings including sealing with approved silicone sealant and fixed to brickwork or concrete</u>				
173	Window, overall size 1350 x 1200mm high	No	2	
174	Window, overall size 1100 x 800mm high	No	2	
175	Window, overall size 450 x 600mm high	No	1	
<u>STEEL RECORDROOM AND STRONGROOM DOORS, VENTILATORS, ETC</u>				
<u>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</u>				
176	Anti Bandit bullet resistant door and frame 920 x 2100mm high	No	1	
Carried to Collection				
Section No. 2 Metalwork Contract Part C2: Pricing Data				R

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.

177	Bullet resistant glass transaction window 750 x 1100mm high	No	3
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RECYCLING BINS

Stainless steel furniture

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

R

Section No. 2
Metalwork
Contract
Part C2: Pricing Data

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

Section No. 2

Bill of Quantities

Bill No. 11

Metalwork

COLLECTION PAGE

Total Brought Forward from Page No.

**Page
No**

69

**Amount
R**

Total Brought Forward from Page No.

70

Total Brought Forward from Page No.

71

Total Brought Forward from Page No.

72

Total Brought Forward from Page No.

73

Carried Forward to Summary of Section No. 2

R

Section No. 2

Metalwork

Contract

Part C2: Pricing Data

Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 12</u>			
	<u>PLASTERING</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>SCREEDS</u>			
	<u>Screeds on concrete</u>			
179	30mm Thick on floors and landings	m ²	9	
180	Average 50mm thick on floors with upper surface to falls	m ²	9	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork</u>			
181	On walls	m ²	209	
182	On narrow widths	m ²	2	
	<u>Cement plaster on concrete</u>			
183	On ceilings	m ²	9	
	<u>EXTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork</u>			
184	On walls	m ²	29	
185	On narrow widths	m ²	1	
	Carried Forward to Summary of Section No. 2			R
	Section No. 2 Plastering Contract Part C2: Pricing Data			

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 13</u></p> <p><u>TILING</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>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</p> <p style="text-align: center;">-----</p> <p><u>WALL TILING</u></p> <p><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></p>			
186	On walls	m ²	617	
187	On narrow widths	m ²	1	
	<p><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></p>			
188	On walls in isolated panels, splashbacks, etc	m ²	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

189	On floors and landings	m ²	217
190	Skirting 100mm high	m	397

Carried to Collection

R

Section No. 2
Tiling
Contract
Part C2: Pricing Data

Section No. 2

Bill of Quantities

Bill No. 13

Tiling

COLLECTION PAGE

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page
No**

76

77

**Amount
R**

Carried Forward to Summary of Section No. 2

R

Section No. 2
Tiling
Contract
Part C2: Pricing Data

Item No	Quantity	Rate	Amount R
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 14</u></p> <p><u>PLUMBING AND DRAINAGE</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>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings unless hailguards are allowed for in the bills of quantities</p> <p><u>Stainless steel basins, sinks, wash troughs, urinals, etc</u></p> <p>Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)</p> <p>Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)</p> <p>Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Waste unions</u></p> <p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings</p> <p><u>Sealing of edges</u></p> <p>Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone</p>			
Carried to Collection			R
<p>Section No. 2 Plumbing and Drainage Contract Part C2: Pricing Data</p>			

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

R

Section No. 2
Plumbing and Drainage
Contract
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, gully 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

RAINWATER DISPOSAL

**0.9mm Galvanised steel sheet with chromadek finish
one side and standard backing coat**

191	100 x 150mm Eaves gutters	m	103
192	Extra over 100 x 150mm eaves gutter for stopped end	No	4
193	Extra for outlet for 100mm pipe	No	4
194	100 x 75mm Rainwater pipes	m	21
195	Extra over 100 x 75mm pipe for angle	No	4
196	Extra over 100 x 75mm pipe for bend	No	4
197	Extra over 100 x 75mm pipe for shoe	No	4
198	Extra 100 x 75mm pipe for eaves or plinth offset	No	4

SOIL AND STORMWATER DRAINAGE

Budgetary Allowances

Sewer

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

Stormwater

200	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
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Carried to Collection

R

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

SANITARY FITTINGS

1.6mm Stainless steel type 304 (18/10)

201	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	3
-----	--	----	---

White glazed vitreous china

202	Vitreous china top flush toilet suite comprising 90° outlet open rim pan with top flush cistern and flush mechanism and normal close seat	No	6
-----	---	----	---

203	High quality non-corrosive 6/3 liter dual flush concealed cistern with inlet/outlet connector for floor mounted applications	No	17
-----	--	----	----

204	Vitreous china approved security pan (Cistern measured elsewhere)	No	11
-----	---	----	----

205	Vitreous china wall hung closed rim pan with soft close seat (Cistern measured elsewhere)	No	6
-----	---	----	---

206	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	6
-----	---	----	---

207	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	4
-----	--	----	---

208	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	12
-----	---	----	----

209	Vandal Resistant Urinal with automatic flush sensors or manual flush valve	No	6
-----	--	----	---

Floor drain

210	Floor drain square brass including trap	No	4
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Carried to Collection

R

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

Section No. 2

Bill of Quantities

Bill No. 14

Plumbing and Drainage

COLLECTION PAGE

Total Brought Forward from Page No.

**Page
No**

79

**Amount
R**

Total Brought Forward from Page No.

80

Total Brought Forward from Page No.

81

Total Brought Forward from Page No.

82

Total Brought Forward from Page No.

83

Total Brought Forward from Page No.

84

Total Brought Forward from Page No.

85

Carried Forward to Summary of Section No. 2

R

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

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>			
220	Panes not exceeding 0,1 m2	m ²	2	
221	Panes exceeding 0,5m2 and not exceeding 2m2	m ²	2	
	<u>GLAZING TO WOOD WITH PINNED-ON BEADS</u>			
	<u>4mm Clear float glass</u>			
222	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>			
223	Mirror size 600 x 900mm high	No	9	
	Carried Forward to Summary of Section No. 2			R
	Section No. 2			
	Glazing			
	Contract			
	Part C2: Pricing Data			

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 16</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 style="text-align: center;">-----</p> <p><u>PAINTWORK, ETC TO NEW WORK ON</u></p>			
	Carried to Collection			R
	<p>Section No. 2 Paintwork Contract Part C2: Pricing Data</p>			

<u>FLOATED PLASTER SURFACES WITH</u>					
<u>One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint on</u>					
224	Internal walls	m ²	166		
225	Narrow widths	m ²	1		
<u>One coat alkali resistant plaster primer and two coats modified acrylic fine textured emulsion paint on</u>					
226	Ceilings and beams	m ²	9		
<u>One coat alkali resistant plaster primer and two coats modified acrylic fine textured emulsion paint on</u>					
227	External walls	m ²	29		
228	Narrow widths	m ²	1		
<u>FIBRE-CEMENT SURFACES WITH</u>					
<u>Two coats pure acrylic paint on</u>					
229	Ceilings	m ²	40		
230	Cills	m ²	1		
231	On fascias and barge boards	m ²	39		
<u>METAL SURFACES WITH</u>					
<u>One coat multisurface primer and two coats gloss enamel paint on work in sound condition on steel</u>					
232	On door frames	m ²	6		
<u>WOOD SURFACES WITH:</u>					
<u>One coat pink wood primer, one coat universal undercoat and two coats super universal high gloss enamel paint on</u>					
233	Doors	m ²	20		
Carried to Collection					
Section No. 2 Paintwork Contract Part C2: Pricing Data				R	

234	<p><u>Three coats polyurethane suede varnish on</u></p>	m	26	R
	<p><u>PAINTWORK, ETC TO PREVIOUSLY PAINTED WORK ON</u></p>			
	<p>General</p>			
	<p>All works are to be executed in strict accordance with the paint specifications of the manufacturer for the preparation of previously painted surfaces</p>			
	<p>Primer (first) coats may be thinned in accordance with the specifications of the manufacturer to aid the absorption of the paint</p>			
	<p>All surfaces must be sound, clean and have a moisture content of less than 12%</p>			
	<p>Previously painted plastered surfaces</p>			
	<p>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</p>			
	<p>Previously painted metal surfaces</p>			
	<p>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</p>			
	<p>Previously painted wood surfaces</p>			
	<p>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</p>			
	<p><u>BRICK OR QUARRY TILE SURFACES WITH</u></p>			
	<p>Carried to Collection</p>			
	<p>Section No. 2 Paintwork Contract Part C2: Pricing Data</p>			

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

244	Door frames	m ²	84
245	On windows	m ²	154
246	On steel sections not exceeding 300 mm girth	m	100
247	On steel sections	m ²	155
248	On eaves gutters not exceeding 300 mm girth	m	1
	<u>One coat of waterprime, one coat of universal undercoat and two coats of gloss enamel on work in sound condition on steel</u>		
249	Rails, bars, pipes, etc not exceeding 300mm girth	m	72
250	On walkway and bridge balustrades (both sides measured over the full flat area)	m ²	993
	<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>		
251	Roller shutter doors	m ²	425
	<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>		
252	On profiled roof sheeting (measured on flat)	m ²	1 850
	<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>		
253	Doors	m ²	189

Carried to Collection

R

Section No. 2
Paintwork
Contract
Part C2: Pricing Data

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

Section No. 2

Bill of Quantities

Bill No. 16

Paintwork

COLLECTION PAGE

Total Brought Forward from Page No.

**Page
No**

88

**Amount
R**

Total Brought Forward from Page No.

89

Total Brought Forward from Page No.

90

Total Brought Forward from Page No.

91

Total Brought Forward from Page No.

92

Carried Forward to Summary of Section No. 2

R

Section No. 2

Paintwork

Contract

Part C2: Pricing Data

Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 17</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>			
254	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
255	Allow for general attendance		%	
256	Allow for profit		%	
	Carried to Collection			
			R	
	Section No. 2 Provisional Amounts Contract Part C2: Pricing Data			

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

<u>EPWP TRAINING</u>				
257	Allow the amount of R375,000.00 (Three Hundred and Seventy Five 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		375 000.00
258	Allow for general attendance		%	
259	Allow for profit		%	
<u>BUDGETARY AMOUNTS</u>				
<u>LANDSCAPING</u>				
260	Allow the amount of R75 000.00 (Seventy Five Thousand Rand) landscaping to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		75 000.00
<u>SIGNAGE</u>				
261	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
<u>EXTENSION OF HANDRAILS AND BALUSTRADES ON PLATFORM STAIRCASE</u>				
262	Allow the amount of R30 000.00 (Thirty Thousand Rand) for extending the staircase handrails and balustrades to be used at the discretion of the Project Manager and deducted in whole or in part if not required	Item		30 000.00
Carried to Collection			R	
Section No. 2 Provisional Amounts Contract Part C2: Pricing Data				

Section No. 2

Bill of Quantities

Bill No. 17

Provisional Amounts

COLLECTION PAGE

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page
No**

94

95

**Amount
R**

Carried Forward to Summary of Section No. 2

R

Section No. 2
Provisional Amounts
Contract
Part C2: Pricing Data

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

Section No. 2

Bill of Quantities

SECTION SUMMARY

Bill No		Page No	Amount R
1	Alterations	34	
2	Earthworks	39	
3	Concrete, Formwork and Reinforcement	44	
4	Masonry	48	
5	Waterproofing	51	
6	Roof Coverings	54	
7	Carpentry and Joinery	59	
8	Ceilings, Partitions and Access Flooring	62	
9	Floor Coverings and Wall Linings	63	
10	Ironmongery	68	
11	Metalwork	74	
12	Plastering	75	
13	Tiling	78	
14	Plumbing and Drainage	86	
15	Glazing	87	
16	Paintwork	93	
17	Provisional Amounts	96	
	Carried to Final Summary		R
	Section No. 2		
	Contract		
	Part C2: Pricing Data		

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>ROADS - ASPHALT BASE AND SURFACING</u></p> <p><u>DEMOLITIONS ETC</u></p> <p><u>Hacking up and removing</u></p>			
1	Asphalt road surface	m ²	7 048	
	Carried to Collection			R
	Section No. 3 Platforms Contract Part C2: Pricing Data			

<u>EARTHWORKS (BULK EXCAVATION, FILLING ETC)</u>			
<u>Extra over excavations for carting away</u>			
2	Surplus material from stock piles on site to a dumping site to be located by the contractor	m ³	352
<u>Keeping excavations free of water</u>			
3	Keeping excavations free of water		Item
<u>Compaction of surfaces</u>			
4	Rip and compact existing subbase to 90% of Mod AASHTO density	m ²	7 048
<u>Prescribed density tests on filling:</u>			
5	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	20
<u>Additional prescribed density tests on filling as requested by the principal agent</u>			
6	Relative compaction test in accordance with methods A1, A10b and A17 of TMH1	No	1
7	Indicator test in accordance with methods A1 to A5 of TMH1	No	1
8	CBR test in accordance with method A8 of TMH1	No	1
9	UCS test in accordance with method A14 of TMH1	No	1
<u>SURFACING</u>			
<u>Asphalt road and parking surfacing</u>			
10	50mm Thick continuously graded asphalt surfacing	m ²	7 048
<u>Prime coat</u>			
11	MC-30 Cutback bitumen	m ²	7 048
Carried to Collection			R
Section No. 3 Platforms Contract Part C2: Pricing Data			

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

Section No. 3

Civil Work

Bill No. 1

Platforms

COLLECTION PAGE

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page
No**

**Amount
R**

98

99

100

Carried Forward to Summary of Section No. 3

R

Section No. 3
Platforms
Contract
Part C2: Pricing Data

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

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>			
17	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	12	
18	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 style="text-align: center;">-----</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 3 Roads and Paving Contract Part C2: Pricing Data</p>			R

<u>EARTHWORKS (BULK EXCAVATION, FILLING ETC)</u>					
<u>Excavation not exceeding 2m deep</u>					
19	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	104		
<u>Extra over excavations for carting away</u>					
20	Surplus material from stock piles on site to a dumping site to be located by the contractor	m ³	104		
<u>Keeping excavations free of water</u>					
21	Keeping excavations free of water			Item	
<u>Earth filling supplied by the contractor under pavings and roads or in soil mattress, etc as drawings 102472-CIV-005 and 006</u>					
22	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	35		
23	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	35		
24	Base course under roads and parking compacted to 85% apparent density (G2 graded crushed stone material)	m ³	35		
<u>Compaction of surfaces</u>					
25	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	232		
Carried to Collection					R
Section No. 3 Roads and Paving Contract Part C2: Pricing Data					

Additional prescribed density tests on filling as requested by the principal agent

26	Relative compaction test in accordance with methods A1, A10b and A17 of TMH1	No	1	
27	Indicator test in accordance with methods A1 to A5 of TMH1	No	1	
28	CBR test in accordance with method A8 of TMH1	No	1	
29	UCS test in accordance with method A14 of TMH1	No	1	

Approved weedkiller mixed in the proportion and applied as specified by the manufacturer

30	Under block paving, etc	m ²	232	
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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

31	Paving to islands and yards	m ²	232	
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Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing

32	Kerb (SABS 927 fig 11) 75mm wide x 150mm high with 150mm x 150mm x 300mm unreinforced concrete haunching at back of each joint including excavation, backfilling, etc	m	93	
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PAVING

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

33	Paving to walkways	m ²	116	
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Carried to Collection

R

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

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

Section No. 3

Civil Work

Bill No. 3

Roads and Paving

COLLECTION PAGE

Total Brought Forward from Page No.

**Page
No**

103

**Amount
R**

Total Brought Forward from Page No.

104

Total Brought Forward from Page No.

105

Carried Forward to Summary of Section No. 3

R

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

Item No		Quantity	Rate	Amount R
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 4</u>			
	<u>BOUNDARY WALL</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>SITE CLEARANCE ETC</u>			
	<u>Site clearance</u>			
34	Stripping average 150mm thick layer of top soil and depositing material in prescribed stock piles on site	m ²	97	
	<u>EXCAVATIONS</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
35	Trenches	m ³	68	
	<u>Extra over trench and hole excavations in earth for excavation in:</u>			
36	Soft rock.	m ³	7	
37	Hard rock.	m ³	3	
	<u>Extra over all excavations for carting away:</u>			
38	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m ³	37	
	<u>Risk of collapse of excavations</u>			
39	Sides of trench and hole excavations not exceeding 1,5m deep	m ²	194	
	Carried to Collection			R
	Section No. 3 Boundary walls Contract Part C2: Pricing Data			

G5 Material supplied by the Contractor compacted to 95% Mod. AASHTO density:

40	Backfilling to trenches, holes, etc.	m ³	34
41	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density.	m ²	68

Prescribed density tests on filling:

42	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	3
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Soil insecticide

43	To bottoms and sides of trenches, etc	m ²	262
----	---------------------------------------	----------------	-----

25 MPa/20mm reinforced concrete

44	Strip footings	m ³	17
----	----------------	----------------	----

Test blocks

45	Making and testing 150 x 150 x 150mm concrete strength test cube	No	3
----	--	----	---

BRICKWORK

FOUNDATIONS

Brickwork of NFX bricks in class 1 mortar

46	One brick walls	m ²	87
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SUPERSTRUCTURE

Brickwork of NFX bricks in Class I mortar:

47	230mm walls.	m ²	116
----	--------------	----------------	-----

Carried to Collection

R

Section No. 3
Boundary walls
Contract
Part C2: Pricing Data

BRICKWORK SUNDRIES

Brickwork reinforcement:

48	150mm Wide reinforcement built in horizontally.	m	970
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FACE BRICKWORK

External facings in approved face bricks (FBX) pointed with flush horizontal and vertical joints

49	Extra over brickwork for face brickwork	m ²	233
----	---	----------------	-----

50	Extra over brickwork for face brickwork in foundations	m ²	213
----	--	----------------	-----

Brick-on-edge header course copings, sills, etc of approved face bricks (FBX) pointed with flush horizontal and vertical joints on all exposed faces

51	220mm Copings on top of one brick walls	m	97
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GALVANISED STEEL GATES

Gates

52	Vehicle gate 6,0 x 1,8m 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 to Collection

R

Section No. 3
Boundary walls
Contract
Part C2: Pricing Data

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

Section No. 3

Civil Work

Bill No. 4

Boundary walls

COLLECTION PAGE

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page
No**

**Amount
R**

107

108

109

Carried Forward to Summary of Section No. 3

R

Section No. 3
Boundary walls
Contract
Part C2: Pricing Data

Item No		Quantity	Rate	Amount R
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO. 5</u></p> <p><u>FENCING</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 style="text-align: center;">-----</p> <p><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></p>			
53	Fence 1200m 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	97	
54	Extra over for 150mm diameter taper post 2.4m long, including 400 x 600mm deep concrete base, 85mm width tapering to 45mm with a depth of 85mm. Post shall include 'Locking Recess Mechanism' to secure panel edge. Post shall be sealed with a UV stabilised polymer cap and fitted with a 12mm base pin	No	33	
55	Sliding gate 5.5 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			

Section No. 3

Civil Work

SECTION SUMMARY

Bill No		Page No	Amount R
1	Platforms	101	
2	Street Furniture	102	
3	Roads and Paving	106	
4	Boundary walls	110	
5	Fencing	111	
Carried to Final Summary			R
Section No. 3 Contract Part C2: Pricing Data			

SECTION NO.4 : ELECTRICAL WORK

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

Item No		Quantity	Rate	Amount R
1	Electrical Work sub-total amount carried from final summary Section 4 (Excluding Value added Tax).	Item		
	Carried to Final Summary			R
	Section No. 4 Electrical Work Contract Part C2: Pricing Data			

PRASA NALEDI STATION ELECTRICAL PROVISIONAL BOQ

LV Reticulation

Item	Description	Unit	QTY	Cost	Total Cost
	Distribution Boards				
	Refurbish the following distribution boards, including all equipment, complete with all accessories. Installation shall include fixing, accessories and earthing.				
	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.				
1	Main Security DB - PC	Lot	1	R 100 000,00	
2	Ticket Office - 18 Way	Lot	2		
3	Security Office DB 18 Way	Lot	2		
4	160A MDB Refurb - PC	Lot	2	R 55 000,00	
5	Stall Distribution Boards refurb	Lot	17		
6	Toilet Distribution Boards	Lot	2		
7	Platform Distribution Boards	Lot	3		
	Power Cabling				
	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				
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	25		
12	Joining Kits PC Sum	Lot	1		
	Standby Generator				
	Supply, Rig and Install following Standby Generator, including all equipment, complete with all accessories. Installation shall include fixing, plinth, accessories and earthing.				
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 NALEDI 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	120		
4	LED panel Sidelift flicker free driver + PMMA LG + Prisma Diffuser - 4000 Lumens - 600x600 Recessed with Battery Backup	Lot	50		
5	1578mm Surface Mounted fitting 53W LED complete with microwave sensor with 70'000hr operation warranty	Lot	200		
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	122		
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	8		
9	Exit Sign/Running Man c/w battery backup including lamps	Lot	10		
10	2,5mm ² x 3 (Red, Black & Green) - Housewire	m	5000		
11	25mm diameter PVC conduit	m	3000		
Total Ex VAT					

PRASA NALEDI STATION ELECTRICAL PROVISIONAL BOQ

SMALL POWER

Item	Description	Unit	QTY	Cost	Total Cost
SMALL POWER					
1	16 Amp, single Switched Socket Outlet - white	No	20		
2	16 Amp, single Switched Socket Outlet - white on Power Skirting	No	64		
3	20 Amp, DP Isolator - complete with conduit to outlet box below-	No	4		
4	4mm ² x 3 (Red, Black & Green) - Housewire	m	1400		
5	25mm diameter PVC conduit	m	200		
6	2 compartment PVC Power Skirting	m	70		
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 NALEDI 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 Naledi Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
1	Mechanical Work sub-total amount carried from final summary Section 5 (Excluding Value added Tax).	Item		
Carried to Final Summary				R
Section No. 5 Mechanical Work Contract Part C2: Pricing Data				

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SECTION NO. 5 BILL NO. 1 HVAC INSTALLATION				
1,0	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				
1,1	FAN EF - 120 l/s wall mounted fans	Supply	No	6	
		Install	No	6	
2,0	Supply and install the following AC units (<i>DX system</i>), complete with matching refrigerant tubing, condensate drainage, mounting brackets, thermostats, remote controllers, electronic and electrical wiring upto isolator supplied by electrical contractor and ALL MOUNTING ACCESSORIES NECESSARY				
2,1	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	8	
		Install	No	8	
2,2	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	
3,0	General				
3,1	Stripping of existing air conditioning system	Item	1		
3,2	Testing and commissioning of the above system to the complete satisfaction of the Mechanical engineer and client	Item	1		
3,3	Preparation and supply of handover documents	Item	1		
3,4	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.	General				
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	Fire Plan 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.				
	Fire Hydrants				
2,1	65mm hydrant valve with handwheel opening mechanism & fittings.				
	Supply	No.	4		
	Install	No.	4		
	Fire Hose Reels				
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 galvafruid 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	20		
2.3.2	50mm	m	20		
2.3.3	100mm	m	300		
3,0	Fire extinguishers				
3,1	Fire extinguishers complete with supports & fittings. 4,5kg DCP fire extinguishers				
	Supply	No.	10		
	Install	No.	10		
3,2	Fire extinguishers complete with supports & fittings. 5kg CO2 fire extinguishers				
	Supply	No.	2		
	Install	No.	2		

4,0	<u>Statutory Fire Signage</u>				
	Supply and install photoluminescent signs (in Anodised aluminium frames) on all areas indicating the escae 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.	8		
4,4	F14 (190mm high)	No.	6		
4,5	F17/20 (190mm high)	No.	6		
4,6	F13 (190mm high)	No.	8		
4,7	F30 (190mm high)	No.	8		
Total to Summary Page					
vat 15%					
Grand Total					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>SECTION NO. 5 BILL NO. 3 PLUMBING AND DRAINAGE</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	50		
1.2	Ø22mm pipe	m	95		
1.3	Ø15mm pipe	m	90		
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	12		
2.3	Ø28mm Elbow: 90°	No	8		
2.4	Ø22mm Elbow: 90°	No	12		
2.5	Ø15mm Elbow: 90°	No	98		
2.6	Reducer: Ø28mm x Ø22mm	No	4		
2.8	Reducer: Ø28mm x Ø15mm	No	0		
2.9	Reducer: Ø22mm x Ø15mm	No	8		

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 sanitay fittings	No	49		
3.4	15mm diameter stopcock/angle valve on cold and hot water pipe to sanitary appliance or sink	No	49		
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, vaccum breakers, thermostat, expansion relief valve, strainers, lever ball valves, drip tray, hot water pipe insulation, mixing valve and all neccessary accesories and ftings, 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.	Sum	1		
SUBTOTAL					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>SECTION NO. 5 BILL NO. 3 PLUMBING AND DRAINAGE</p> <p>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.</p> <p>SANITARY DRAINAGE PIPING Polyvinyl Chloride (PVC) pipe, including couplers in the running length, installed in accordance with SANS 10400 and SANS 10252-2:2004</p> <p>1 PIPING</p> <p>1.1 Ø50mm uPVC pipe</p> <p>1.2 Ø110mm uPVC pipe</p> <p>2 FITTINGS</p> <p>2.1 Ø50mm fitting; 90°elbow</p> <p>2.2 Ø110mm fitting; 45°elbow</p> <p>2.3 Ø110mm x Ø110mm x Ø110mm fitting; 87.5° swept entry, lateral branch junction</p> <p>2.4 Ø50mm vent one way valve</p> <p>2.5 Ø110mm x Ø50mm fitting; concentric reducer</p> <p>3 WASTE TRAPS</p> <p>3.1 40mm flexi rubber "P" trap complete with coupling clamps.</p> <p>4 AS BUILT DRAWINGS 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</p> <p>5 Stripping of existing plumbing and drainage</p>				
	SUBTOTAL				
	TOTAL CARRIED FORWARD TO SUMMARY				

PRASA NALEDI 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 Naledi Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
1	Electronic Work sub-total amount carried from final summary Section 6 (Excluding Value added Tax).	Item		
	Carried to Final Summary			R
	Section No. 6 Electronics Contract Part C2: Pricing Data			

PRASA NALEDI STATION ELECTRONICS PROVISIONAL BOQ
FIRE DETECTION

Item	Description	Unit	QTY	Cost	Total Cost
	Fire Detection				
1	Addressable Smoke Detectors	Lot	54		
2	Addressable Smoke Detectors + Void LED	Lot	22		
3	Addressable Heat Detectors	Lot	4		
4	Addressable Manual Call Point (Breakglass)	Lot	10		
5	Addressable Relay Unit	Lot	3		
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 NALEDI 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	1		
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 NALEDI 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 Naledi Train Station
Prasa South Gauteng Region Corridor 3**

Item No		Quantity	Rate	Amount R
1	Access Control sub-total amount carried from final summary Section 7 (Excluding Value added Tax).	Item		
Carried to Final Summary				R
Section No. 7 Access Control Contract Part C2: Pricing Data				

PROVISIONAL BOQ NALEDI STATION**PRELIMINARY AND GENERAL**

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

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

PROVISIONAL BOQ NALEDI STATION				
EQUIPMENT				
Item	Description	QTY	Cost	Total Cost
1	AI IR Dome Network Camera,8MP, 1/2.8" CMOS image sensor, low illuminance, 8MP (3840 × 2160) @20 fps H.265 codec, high compression rate, low bit rate· Built-in IR LED, max. IR distance: 50m· ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments· Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes· Intelligent detection: Intrusion, tripwire (Recognition of vehicle and human)· Supports max. 256 G Micro SD card, built-in Mic· 12V DC/POE power support· IP67 protection· SMD	95		
2	2MP 25x 100m IR PTZ Network Camera with Smart Video Analytics IVS + Alarm + Audio >1/2.8" 2Megapixel CMOS· Powerful 25x optical zoom· Starlight technology· Max. 50/60fps@1080P· Support PoE+· IR distance up to 100m· SMD· IP66	20		
3	NVR 32 Ch 16 PoE 4K AI+SMD+ANPR. Rack mounted complete with all relevant Software	4		
5	Surveillance Hard Drive 6TB.	6		
6	Rack Mountable 10KVA UPS complete with 1 hour full load capacity on non corrosive batteries - 1 duty and other standby	2		
7	65 Inch HD Monitor Wall Mounted	1		
8	16 Port 10/100 Managed PoE + 2GB TP	4		
9	IP Based Intercomm System - PC	1		
10	Anti Vandal Bespoke Solid Steel Poles	12		
11	Full height, bi directional single turnstile - Single turnstile - Polyester exterior grade powder cost - charcoal blue - Fail Secure	6		
12	Biometric/fingerprint reader mounting bracket - Polyester exterior grade powder coat - charcoal blue	12		
13	Battery backup 24 Volt DC with 12V rechargeable batteries	6		
14	LED indicator lights (red and green - 80mm diameter) for full height turnstile - 2 units, one for entry and one for exit	6		

15	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 NALEDI 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 Naledi 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	97		
3	Civil Work	112		
4	Electrical Work	113		
5	Mechanical Work	114		
6	Electronics Work	115		
7	Access Control	116		
	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			