



RUSTENBURG LOCAL MUI

RLM/DRT/0105/2021/22: APPOINTMENT OF CONTRACTORFOR RAPID TRASPORT STATIONS SUPERSTI

PROJECT DOCUMENT

PRICING DATA

Rustenburg Local Municipality		
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Tenderer _
Total of the prices inclusive of value added tax: R

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RLM/DRT/0105/2021/22: APPOINTMENT OF CONTRACTOR FOR THE CONSTRUCTION OF RUSTENBURG

C2.1 Pricing Assumptions

1. The Bills of Quantities have been drawn up in accordance with the "Standard System of Measuring Building Work Sixth Edition (1993)".
2. The agreement is based on the JBCC Series 2000 Principal Building Agreement, prepared by the Joint Building Contracts Committee. Only the heading and conditions of the JBCC Principal Agreement as well as the contract specific variables are as stated in the Contract Data. Only the heading and conditions are recited.
3. The ASAQS Preliminaries compiled by the Association of South African Quantity Surveyors, November 2007, are forming part of the contract and are stated within the Preliminaries Bill of Quantities.
4. Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the "Model Preambles for Trades 2008".
5. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
6. The prices and rates to be inserted in the Bills of Quantities are to be the full inclusive prices for the work described under the section, including all materials, labour, and overheads required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth in the contract. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work.
7. A price or rate is to be entered against each item in the Bills of Quantities, whether the quantities are stated or not. An item against which no price or rate is entered shall be deemed to be included in the total tendered price in the "Amount" column and shall be included in the Bills of Quantities.
8. Except where rates only are required, insert all amounts to be included in the total tendered price in the "Amount" column and state the unit of measurement.
9. The units of measurement described in the Bills of Quantities are metric units. Abbreviations which may be used in these Bills of Quantities are as follows:

mm	= millimetre
m	= metre
km	= kilometre
m ²	= square metre
m ² .pass	= square metre-pass
ha	= hectare
m ³	= cubic metre
m ³ .km	= cubic metre-kilometre
l	= litre
kl	= kilolitre
MPa	= megapascal

Tender
C2.1

PART NO. 1

PRELIMINARIES

PRELIMINARIES AND GENERAL	Unit	Quantity
The Principal Building Agreement (JBCC Series 2000) prepared by the Joint Building Contracts Committee (Edition 5 Code 2101 - July 2007), shall be the Agreement, amended as hereinafter described.		
The Preliminaries (May 2005) 3rd Edition for use with the (JBCC Series 2000) Principal Building Agreement as recommended by the Joint Building Contracts Committee forms part of these Bills of Quantities.		
The Contractor is referred to the above-mentioned documents for full intent and meaning of each clause thereof.		
These clauses are hereinafter referred to by clause heading and number only. The Contractor shall allow opposite each clause for any cost involved in complying with such clause.		
Where standard clauses or alternatives are not entirely applicable to this contract, such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence notwithstanding anything contrary contained in the above-mentioned documents		
Where an item is not relevant to this specific contract such item is marked N/A , signifying "not applicable".		
<u>PREAMBLES FOR TRADES</u>		
The Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these Bills of Quantities.		
Supplementary preambles to the Model Preambles covering clauses of a general nature, clauses pertaining to specific materials and amendments to clauses in the Model Preambles are incorporated in these Bills of Quantities to satisfy the requirements of this project.		
The contractor's prices for all items throughout these Bills of Quantities must take account of and include for all of the obligations, requirements and specifications given in the Model Preambles and in any supplementary preambles.		
<u>SYSTEMS OF MEASUREMENT</u>		

The bills of quantities for the building works to the trunk stations have been drawn up in accordance with the 6th Edition (Revised) of the Standard System of Measuring Building Work dated 1999 and the amendments thereto.		
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SECTION "A" : PRINCIPAL BUILDING AGREEMENT		
Clause 1 Definitions and interpretation	Item	
Clause 2 Offer acceptance and performance	Item	
Clause 3 Documents	Item	
Clause 3.1 is omitted as the employer will not be furnishing a payment guarantee.		
Clause 3.3 is amended as follows: Where the employer requires the contractor to waive his lien or right of continuing possession of the works as stated in the schedule, the contractor shall do so prior to commencement of the works. The waiver shall be according to the JBCC Waiver of Contractors Lien form or such other form as stated in the schedule		
Clause 4 Design responsibility	Item	
Clause 5 Employer's agents	Item	
Allow R 10 000 for engineers telecommunication & internet Montly		
Allow ONCE OFF Note Books for Engineers R 60 000.00		
Clause 6 Site representative		
The Contractor shall price this item in relation to organogram provided in the tender and all the representatives are required as per clause 6.1 & 6.2.	months	10
Clause 7 Compliance with regulations	Item	
Without limiting the generality of the provisions of clause 7.0 of the agreement, the contractor's attention is drawn to the provisions of the Construction Regulations, 2003 issued in terms of the Occupational Health and Safety Act, 1993 in which it is specifically stated that the employer shall prepare a documented health and safety specification for the works (refer to Section C3.3 for a copy of the relevant specification) and that the employer shall ensure that the contractor has made provision for the cost of health and safety measures during the execution of the works. The contractor shall price opposite this item for compliance with the act and the regulations and the provisions of the aforementioned health and safety specification. This item shall be claimed in accordance with audits by the consultants. where the contractor does not comply this money may be omitted from the claim	months	10
Accommodation of traffics should be priced in relation to this item as form of compliance to regulations and traffic acts	Item	
Clause 8 Works risk	Item	
Clause 9 Indemnities	Item	
Clause 10 General insurances	Item	
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Clause 11	Special insurances	Item
Clause 12	Effecting insurances	Item
The contracting parties responsible for effecting the aforesaid insurances shall make available to the Principal Agent as soon as possible, documentary evidence of the insurances for approval by the other contracting parties within five (5) days. Such approval shall not be unreasonably withheld and if not dissented from within the said five (5) days, such approval shall be deemed to have been given.		
Clause 13	Assignment	Item
Clause 14	Security	Item
Clause 15	Preparation for and execution of the works	Item
Clause 16	Site and Access	Item
a) Fixed Obligations: The Contractor shall price on this item in relation to general obligations		Sum 1
b) Time Related Obligations: Running costs of site camp or establishment of offices. This amount shall be claimable prior to the validation of such cost by the contractor to the consultants		months 10
Clause 17	Contract instructions	Item
Supervision by the Principal Agent and other Agents is intended as a means of checking the interpretation of work done and providing clarification and further information where required during the progress of the work. Supervision shall not in any way relieve the Contractor of his responsibility for ensuring that the work is carried out satisfactorily in all aspects, in good time and in accordance with the Contract. Although the Principal Agent and other Agents will make spot checks from time to time on dimensions and levels as the work proceeds, checking of the setting out, dimensions, levels and positioning of all items is the Contractor's responsibility and should any errors occur during the course of or be found after completion of the Works, the cost for remedying same will be for the Contractor's account. Allowed Sum of R 150 000.00		
The following amount shall be used in relation to contract instruction and shall be utilized upon Engineers instructions. (Allow R 150 000)		Sum 1
Clause 18	Setting out of the works	Item
The contractor shall notify the Principal Agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc. exist in order that the necessary arrangements may be made for rectification of any such encroachments.		
Page Total To Collection R		
Clause 19	Temporary Works and Plant	Item

The contractor is to erect and maintain throughout the construction duration, hoarding and gated ingress and egress points to his site establishment area in accordance with the principal agent's specifications for same. All further requirements for hoardings, protection screens, gantries, tunnels, and temporary coverings required for the protection of both property and the public, and for which installation of same is dependant on the contractor's programming and method statement , as well as the included Health & Safety Specification is also to be priced herein.		
The contractor is to provide suitable direction boards and/or notices advising the public of the correct and safe access routes for their proper utilisation of sectionally completed and occupied areas of the project, all to the satisfaction of the principal agent.		
Clause 20 Nominated Sub-Contractors	Item	
There shall be no nominated sub-contractors on this contract. All sub-contractors shall therefore either be selected or domestic.		
Clause 21 Selected Sub-Contractors	Item	
The contractor is to satisfy himself and give notice to the principal agent to such effect that tenderers to be appointed as selected subcontractors can fulfill the provisions of clauses 21.2.1. and 21.2.2 prior to the opening of the selected subcontract tenders and clause 21.3.2 is therefore not applicable.		
Clause 22 Employers Direct Contractors	Item	
The following amount shall be claimed in relation to Direct Contractors upon Engineer's instruction. (Allow R 150 000)	Sum	1
The contractor is advised that the following works will be carried out by the Direct Contractors and the value of such work is not included in the Principal Contract:		
1)Information and Communication Technology (ITC) Components		
2)Automated Fare Collection System for Access Control and Fare Payment		
Should the Contractor be required to make good after such Direct Contracts or to carry out jobbing, etc. the contractor will be recompensed for any cost incurred by him in terms of clause 14 of the Agreement		
The contractor shall not be entitled to any percentage, profit or discount on the value of work executed by "Direct Contractors" but shall nevertheless allow these Direct Contractors to have access to the works, allocate reasonable space in the building for storage of their materials, tools and equipment, etc and co-ordinate via the Principal Agent the work of such Direct Contractors as necessary, all to the satisfaction of the Principal Agent. The Contractor shall allow the Direct Contractors, to use, free of charge, the latrine accommodation and water and power supply on site, and shall not in any way hinder or prevent the execution of their work.		
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1) Information and Communication Technology (ITC) Components		
The ICT Tender calls for the design, build, and operate services to be provided to the Client, for a period of 7 years that includes the following Information and Communication Technology (ICT) Components:		

1.1) Server Computing Hardware, Software, and Services		
1.2) Storage Hardware, Software, and Services		
1.3) Workstation Computing Hardware, Software and Services		
1.4) Mobile Computing Hardware, Software and Services		
1.5) Information Security Hardware, Software and Services		
1.6) Fibre Optic Data Communication Hardware, Software and Services		
1.7) Copper Data Communication Hardware, Software and Services		
1.8) Wireless Data Communication Hardware, Software and Services		
1.9) Switch Fabric Hardware, Software and Services		
1.10) Telephony Hardware, Software, and Services		
1.11) Public Annunciation (incl.Audio Induction Loops) Hardware, Software and Services		
1.12) Intercom Hardware, Software, and Services		
1.13) Variable Message Signs Hardware, Software, and Services		
1.14) Enterprise Resource Planning Software, Configuration, Development & Services		
1.15) Enterprise Message Bus and Integration Software, Configuration, Development and Services		
1.16) Software Development and Integration Services		
1.17) Help Desk Software and Services		
1.18) Internet Access Services		
1.19) Offsite Web Hosting Services and		
1.20) Information Technology Service Management Services.		
2) Automated Fare Collection System for Access Control and Fare Payment		
The RM requires an automated Fare Collection System for access control and fare payment on its Rapid Transit System which also will interface with adjacent intelligent transport systems. The items below describe in particular the provision, installation and commissioning of the fare collection system and related ITS components particular to the functionality required at RRT Stations .		
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The extent of the works and access to facility can be grouped within 4 particular areas within the station precinct. All of the work below will require access to the station, electricity and personnel to use public toilets. Please find below estimated times for installation since it may vary from Contractor to Contractor.		
A) Within the Station Kiosk; (note some of the tasks can run concurrently)		
a) Installation of Point of Sale equipment, which includes the following:		
i.) Card Office Machine and PIN Pad;		
ii.) Credit/Debit card reader and pin pad;		
1.) 1 day to install.		
b.) Banking safe under service desk;		
i.) 2 days to install;		
c.) Hand Held Validator Docking stations mounted on wall		
i.)1 day to install;		
d.) Emergency push button override for opening of fare gates;		
i.)1 day to install;		
B.) Station Server Room and Electrical DB location; (2 days)		
a.) Installation AFC equipment data connection to server;		
b.) ITS interface between bus doors and RRT station doors;		
c.) Installation of GRPS Antenna for Hand Held Validators;		
d.) Electrical connection form DB to fare gates.		

C.) Foyer area approaching the kiosk;		
a.) Installation of Card Vending Machines (CVM's) on particular stations;		
i.) 2 days to install;		
ii.) 1 day to commission and sign-off;		
b.) Data connection from CVM to station server room;		
c.) Electrical connection form CVM to station server room;		
D.) Internal station Interchange area (behind gates).		
a.) Installation of fare gates. (includes levelling platform)		
i.) 5 days to install gate;		
ii.) 1 day to commission and sign-off gate;		
b.) Data connection from CVM to station server room;		
c.) Electrical connection from CVM to station server room;		
Clause 23 Contractor's Domestic Sub-Contractors	Item	
Clause 24 Practical completion	Item	
Clause 25 Works Completion	Item	
The Contractor shall be responsible to submit program of works highlighting completion of project. The master program shall be approved by the engineers & issued to client.		
Clause 26 Final completion	Item	
Nothing in clause 26 shall be construed so as to restrict or remove in any way the contractor's liability for any patent defects and any insufficiencies in the works or materials nor to prescribe the employers common law rights in any way.		
Clause 27 Latent defects liability period	Item	
Page Total To Collection R		
Clause 28 Sectional completion		
The shall be no sectional completon om this contract , works must be handed over by the completion date set aside.		
Refer to section C4 and Contract Data for the details of the completion dates and composite route plan for the various sections and locations.	Item	
Clause 29 Revision of date for practical completion		
An extension of the construction period will only be considered when work on the critical path of the programme for the works is affected.		
The removal and replacement of materials and/or workmanship that do not conform to description shall not constitute grounds for an extension of the construction period nor for an adjustment to the contract sum.		
It should be noted that the site is situated in an area where inclement weather can normally be expected. The contractor is to allow 32 days to be lost through the above cause in the programming of the works, including any remedial action work arising out of such inclement weather. The Contractor is to note that no claim for an extension of the contract time with relevant Preliminaries and General Costs for consequential delays as a result of inclement weather will be entertained.	Item	

The Contractor needs to price accordingly for this item and then claim for this item shall be evaluated fully and approved by the Engineers (15days). Exception of rain gauge readings via images and for 35mm and above.	DAYS	15
Clause 30 Penalty for non-completion	Item	
The penalty of R 25 000.00 shall be charged daily in case the contractor fails to reach the preactical completion by the due date set aside.	Item	
Clause 31 Interim payment	Item	
The employer shall not pay any interest on amounts payable to the contractor after the date of issue of the certificate of practical completion and clause 31.10 shall therefore not apply.		
The employer shall, however, pay interest to the contractor at the rate stipulated in clause 31.11.1 on any amount payable to the contractor more than sixty (60) days after the date of issue of the certificate of practical completion but only for such period as the settlement of the final account is delayed by the non-performance of the principal agent, or the employer or his agents. In evaluating non-performance for purposes of this clause, a reasonable time shall be allowed to the principal agent or the employer or his agents to respond to any matter brought to his/their attention and which may effect the settlement of the final account.		
Page Total To Collection R		
The statement indicating the formulation of the payment certificate (other than the amounts due to selected sub-contractors) referred to in clause 31.13.1 will only be issued if so requested by the contractor. Any payments made by the contractor based on any information provided by the principal agent shall be at the contractor's sole risk if he had not provided the principal agent or the agents with all relevant information that could have had an effect on any amount incorporated in a payment certificate.		
Clause 32 Adjustment to the contract value	Item	
Where prices are submitted by the contractor or selected sub-contractors during the progress of the works in respect of variations or in regard to a claim under the respect of variations or in regard to a claim under the terms of the contract and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumptions of acceptance. Should the quantity surveyor wish to accept any such prices prior to the issue of the final certificate, it will be in writing.		
Clause 33 Recovery of expense and loss	Item	
Clause 34 Final account and final payment	Item	
Clause 35 Payment to other parties	Item	
Clause 36 Termination by employer - contractor's default	Item	
The Employer may terminate this contract when the contractor has failed to reach practical completion ON THE DUE DATE . An independent party may be appointed to complete the works.		
Clause 37 Termination by employer - loss and damage	Item	
Clause 38 Termination by contractor - employer's default	Item	
Clause 39 Termination - cessation of the works	Item	

Clause 40	Settlement of disputes	Item	
Clause 41	Post tender provisions	N/A	
Clause 42	Pre-tender information Refer Section C1.2: Contract Data	Item	
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<u>SECTION B: PRELIMINARIES</u>			
1.0 DEFINITIONS AND INTERPRETATION			
1.1	Definitions and Interpretation	Item	
2.0 DOCUMENTS			
2.1	Checking of documents	Item	
2.2	Provisional bills of quantities	Item	
The contractor shall ascertain by personal viewing of the site any restrictions to the area that is to be occupied by the contractor for the execution of the works, including any restrictions that may be imposed by any authority. The contractor shall liaise with the principal agent in connection with the limits of access and/or egress.			
No claims for an adjustment to the contract value arising from the contractor having failed to comply with this clause will be entertained.			
These bills of quantities must be completed in black ink.			
Tenders shall be submitted on the tender form provided.			
Tenders shall be valid for a period of one hundred and twenty (120) calendar days from the closing date of tender.			
2.3	Availability of construction documentation	Item	
The budgetary allowances and subcontract amounts allocated for subsequent trades included in this document will be separately procured, based on multiple procurement of selected subcontractors during the construction period.			
3.0 PREVIOUS WORK AND ADJOINING PROPERTIES			
3.1	Previous work - dimensional accuracy	Item	
The amount shall be provided in relation to rectifications and shall be of work claimed upon Engineer's instructions and approval of rectified works. Allow R300 000.00		Sum	1
3.2	Previous work - defects	Item	
The amount shall be provided in relation to Defective works and shall be of work claimed upon Engineer's instructions and approval of rectified works. Allow R100 000.00		SUM	1
3.3	Inspection of adjoining properties	Item	
4.0 SAMPLES, DRAWINGS AND MANUFACTURER'S INSTRUCTIONS			
Testing of material and workmanship, other special tests required by the Engineer:			
a) Cost of Testing.		Sum	1
b) Charge of provisional sum for overheads and profit.		Item	1

Samples are physical examples furnished by the contractor to illustrate materials, equipment or workmanship and to establish standards by which the work will be judged. The contractor shall furnish without delay such samples and "mock ups" as may be called for by the principal agent, who may reject all material and workmanship not corresponding with the approved samples.		
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Samples must be submitted in duplicate or as instructed and must allow a reasonable time for their consideration.		
Samples must be properly labelled with the project name and location, contractor's name, the type, finish composition of materials date of submission and the contract document reference in which the project is identified.		
4.2 Workmanship samples	Item	
4.3 Shop drawings	Item	
The contractor and/or nominated/selected sub-contractor shall prepare and submit , at his own expense, three (3) copies of shop drawings of all fabricated work, working or setting out drawings, shop details and schedules to the principal agent for approval prior to commencement of manufacture.		
Corrections of shop drawings shall not constitute a change in scope of work unless the contractor notifies the principal agent in writing within seven (7) calendar days and shall not proceed with fabrication until so authorised by the principal agent.		
The contractor shall present a complete schedule showing the sequence and dates for submission of shop drawings as well as the scheduled dates for approval of all drawings for all applicable trades. This schedule shall take into account that the principal agent reserves a maximum ten (10) working day check period from the date of the receipt of all shop drawings and/or catalogue data.		
4.4 Compliance with manufacturer's instructions	Item	
5.0 DEPOSIT AND FEES		
5.1 Deposits and fees	Item	
6.0 TEMPORARY SERVICES		
6.1 Water	Monthly	10
Water for the works will be supplied by the contractor in accordance with Option A.		
6.2 Electricity	Monthly	10
Electricity for the works will be supplied by the contractor in accordance with Option A.		
6.3 Telecommunication facilities	Monthly	10
6.4 Ablution facilities	Monthly	10
Ablution facilities will be provided in terms of Option A.		
The contractor shall ensure that the ablution facilities provided are suitably screened and are not visible to the public and/or employer personnel from any part of the occupied premises and public spaces.		
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7.0 PRIME COST AMOUNTS		
7.1 Responsibility for prime cost amounts	Item	
8.0 SPECIAL ATTENDANCE ON N/S SUBCONTRACTORS		
8.1 Special attendance	Item	
The contractor shall make available hoisting facilities and hoist into position free of charge all subcontractor's materials or manufactured articles for the works for the construction period whilst such hoisting facilities are in position for the works, and provided that such materials fall within the hoisting capacities of the hoisting facilities.		
9.0 GENERAL		
9.1 Protection of the works		
The following item shall be priced in relation to protection of sites and maintenance of site. (6 Stations for 10 months)	monthly	10
9.2 Protection / isolation of existing / sectionally occupied works	Item	
9.3 Security of the works		
The following item shall be priced in relation to security to safeguard works. (6 Stations for 10 months)	monthly	10
9.4 Notice before covering work	Item	
9.5 Disturbance	Item	
All work is to be carried out in such a manner as to cause no unacceptable and/or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other adjacent properties and traffic. Any delays, stoppage and the like due to compliance with the above will not constitute grounds for a revision of the date for practical completion or an adjustment to the contract value.		
The contractor shall be responsible for and take all precautions in controlling all forms of pollution during the execution of the contract due to wind-blown sand, dust, etc in the dry season and deposits of mud etc in the wet season by whatever means necessary and daily removal of deposits etc, all to the satisfaction of the principal agent and any costs, claims, etc will be for the contractor's account.		
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After one (1) written notice from the principal agent to the contractor stating the contractors failure to comply with this clause, the employer reserves the right to employ others at the discretion of the principal agent to ensure in particular that the adjacent and surrounding roads are kept reasonably clean at all times and to deduct cost thereof on certification by the principal agent from any amounts owing to the contractor.		
9.6 Environmental disturbance	Item	
Claim in relation to natural damages.		
9.7 Works cleaning and clearing	Item	

[illegible]

The contractor shall take delivery of, handle, store, use, apply and/or fix all proprietary branded products in strict accordance with the manufacturer's instructions after consultation with the manufacturer's authorised representative.	Item	
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<u>As Built Drawings</u>		
The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the principal agent and the structural engineer for their records.	Item	
As built drawings indicating finished levels for bulk earthworks and the building platform are to be submitted to the principal agent within one week of the completion thereof.	Item	
<u>Labour Record</u>		
At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and descriptions of tradesmen and labourers employed by him and all subcontractors on the works each calendar day of that week.	Item	
<u>Plant Record</u>		
At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools used on the works each calendar day of that week.	Item	
<u>Checking of Drawings and Specifications</u>		
Upon receipt of detail drawings for any work, the contractor shall, before putting that work in hand, ascertain that the dimensions given on the detail drawings correspond with the dimensions of any work already built and which governs the sizes of any work for which details are now issued.	Item	
In the event of the detail drawings not agreeing with each other or with the works already built, the discrepancy shall be brought to the attention of the principal agent timeously and the detail drawings shall be returned at once for alteration.	Item	
<u>Interpretation of Drawings, Specifications and Bills of Quantities</u>		
Should any part or parts of the drawings, specifications, bills of quantities or contract instructions not be clearly intelligible to the contractor, or the material or articles to be used in the execution of the works be considered to be insufficiently described, or the manner in which the work is to be carried out not be clear, the contractor must obtain from the principal agent the necessary information to clarify such drawings, specification, bills of quantities or contract instructions, which request shall be in writing.	Item	
The contractor shall be held solely responsible for and shall, at his own expense, rectify any errors arising out of incorrect interpretation of the drawings, specification, bills of quantities or contract instructions.	Item	
Delayed Site Possession		

Tenderers are to provide for the possibility of a delayed handover date with respect to all the Section 2 sites. Tenderers may assume that the relevant sectional completion dates will be extended by the equivalent length of time of the delay. It is a condition of tender that the rate per week for the respective section 2 is inserted and extended for tender submission and adjudication.		
<u>Weeks</u>	<u>Rate per week</u>	<u>Amount</u>
Section 2 sites 12	R.....	R.....
Preliminaries associated with above delayed handover to Section 2 sites		
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<u>Site Instructions</u>		
Site 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	Item	
Site instructions to the various sub-contractors may be issued only by the principal agent and must be issued via the contractor.	Item	
Copies of all site instructions issued are to be submitted to the principal agent and the quantity surveyors within two (2) days of issue.	Item	
<u>Overtime</u>		
The additional costs of overtime work shall be for the employer's account only when prior written agreement thereto is given by the Principal Agent.	Item	
The following cost shall be in relation to overtime and shall be in accordance with the Engineer's Instruction		
<u>Co-operation of Contractor for Cost Control</u>		
It is specifically agreed that the contractor accepts the obligation of assisting the professional consultants in implementing proper 1 the budget.	Item	
It is specifically agreed that the professionals and the contractor will endeavour to agree and sign off variations within sixty days of them arising.	Item	
<u>Reinstatement of Damaged Areas on the Site or Employers' Properties in General caused by Construction Operations, etc.</u>		
Before commencing the works, the contractor shall arrange with the principal agent to inspect the existing buildings, structures, pavings, kerbs, channels, fences, etc. on the site or employers' properties in general. The contractor shall note in writing, all conditions that could affect the works and copy the principal agent accordingly. The contractor should pay particular attention to cracks, defects and existing levels related to structures, pavings, kerbs, channels, fences, etc. which later could be claimed to have been caused or disturbed by the construction operations.	Item	
Where instructed by the principal agent, levels and photographs shall be taken by the contractor and the cost thereof shall be for the employer's account. Certified copies shall be lodged with the principal agent.	Item	
The contractor will be held responsible for maintaining the above in its present condition during execution of the works and will be liable for all costs relating to the repairing or replacing of damaged areas caused by the construction operations.	Item	

Additional Security		
At practical completion the client may elect not to take full occupation of the stations. In this regard the contractor is to allow for continued security of the stations up to a maximum of 6no.stations at a time for up to 5no. months. Security for the purpose of this clause shall entail Grade D security guard/s on a 24hour basis. Security to the stations shall ensure that the full integrity of the buildings are maintained, inclusive of all external fabrics, internal fittings and fixtures, etc. Insurance of the stations will be the reposnibility of the Rustenburg Local Municipality		
<u>Months</u> <u>Rate per month</u> <u>Amount</u>		
6No. Stations 10No. R..... R.....		
Preliminaries associated with above additional security to 6no. Stations for 10no. Months	Monthly	5
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<u>Control of Sand, Dust, Mud and Noise Pollution on Site, Public Spaces, Public Roads, etc.</u>		
Control of sand, dust, mud and noise pollution on site, public spaces public roads, etc.		
The contractor shall be responsible for and take all precautions in controlling all forms of pollution during the execution of the contract due to wind-blown sand, dust, etc. in the dry season and deposits of mud, clay, etc. in the wet season by means of continuous watering, screening, etc. and daily removal of deposits etc, all to the satisfaction of the local authority and the principal agent and any costs, claims, etc will be for the contractor's account. The contractor must ensure that his operations do not cause a noise nuisance as the surrounding premises are occupied.	Item	
<u>Programme for the Works</u>		
The principal agent shall agree with the contractor a programme for the works i	Item	
<u>Network Analysis</u>		
The contractor shall submit within two weeks after his tender has been accepted a network analysis, or dependency diagram. The contractor shall incorporate into his network analysis that work being performed by all his subcontractors so that all work involved is shown in the network analysis for the complete project.		
The network analysis shall clearly depict the sequence of the activities planned by the contractor, their interdependence and time required to perform the work.	Item	
<u>Variations / Amendments</u>		
The contractor shall regularly, throughout the progress of the contract, amend and update all variations, new drawings and contract instructions and all such amendments are to be subject to the approval of the principal agent and shall not alter the completion date of the project unless revisions to the date for practical completion have been granted by the principal agent in terms of clause 29 as amended.	Item	
<u>Work Behind Programme</u>		

If in the opinion of the principal agent, the contractor falls behind the agreed programme and where the contractor is not entitled to a revision of the date for practical completion, the principal agent may require the contractor to submit for approval revised schedules in order to demonstrate the manner in which completion on due date can be achieved. The principal agent may instruct the contractor to employ additional resources to achieve the revised programme without additional cost to the employer.	Item	
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<u>Trade Names</u>		
Wherever a trade name for any product has been described in the Priced Document, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders		
If written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for.	Item	
<u>Liaison with Senior Management</u>		
On request by the principal agent, a senior director of the contracting company, not directly involved with the project, shall make himself available to review the project with regard to the progress, performance and quality.	Item	
<u>Failure to Provide or Review Programme and Network Analysis</u>		
In the event of the contractor failing to submit the programme and network analysis or failing to revise that programme all as contemplated above and without derogating from any other rights the employer may have, the contractor shall forfeit the right to make any claims against the employer whether in terms of clause 29 as amended or at all which may arise during any period in which the contractor is in breach of his obligations in terms hereof.	Item	
<u>Safety Helmets</u>		
The contractor shall provide and keep on site an adequate supply of clean safety helmets for the use of all agents and all authorised visitors.	Item	
<u>Working Hours</u>		
Should the contractor wish to work outside normal working hours or at weekends in order to maintain his building programme, he shall notify and obtain the approval of the principal agent before doing so. The cost of his overtime will be for the contractor's account.	Item	
<u>Identity of Employees</u>		
All employees of the contractor and his subcontractors shall be identifiable at all times by means of ID cards. The contractor shall be requested by the principal agent, to remove any person not complying with the aforementioned conditions from the site.	Item	
<u>Cost of Claims</u>		
The costs incurred by the contractor, in the preparation of claims to the approval of the principal agent, shall be for the contractor's account.	Item	
<u>Training and Internship</u>		
Provide the provisional amount of R 50 000.00 (Five hundred Thousand Rand) for training and internship of candidates from the local communities	Sum	

Profit on above item (%)	Item	
Attendance on ditto (%)	Item	
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<u>Interpretation of Contract Documents</u>		
Should any part of the contract documents not be clearly intelligible to the contractor, or the materials and goods not be sufficiently described or the manner in which the works is to be carried out not be clear, the contractor shall obtain from the principal agent in writing the necessary information to clarify same.	Item	
<u>Housekeeping and Compliance with Principal Agents Site Rules</u>		
The contractor shall comply with all site rules as laid down by the principal agent.	Item	
The contractor will be responsible for a high standard of housekeeping in his site establishment, delivery of materials and goods and removal of rubble, debris, etc., storage areas and construction working areas to the approval of the principal agent.	Item	
<u>Use of Local Resources</u>		
A major objective of this Contract is the optimum use of local resources. The methods to be adopted to achieve this objective include:	Item	
a) The implementation of labour-optimising construction methods.	Item	
b) The use of local subcontractors; contemplated herein as subcontractors who are based within the Rustenburg Local Municipality.	Item	
c) The use of local suppliers; contemplated herein as suppliers who are based within the Rustenburg Local Municipality.	Item	
The Contractor shall ensure that local resources account for a minimum of 25% of the Final Contract Value as stipulated in Clause F3.1.2 in the Tender Data.	Item	
<u>Labour Relations</u>		
The contractor must take into account that the works will be carried out in an environment where the majority of the labour force may be unionised and he shall make such allowances as may be deemed necessary to cover all eventualities arising out of this factor.	Item	
Furthermore the contractor shall ensure that his employees act in a manner which is consistent with good labour relations practices.	Item	
Community Liaison Officer		
a) Community Liaison Officer at R6500/m including R500 airtime.	Monthly	10
b) Handling costs and profit in respect of sub-item (a).	%	
Labour Desk Officer		
(a) Labour Desk Officer at R6500/m including R500 airtime.	Monthly	10
(b) Handling costs and profit in respect of sub-item (a).	%	
Community Student		

(a) Community Liaison Officer at R6500/m including R500 airtime.	Montly	10
(b) Handling costs and profit in respect of sub-item (a)	%	
Profit on above item (%)	Item	
Attendance on ditto (%)	Item	
Page Total To Collection	R	

TOTAL PRELIMINARIES FOR ZONE A

BESTER STATION 10		
Item	Description	Uom Quantity
	SECTION NO. 0 : Single Section	
	BILL NO.1 : ALTERATIONS (PROVISIONAL)	
	(CPAP WORK GROUP No.102 UNLESS OTHERWISE STATED)	
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for trades (2008 Edition) and the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.	
	SUPPLEMENTARY PREAMBLES:	
	View site:	
	Before submitting his tender the contractor shall 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 any variations of the tender in respect of the nature and extent of the work or of inferior or damaged materials will be entertained.	
	Explosive:	
	No explosives whatsoever may be used for demolition purposes unless otherwise stated.	
	General	
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent.	
	Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any connections that may be necessary shall be made with proper fittings, to the satisfaction of the Representative/Agent.	
	Prices for taking out of doors and frames shall include for removing door stops, cabin hooks, etc and making good floor and wall finishes to match existing.	
	With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork.	
	Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary.	
	The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)	
	The contractor shall make provision for propping all air conditioning plants and duct for allowing to below plants.	
	Disposal of asbestos-cement:	
	Disposal of asbestos cement is to be recycled or disposed off under controlled conditions by a registered asbestos contractor in compliance with the Occupational Health and Safety Act (Act 85/1993), Asbestos Regulations as per the instructions from the Representative/Agent.	

	REMOVAL OF EXISTING WORK		
	Taking up/off and removing:		
1	Rubble, broken tiles, plant growth including roofs, etc.	m³	
	Breakind down/off and remiving reinforced concrete including cutting off and removing reinforcement:		
2	Columns.	m³	
	Taking down and removing roofs, floors, panelling, ceilings, partitions, etc:		
3	Gypsum plasterboard ceilings, including suspension grid, hangers, etc.	m²	
	Taking out/off and removing joinery fittings, etc:		
4	Granite counter 750mm wide x 32mm thick.	m	
	Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screeds, plaster, etc:		
5	Screed from floors.	m²	
6	Plaster from walls.	m²	
	Hacking up/off and removing tile floor and wall finishes, including removing motar bed or backing and preparing concrete or brick surfaces for new screeds, plaster or tile finishes:		
7	Tiles on walls.	m²	
	Carefully taking up/off and removing brick pavers, etc, temporary storing for later re-use in similar new position:		
8	220 x 110 x 50mm Brick pavers.	m²	
	CORE DRILLING, ETC		
	Core drilling:		
9	50mm Diametre core drill through 250mm concrete slab, wall or beam.	No	
10	100mm Diametre core drill through 250mm concrete slab, wall or beam.	No	
	BUDGETARY ALLOWANCE		
11	Provide the amount of R 200 000.00 (Two hundred thousand Rand) for work associated with defects.	Item	
	Bill Total		
	BILL NO.2 : EARTHWORKS (PROVISIONAL)		
	(CPAP WORK GROUP No.104 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Nature of ground:		
	The nature of the ground is assumed to be loose sandy material, therefore earth, but possibly interspersed with hard rock or soft rock.		
	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, etc:		
	Prices for filling and backfilling shall include for all selection and any multiple handling of material, etc.		
	EXCAVATION ETC		
	Excavation in earth not exceeding 2000mm deep:		
1	Holes.	m³	5,00
	Back excavation of vertical sides of excavation in earth for working space, including backfilling compacted to 95% Mod AASHTO density:		

2	Exceeding 500mm and not exceeding 1500mm deep for placing and removing formwork to walls etc 500mm away from excavated face.	m ²	14,00
	Extra over trench and hole excavation in earth for excavation in:		
3	Soft rock.	m ³	3,00
4	Hard rock.	m ³	2,00
	Extra over back excavation in earth for working space for excavation in soft rock:		
5	Exceeding 500mm and not exceeding 1500mm deep for placing and removing formwork to walls etc 500mm away from excavated face.	m ²	2,00
	Extra over back excavation in earth for working space for excavation in hard rock:		
6	Exceeding 500mm and not exceeding 1500mm deep for placing and removing formwork to walls etc 500mm away from excavated face.	m ²	2,00
	Extra over all excavations for carting away:		
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m ³	5,00
	Risk of collapse of excavations:		
8	Sides of trench and hole excavations not exceeding 1500mm deep.	m ²	11,00
	Keeping excavations free of water:		
9	Keeping excavations free of all water other than subterranean water.	Item	1,00
	FILLING, ETC.		
	Selected cohesionless material obtained from the excavation and/or prescribed stock piles on site compacted to 95% Mod. AASHTO density:		
10	Backfilling to trenches, holes, etc.	m ³	3,00
	Earth filling supplied and carted on to site by the Contractor compacted to 95% Mod AASHTO density:		
11	Under paving etc of G5 material in accordance with SABS 1200 DM compacted to 95% Mod AASHTO density.	m ³	26,00
12	Under paving etc of G7 material in accordance with SABS 1200 DM compacted to 95% Mod AASHTO density.	m ³	29,00
	Approved clean sand filling supplied and carted onto site by the Contractor compacted to 100% Mod. AASHTO density:		
13	Under floors, steps, paving, etc.	m ³	34,00
	Compaction of surfaces:		
14	Compaction of ground surface under floors, paving, etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density.	m ²	303,00
	Prescribed density tests on filling:		
15	Modified AASHTO density test.	No	5,00
	Bill Total		
	BILL NO.3 : CONCRETE, FORMWORK AND REINFORCEMENT (PROVISIONAL)		
	(CPAP WORKGROUP NO.110 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	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 Representative/Agent. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Representative/Agent. (Test cubes are measured separately).		
	Concrete:		
	A minimum of 50 to 70% of the absolute quantity of Portland cement, as an average across all mixes, is to be replaced with industrial waste products (such as flyash or slag or silica fume), or with oversized aggregate. No industrial waste product may come from industrial facilities that are co-fired with hazardous waste.		

	A minimum of 10% of all aggregate used for structural purposes is to be recycled concrete aggregate (RCA) or slag aggregate. RCA must be classified as Class 1 RCA in accordance with Australian code HB 155-2002, "Guide to the Use of Recycled Concrete and Masonry Materials". No natural aggregates are to be used for non-structural purposes (eg building base course, sub-grade to footpaths and backfill to service trenches)		
	All concrete mixes and aggregates to be approved by the structural engineer. All backfill and sub base mixes to be approved by the structural engineer with Australian code HB 155-2002, "Guide to the Use of Recycled Concrete and Masonry Materials". No natural aggregates are to be used for non-structural purposes (eg building base course, sub-grade to footpaths and backfill to service trenches)fsfasdaFAF Concrete and Masonry Materials". No natural aggregates are to be used for non-structural purposes (eg building base course, sub-grade to footpaths and backfill to service trenches)		
	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.		
	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 reasons. 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.		
	Formwork should be designed to be re-used without a subsequent loss in quality of the concrete finish.		
	The design of the formwork is to be submitted for approval by the architect. Formwork is to be inspected by the architect prior to placement of concrete.		
	Classification of formwork:		
	Smooth-special: Formwork shall be metal or wrought timber with a degree of accuracy II as per SANS 1200G. Surfaces of the concrete must be completely rubbed or treated to form a smooth finish of uniform texture, appearance and colour.		
	Elements of the works should be finished as follows:		
	Foundations and concrete that is not visible: ROUGH		
	Floor slab: Power floated and prepared to allow for later screeding		
	Formed and unformed surfaces of visible concrete elements apart from the floor slab. (Includes all walls, columns and the concrete infill between Kassel Kerb and walls): SMOOTH SPECIAL		
	Reinforcement:		
	All concrete reinforcing steel must have a minimum of 95% recycled content.		
	Repairs:		
	A method statement for any repair work to the concrete or finishing work done after the shutters are stripped is to be provided for approval by the architect and structural engineer.		
	The approved methods are to be assessed after application to the test panel for final approval by the architect and engineer prior to proceeding with the works.		
	Documentation:		
	The contractor is to identify all concrete uses on site and describe the mix and product used. The contractor is to ensure the supplier confirms:		
	The quantities of Portland cement, industrial waste products and aggregate (both recycled and non-recycled) supplied to site.		
	That no industrial waste product came from industrial facilities co-fired with hazardous waste.		
	That where recycled concrete aggregate is used, it is classified as Class 1 RCA in accordance with Australian code HB 155-2002		
	The contractor is to confirm the total mass of steel re-inforcing used within the building structure, and is to obtain from the supplier:		
	Confirmation of the total quantity of steel re-inforcing supplied for the building structure.		
	The post-consumer recycled content of the steel reinforcing.		
	Construction breaks:		
	The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the architect and the structural engineer for their records.		
	Use of suspended reinforced concrete slabs:		

	The contractor is advised that 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., propping through the floors below may be required. The location of these areas and any necessary propping shall be approved by the structural engineer. The cost of this propping will be for the contractor's account.		
	Costs associated with these preambles:		
	Cost stemming from these preambles are to be included within the rates of the associated items hereunder, if not specifically measured.		
	UNREINFORCED CONCRETE		
	15Mpa/25mm Concrete:		
1	Surface blinding under footings and bases.	m ³	1,00
	REINFORCED CONCRETE		
	30 MPa/19mm Concrete:		
2	Bases.	m ³	2,00
3	Totem columns.	m ³	8,00
	TEST BLOCKS		
	Test blocks:		
4	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes.	Sets	3,00
	FORMWORK (CPAP WORK GROUP No. 111)		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)		
	Rough formwork to sides:		
5	Bases.	m ²	5,00
	OFF-SHUTTER SMOOTH FORMWORK (DEGREE OF ACCURACY II)		
	Smooth formwork to sides:		
6	Totem columns.	m ²	36,00
	Boxing in soft formwork to form:		
7	25 x 25mm Vertical chamfers at corners.	m	13,00
	MOVEMENT JOINTS ETC		
	One layer three-ply asphaltic waterproofing membrane with fibre felt carrier between horizontal concrete and brick surfaces, including cement mortar bed:		
8	Not exceeding 300mm wide.	m	25,00
	REINFORCEMENT (CPAP WORK GROUP No. 114)		
	High tensil steel reinforcement to structural concrete work:		
9	Various diameter rod reinforcement.	Tonnes	1,50
	Bill Total		
	BILL NO.4 : PRECAST CONCRETE (PROVISIONAL)		
	(CPAP WORKGROUP NO.112 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Sizes:		
	Blocks, sills, etc measured linear shall be made in suitable lengths. Large size setting out drawings shall be prepared where necessary and submitted to the Representative/Agent for approval before moulds are made.		
	General:		
	Where kerbstones, blocks, etc are laid in ground descriptions shall be deemed to include necessary excavations, filling in and ramming.		

	PRECAST CONCRETE		
	Precast concrete left smooth from the mould, including bedding, jointing, pointing, etc:		
1	1800mm Long x 450mm wide x 715mm high bench on concrete footing (footing elsewhere measured).	No	2,00
	REINFORCEMENT:		
	High tensile steel reinforcement to structural concrete work:		
2	Various diameter rod reinforcement.	Tonnes	0,10
	Bill Total		
	BILL NO.5 : MASONRY (PROVISIONAL)		
	(CPAP WORKGROUP NO.118 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	BRICKWORK		
	Sizes in descriptions:		
	Where sizes in descriptions are given in units, 'one brick' shall represent the length and 'half brick' the width of the brick.		
	Specification:		
	Block paving to be manufactured in accordance with SABS Specification 1058 to the following compressive strength: Class 25 or 35MPa.		
	Paving to be laid in accordance with SABS 1200MJ, SABS 1058 and the Concrete Manufacturers Association's specifications		
	Clean dry jointing sand complying with SABS 1200MJ is to be swept into joints between road stones		
	All block paving to be inspected and resanded after 3 months.		
	BRICKWORK IN SUPERSTRUCTURE		
	Brickwork of NFP bricks in Class I mortar:		
1	Half brick walls.	m ²	100,00
2	One brick walls.	m ²	50,00
3	250mm Hollow walls of two half brick skins, including wire ties.	m ²	50,00
4	270mm Hollow walls of two half brick skins, including wire ties.	m ²	50,00
	BRICKWORK SUNDRIES		
	Sundries:		
5	Closing 60mm cavity of hollow wall horizontally with brickwork half brick wide.	m	2,00
	Brickwork reinforcement:		
6	75mm Wide reinforcement built in horizontally.	m	35,00
7	150mm Wide reinforcement built in horizontally.	m	11,00
	PAVING		
	Take from store paving of 220 x 110 x 60mm 'Corobrik Champagne' or other equal and approved clay paving bricks on and including 20mm thick clean sand bed with sand and cement mixture swept into joints and lightly hosed down, including preparation of ground or filling:		
8	Paving in herringbone pattern to falls .	m ²	450,00
9	Paving to ramps.	m ²	50,00
	Take from store paving of 210 x 60 x 60mm 'Corobrick Onyx Piazza' or other equal and approved clay paving bricks with butt joints on 20mm thick clean sand bed with sand and cement mixture swept into joints and hosed down:		
10	210mm Wide header course edgings.	m	190,00
11	210mm Wide brick-on-flat header course borders, bands, etc on and including 250 x 150mm thick unreinforced concrete bedding, haunching, etc, including excavation, backfilling, cartaway, etc.	m	106,00

	300 x 300 x 60mm Pigmented precast concrete block paving on and including 20mm thick clean sand bed, including preparation of ground or filling:		
12	600mm Wide directional tactile bands.	m	56,00
13	600 x 600mm Wide warning tactile isolated panel.	No	1,00
14	1800 x 600mm Wide warning tactile isolated panel.	No	4,00
	MOVEMENT JOINTS		
	Expansion joints with closed cell expanded polyethylene between concrete and brick surfaces:		
15	10mm Vertical joints not exceeding 300mm wide.	m	29,00
16	10mm Horizontal joints not exceeding 300mm wide.	m	32,00
	Bill Total		
	BILL NO.6 : WATERPROOFING (PROVISIONAL)		
	(CPAP WORKGROUP NO.120 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	DAMPPROOFING OF WALLS AND FLOORS		
	One layer of 375 micron embossed damp proofing course:		
1	In walls	m ²	5,00
	JOINT SEALANTS ETC		
	Approved silicone sealant:		
2	5 x 5mm Fillet joints around sanitary fittings.	m	36,00
	Approved polyethylene sealing compound, including backing cord, primer, etc:		
3	10 x 10mm In vertical expansion joints.	m	45,00
	Bill Total		
	BILL NO.7 : CARPENTRY AND JOINERY (PROVISIONAL)		
	(CPAP WORKGROUP NO.126 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Particle board:		
	Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type.		
	Joinery:		
	Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.		
	Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.		
	Fixing:		
	Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.		
	Decorative laminate finish:		
	Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.		
	References:		
	References in brackets in descriptions refer to Architects drawings and details issued together with these Bill of Quantities for tender purposes.		

	DOORS ETC		
	Solid core flush doors with commercial veneer suitable for painting on both sides and 8mm thick exposed hardwood edge strip to tops, sides and bottoms, hung to steel frames:		
1	40mm Door size 1050 x 2255mm high (DO2).	No	2,00
2	40mm Door size 890 x 2255mm high (DO3, D16, D17, D18, D19).	No	6,00
	Bitcon Industries' or other equal and approved security door with commercial veneer on both sides (refer drawing no. RRT/AR/WC/SCH-531):		
3	Anti Bandit' security door size 1050 x 2255mm high, including 3mm thick galvanised pressed steel frame for 250mm hollow brick wall and preparing frame for door closer and lock (D01).	No	2,00
	Bill Total		
	BILL NO.8 : CEILINGS, ETC (PROVISIONAL)		
	(CPAP WORKGROUP NO. 129 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Descriptions:		
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.		
	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 have been given.		
	Proprietary suspended ceilings:		
	Electrical light fittings, diffusers, panels, etc. generally are lay-in units of the same dimensions as the suspension grid described and allowance must 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 is to take cognisance thereof).		
	CEILINGS, ETC		
	INSULATION		
	Isover Aerolite' or other equal and approved insulation:		
1	100mm Insulation closely fitted and laid on top of suspension system, etc.	m ²	100,00
	SUSPENDE CEILINGS:		
	6.4mm 'Lafarge' or other equal and approved gypsum plasterboard with taped joints and jointed with 'Lafarge' or other equal and approved jointing compound on 'Lafarge' or other equal and approved steel brander and suspension system, including main and cross tees, necessary hangers, grid, etc, all strictly accordance with the manufacturers specifications:		
2	Ceiling suspended not exceeding 1000mm below concrete soffit.	m ²	100,00
3	Extra over ceilings for 635 x 635mm access panel of white epoxy coated aluminium 'T' frame with 580 x 580mm white epoxy steel hinged pan and fitted flush to opening.	No	5,00
	9mm 'Lafarge' or other equal and approved gypsum tapered edge plasterboard with taped joint and jointed with 'Lafarge' or other equal and approved jointing compound on 'Lafarge' or other equal and approved steel brander system, including main and cross tees, necessary hangers, grid, etc and the whole finished with 'Lafarge Skimlite' or other equal and approved plaster trowelled smooth to polished surface all strictly accordance with the manufacturers specification:		
4	Ceiling suspended not exceeding 1000mm below concrete soffits.	m ²	100,00
	12mm 'Lafarge Pregybel' or other equal and approved perforated accoustic ceiling tapered edge plasterboard with taped joint and jointed with 'Lafarge' or other equal and approved jointing compound on 'Lafarge' or other equal and approved steel brander system, including main and cross tees, necessary hangers, grid, etc and the whole finished with 'Lafarge Skimlite' or other equal and approved plaster trowelled smooth to polished surface all strictly accordance with the manufacturers specification:		
5	Ceiling suspended not exceeding 1000mm below concrete soffits.	m ²	300,00
	2mm Thick 'Dove Grey' powder coated aluminium ceilings, etc suspended on and including aluminium sud-frames, including necessary hangers, bolts, etc:		
6	Ceiling suspended not exceeding 1000mm below concrete soffits.	m ²	44,00
7	Horizontal bulkheads suspended exceeding 1000mm and not exceeding 2000mm below concrete soffits.	m ²	39,00
8	Horizontal closing panels not exceeding 1000mm below concrete soffits.	m ²	17,00

9	Circular cutting.	m	1,00
10	Vertical bulkheads 730mm high suspended not exceeding 1000mm below concrete soffits.	m	36,00
11	Vertical bulkheads 300mm high suspended exceeding 1000mm and not exceeding 1000mm below concrete soffits.	m	39,00
12	Vertical bulkheads 400mm high suspended exceeding 1000mm and not exceeding 2000mm below concrete soffits.	m	6,00
13	Vertical bulkheads 730mm high suspended not exceeding 1000mm below concrete soffits circular on plan to 98mm radius.	m	1,00
14	Vertical bulkheads 400mm high suspended exceeding 1000mm and not exceeding 2000mm below concrete soffits circular on plan to 98mm radius.	m	1,00
	CORNICES		
	Lafarge' other equal and approved cornices:		
15	45 x 35mm Pre-painted aluminium plaster trims plugged.	m	75,00
	Bill Total		
	BILL NO.9 : FLOOR COVERINGS (PROVISIONAL)		
	(CPAP WORKGROUP NO.130 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	FLOOR COVERINGS		
	POLISH, SEALERS, ETC		
	Two coats 'abecote WD 337' or other equal and approved epoxy emulsion paint applied strictly in accordance with the manufacturers instructions:		
1	On screeded granolithic floors.	m ²	50,00
	Bill Total		
	BILL NO.10 : IRONMONGERY (PROVISIONAL)		
	(CPAP WORKGROUP NO.132 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	General:		
	The following ironmongery have been measured as complete types per door i.e. the components of the types have not been separately measured. The descriptions, therefore, of such types shall be deemed to include all components, assembling, screwing on with matching screws, etc.		
	Trade names:		
	Trade names referred to on the Architect's schedules shall be or other equal and approved .		
	References:		
	The references given in the descriptions are to the respective types of ironmongery specified on the Architect's schedules annexed to these Bills of Quantities/accompanying these Bills of Quantities for tender purposes.		
	Finishes to ironmongery:		
	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.		
	THE FOLLOWING IN IRONMONGERY SET TYPES		
	Dorma' or other equal and approved hinges, bolts, locks, etc ironmongery set:		
1	Ironmongery set 01.	No	1,00
2	Ironmongery set 02.	No	5,00

3	Ironmongery set 03.	No	3,00
4	Ironmongery set 04.	No	1,00
5	Ironmongery set 05.	No	1,00
	BATHROOM FITTINGS		
	Franke' or other equal and approved brushed stainless steel:		
6	RODX672' Wall mounted double toilet roll holder with spindle system, plugged.	No	1,00
7	RODX619' Wall mounted soap dispenser, plugged.	No	1,00
8	RODX605' Wall mounted hygiene waste bin, plugged.	No	1,00
9	BS611V' Wall mounted sanitary towel disposal, plugged.	No	1,00
10	CNTXPAR' Angle side grab rail, plugged.	No	1,00
11	CNTBR' Cistern back rail.	No	1,00
	Koala Kare' or other equal and approved brushed stainless steel:		
12	KB110-SSRE' Horizontal recessed-mounted baby changing station.	No	1,00
	Bill Total		
	BILL NO.11 : STRUCTURAL STEELWORK (PROVISIONAL)		
	(CPAP WORKGROUP NO. 134 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Descriptions:		
	Descriptions of bolts shall be deemed to include nuts and washers.		
	Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete.		
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.		
	Paint Specification:		
	All steelwork to be degreased, wire brushed and painted all in accordance with the Engineer's specifications included with these Bills of Quantities for tender purposes.		
	HOT DIPPED GALVANISED STEEL GRILLES		
	Welded and bolted overhead grille bolted to brickwork or concrete (refer drawing no. 0368-1/TS/6207):		
1	40 x 40 x 5mm Angle support frame.	Tonnes	0,16
2	Mentis RS80' or other equal and approved rectagrid mesh grill, including angle frame, bolts, etc.	m ²	2,00
	PAINTED HOT DIPPED GALVANISED STEEL RAINWATER PIPES		
	2.5mm Welded hot rolled sheet rainwater pipes, including holder bats, brackets, etc.:		
3	114mm Diameter pipes.	Tonnes	0,45
4	Extra over 114mm diameter pipe for shoe.	No	4,00
5	Extra over 114mm diameter pipe for swanneck.	No	4,00
	Bill Total		
	BILL NO.12 : METALWORK (PROVISIONAL)		
	(CPAP WORKGROUP NO. 136 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		

	Descriptions:		
	Descriptions of bolts shall be deemed to include nuts and washers.		
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.		
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.		
	References:		
	The references given in the descriptions are to be respective types of handrailing or balustrading detailed on the Architect's drawing issued together with these Bills of Quantities for tender purposes.		
	BRUSHED STAINLESS STEEL LEAN RAIL, SEATS, ETC.		
	Welded and bolted lean rails including flats, angles, posts, hollow sections, bolts, rails, etc. Complete as per Architect's drawings, sections, details, etc:		
1	Horizontal lean rail 663mm long x 890mm high overall complete (type 1).	No	6,00
2	Horizontal lean rail 1763mm long x 890mm high overall complete (type 2).	No	4,00
	Welded and bolted benches including flats, angles, posts, hollow sections, bolts, etc. complete as per Architect's drawings, sections, details, etc:		
3	Shaped bench 1220mm long x 850mm high extreme complete (refer drawing no. RRT/AR/WC/DET-606).	No	4,00
	SUNDRY GALVANISED STEELWORK		
	Welded and bolted threshold plate including flats, angles, bars, bolts, etc.:		
4	Threshold plate size 1775 x 477 x 40mm deep complete (mat elsewhere measured).	No	12,00
	6mm 'EPDM' or other equal and approved rubber mat glued to steel plate with 'Balcotan 100' or other equal and approved glue accordance with the manufacture's specification.:		
5	Mat size 1775 x 477mm wide.	No	12,00
	Welded and bolted tiling angle, etc:		
6	50 x 50 x 5mm Angle.	Kg	52,00
7	170 x 50 x 5mm Flat fixing lug 170mm long two holed for bolts.	Kg	24,00
8	Hole through 5mm steel for bolts.	No	72,00
9	M6 chemical anchor bolts 100mm long.	No	72,00
	Welded and bolted manhole cover framework, etc:		
10	25 x 25 x 3mm Angle supports.	Kg	8,00
11	30 x 30 x 3mm Angle framing welded back to back.	Kg	10,00
12	1000 x 700 x 3mm Thick cover plates (In no. 1).	Kg	70,00
13	70 x 50 x 3mm Flat fixing lug 70mm long one holed for bolts (In no. 8).	Kg	2,00
14	50 x 6mm Flat stiffener plates.	Kg	4,00
15	Hole through 3mm steel for bolts.	No	32,00
16	40 x 40 x 10mm Square slotted lifting plate.	No	4,00
	ALUMINIUM SHOPFRONTS, ETC. (CPAP WORKGROUP NO. 140 UNLESS OTHERWISE STATED)		
	DESIGN, SUPPLY AND INSTALLATION OF CURTAIN WALLS, ETC		
	The tenderer shal undertake full design responsibility of these shopfronts and shal indemnify the professional design team of all deign responsibility. The Architect drawings are for design intent only and approval of shop drawings will only be to ensure that this design proposal is maintained. The approval of shop drawings shall not alleviate the contractor of his responsibility.		
	Where the design requires approval by specialist consultant (i.e. façade engineer, etc.) the tenderer shall allow the cost hereof within his/her tender offer.		
	All fitting and fixing details shall be in accordance with the contractors specialist design and approved by the Architects.		
	All butt joints to sealed with an approved silicone sealant with the minimum tensile strength of 1.0Mpa.		
	Glass specification:		

	The specialist glazing contractor shall ensure that he/she prepares or has prepared on his/her behalf, in response to the requirements of the glazed façade Performance Specification, a detailed engineering design, together with shop-drawings of the said façade. Detailed shop-drawings together with the specifications of the glass and framing proposed, shall be submitted to the Project Architect (ARG Design) for approval. No work shall be put in hand until written approval has been received. The said glazed façade design, drawings and specifications submitted for approval shall be endorsed by a suitable qualified and competed structural façade engineer employed or retained by the glazing contractor for that purpose.		
	Notes:		
	Tenderers are to note that all dimensions indicated on these tender drawings are approximate only. The successful tenderer will be required to undertake an on site measurement of openings prior to fabrication of aluminium elements. No claim will be entertained should he/she fail to do so.		
	Tenderers are to allow for approved sealants on both sides around windows, doors, shopfronts, etc.		
	Glazing:		
	All glazing shall conform to the national regulations.		
	Glazing shall comply with SAGGA regulations. Glass performance glass as shown in drawings. Glass thickness shall comply with SAGGA regulation.		
	Approved powder coated aluminium shopfronts, etc glazed as per in accordance with Engineer's specification, including ironmongery, etc plugged to brickwork or concrete or fixed to steelwork:		
17	Shopfront approximately 4400mm long x 2780mm high complete.	No	4,00
18	Shopfront approximately 1920mm long x 2000mm high complete.	No	4,00
19	Shopfront approximately 4200mm long x 2000m high complete.	No	4,00
20	Shopfront approximately 6200mm long x 2000mm high complete.	No	2,00
21	Shopfront approximately 3610mm long x 2000mm high complete.	No	2,00
22	Shopfront approximately 2510mm long x 2000mm high complete.	No	2,00
23	Shopfront approximately 4242mm long x 2780mm high with and including automated fire escap door complete.	No	2,00
24	Fixed light above cladding band approximately 29715mm girth x 785mm high complete.	No	2,00
25	Automated sliding door size 1800 x 2400mm high complete.	No	12,00
	ALUMINIUM COVER BOXES, ETC		
	3mm Thick 'Dove Grey' powder coated aluminium cover box, etc fixed to structural steelwork.		
26	Cover boxes approximately 155mm girth.	m	8,00
27	Cover boxes approximately 240mm girth.	m	102,00
28	Cover boxes approximately 270mm girth.	m	102,00
29	Cover boxes approximately 430mm girth.	m	8,00
30	Cover boxes approximately 450mm girth including 30mm grip.	m	65,00
31	Cover boxes approximately 480mm girth.	m	28,00
32	Cover boxes approximately 900mm girth.	m	65,00
33	30 x 30mm Box section.	m	94,00
34	50 x 25mm Box section.	m	91,00
35	55 x 30mm Box section.	m	35,00
36	30 x 30mm Angle.	m	24,00
37	80 x 110mm Mullion.	m	8,00
38	80 x 120mm Mullion.	m	8,00
39	Intermediate mullion verall size approximately 260 x 312mm.	m	16,00
40	Intermediate mullion verall size approximately 260 x 50mm.	m	6,00
41	Intermediate mullion verall size approximately 260 x 380mm.	m	16,00
42	Intermediate mullion verall size approximately 260 x 220mm.	m	8,00
	ALUMINIUM WINDOWS, DOORS, ETC.		
	Dove Grey' powder coated aluminium louvred windows as per Architect's specification, approved sealant all around on both sides, etc plugged to brickwork or concrete (refer drawing no. RRT/AR/WC/DET-521):		

43	Window size 350 x 350mm high (Type W1 & W2).	No	2,00
	SECURITY PAYROLL WINDOWS		
	Gunnebo' or other equal and approved security payroll window for indoor use suitable for 270mm walls, fixed to brickwork or concrete or steelwork.		
44	L-shaped window approximately 2250mm girth x 1615mm high complete (refer drawing no. RRT/AR/WC/DET-622).	No	1,00
	FENCING		
	Beta fence 3510' or other equal and approved fencing including, posts, brackets, angles, bolts, gouting, etc fixed to concrete:		
45	Fencing 1640mm high complete.	m	68,00
	Bill Total		
	BILL NO.13 : PLASTERING (PROVISIONAL)		
	(CPAP WORKGROUP NO. 142 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SCREEDS		
	Screeds on concrete:		
1	30mm Thick on floors and landings.	m ²	154,00
	GRANOLITHIC		
	Untinted granolithic on concrete:		
2	30mm Thick on floors and landings.	m ²	297,00
	INTERNAL PLASTER		
	Cement plaster on brickwork:		
3	On walls.	m ²	59,00
4	On narrow widths.	m ²	5,00
	EXTERNAL PLASTER		
	Cement plaster on brickwork:		
5	On walls.	m ²	29,00
6	On narrow widths.	m ²	1,00
	Bill Total		
	BILL NO.14 : TILING (PROVISIONAL)		
	(CPAP WORKGROUP NO. 144 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Descriptions:		
	Unless described as fixed with adhesive to plaster (plaster elsewhere measured), 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.		
	WALL TILING		
	100 x 100 x 5mm 'Evaluation' or other equal and approved gloss ceramic tiles fixed with 'Weber Tylon Ceramic fix 6' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
1	On walls.	m ²	12,00
	200 x 200 x 6mm 'Evaluation' or other equal and approved gloss ceramic tiles fixed with 'Weber Tylon Ceramic fix 6' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		

2	On walls.	m²	3,00
	Take from store 300 x 600mm 'Blanco Relieve Grespania Meteor' or other equal and approved porcelain tiles fixed with 'Weber Tylon porcelain fix 12' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
3	On walls.	m²	24,00
	FLOOR TILING		
	Take from store 300 x 300mm 'Moka Natural Grespania Meteor' or other equal and approved porcelain tiles fixed with 'Weber Tylon porcelain fix 12' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
4	On floors.	m²	262,00
5	Skirtings 150mm high of cut tiles.	m	19,00
6	On timber manhole cover size 1000 x 700mm.	No	1,00
	Take from 300 x 300mm 'Centre Blanco Grespania City' or other equal and approved porcelain tiles fixed with 'Weber Tylon porcelain fix 12' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
7	600mm Wide directional tactile bands.	m	40,00
	Take from store 300 x 300mm 'Park Blanco Grespania City' or other equal and approved porcelain tiles fixed with 'Weber Tylon porcelain fix 12' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
8	600 x 600mm Warning tactile isolated panel.	No	5,00
9	1200 x 600mm Warning tactiles isolated panel.	No	8,00
10	2250 x 600mm Warning tactiles isolated panel.	No	1,00
	CORNER PROJECTORS, DIVIDING STRIPS, ETC		
	Kirk Marketing' or other equal and approved brushed stainless steel trims, etc:		
11	Trim type 1.	m	26,00
12	Trim type 2.	m	23,00
13	Trim type 3.	m	28,00
	Bill Total		
	BILL NO.15 : PLUMBING AND DRAINAGE (PROVISIONAL)		
	(CPAP WORKGROUP NO.148 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	HDPE 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.		
	Copper pipes:		
	Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be approved type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.		
	Fixing of pipes:		
	Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. Casting in, building in or suspending not exceeding 1000mm below suspension level.		
	Reducing fittings:		

	Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm 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. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.		
	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'.		
	Laying, backfilling, bedding, etc of pipes:		
	Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.		
	Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB: Earthworks (Pipe trenches)		
	Flush pans:		
	Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.		
	Stainless steel basins, sinks, wash troughs, urinals, etc:		
	Stainless steel for economybasins, domestic sinks, worktops and wash troughs shall be type 430 (17/0):		
	Stainless steel for urinals, basins, quality sinks, wash trough, institutional equipment, etc shall be type 304 (18/8):		
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.		
	Waste unions:		
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.		
	RAINWATER DISPOSAL		
	Approved HDPE pipes:		
1	75mm Diameter rainwater pipes.	m	21,00
	Extra over HDPE rainwater pipes for fittings:		
2	75mm Bend.	No	5,00
3	75mm Junction.	No	1,00
	Saint Gobain' or other equal and approved fullbore outlets:		
4	75mm Diameter 'Purus Barge' or other equal and approved polypropylene floor drain, including 150mm diameter lockable floor grating complete.	No	1,00
5	150mm Diameter 'Purus Barge' or other equal and approved polypropylene floor drain, including 150mm diameter lockable floor grating complete.	No	1,00
	SANITARY FITTINGS		
	Franke' or other equal and approved brushed stainless steel:		
6	Floor mounted disabled wc suite comprising stainless steel pan, concealed 'Valsir Tropea 3' or other equal and approved concealed cistern and 'Valsir Tropea 2' or other equal and approved antivandal metal plate actuator complete.	No	1,00
7	Oval A wall mounted wash hand basin with one taphole on and including mounting plates, fixing bolts, 50mm splashback, etc.	No	1,00
8	DSG wall mounted drip-in sink, including stainless steel buckets, fixing bolts, 90mm splashback, etc.	No	1,00
	WASTE UNIONS ETC		
	Chromium plated brass:		
9	32mm Basin waste union.	No	1,00
10	38mm Bath or sink waste union.	No	1,00
	TRAPS ETC		
	Chromium plated brass:		
11	32mm Bottle trap.	No	1,00
12	38mm Bottle trap.	No	1,00

	TAPS, VALVES, ETC		
	Brass:		
13	15mm Star hose bibtap.	No	1,00
14	28mm Stopcock.	No	1,00
15	15mm Elbow action pillar tap.	No	1,00
16	15mm Angle valve.	No	2,00
17	75mm Long extension piece.	No	1,00
18	28mm In-line strainer.	No	1,00
	SANITARY PLUMBING		
	uPVC pipes:		
19	40mm Pipes.	m	6,00
20	110mm Pipes.	m	2,00
	Extra over uPVC pipes for fittings:		
21	40mm Bend.	No	4,00
22	110mm Pan connector bend.	No	1,00
23	110mm Reducing junction.	No	1,00
24	110mm Gully.	No	5,00
25	Testing waste pipe system.	Item	1,00
	WATER SUPPLIES		
	Class 2 copper pipes:		
26	15mm Pipes.	m	6,00
27	22mm Pipes.	m	2,00
28	28mm Pipes.	m	1,00
	Extra over class 2 copper pipes for brass compression fittings:		
29	15mm Fittings.	No	3,00
30	22mm Fittings.	No	2,00
31	28mm Fittings.	No	1,00
	Sundries:		
32	Testing water pipe system.	Item	1,00
33	450 x 450mm Cast iron stopcock box, including brick chamber below not exceeding 500mm deep internally.	No	1,00
	Bill Total		
	BILL NO.16 : GLAZING (PROVISIONAL)		
	(CPAP WORKGROUP NO.150 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	MIRRORS, ETC.		
	6mm 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:		
1	Mirror size 420 x 840 mm high with six screws.	No	1,00
	Bill Total		
	BILL NO.17 : PAINTWORK (PROVISIONAL)		

	(CPAP WORKGROUP NO. 152 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Paint Specification		
	All painting shall be done in accordance with 'Midas' or other equal and approved specifications.		
	PAINTWORK ETC TO NEW WORK		
	ON FLOATED PLASTER		
	One coat waterbased plaster primer and two coats superior quality, low sheen, washable, pure acrylic emulsion paint:		
1	On internal walls.	m ²	185,00
2	On external walls.	m ²	41,00
	One coat waterbased plaster primer and two coats medium quality, slight sheen, emulsion paint:		
3	On ceilings.	m ²	359,00
	ON PLASTER BOARD		
	One coat waterbased plaster primer and two coats medium quality, slight sheen, emulsion paint:		
4	On ceilings.	m ²	241,00
	ON SKIMMED PLASTER BOARD		
	One coat waterbased plaster primer and two coats medium quality, slight sheen, emulsion paint:		
5	On ceilings and cornices.	m ²	91,00
	ON BAGGED BRICKWORK, ETC		
	One coat waterbased plaster primer and two coats superior quality, low sheen, washable, pure acrylic emulsion paint:		
6	On bagged brickwork.	m ²	36,00
	ON METAL		
	One coat waterbased metal primer, one coat universal undercoat and two coats pure gloss enamel paint:		
7	On door frames.	m ²	21,00
8	On gates, screens, etc (both sides measured over the full flat area).	m ²	33,00
	ON WOOD		
	One coat wood primer, one coat universal undercoat and two coats pure gloss enamel paint:		
9	On doors	m ²	46,00
	Bill Total		
	BILL NO.18 : PROVISIONAL SUMS		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	Note: All Provisional Sums are NETT i.e. there is no cash discount		
	ARTWORK		
1	Provide the amount of R 170 000.00 (One hundred and seventy thousand Rand) for Artwork	Item	1,00
2	Profit on above item (%).	Item	1,00
3	Attendance on ditto (%).	Item	1,00
	ELECTRICAL AND ELECTRONICS INSTALLATION		
4	Provide the amount of R 890 000.00 (Eight hundred and ninety thousand Rand) for Electrical and Electronics Installation.	Item	1,00
5	Profit on above item (%).	Item	1,00

6	Attendance on ditto (%).	Item	1,00
	GATE		
7	Provide the amount of R 20 000.00 (Twenty thousand Rand) for Gate to the link.	Item	1,00
8	Profit on above item (%).	Item	1,00
9	Attendance on ditto (%).	Item	1,00
	INFORMATION BOARDS		
10	Provide the amount of R 150 000.00 (One hundred and fifty thousand Rand) for Information Boards.	Item	1,00
11	Profit on above item (%).	Item	1,00
12	Attendance on ditto (%).	Item	1,00
	JOINERY FITTINGS, ETC		
13	Provide the amount of R 150 000.00 (One hundred and fifty thousand Rand) for Joinery Fittings, etc.	Item	1,00
14	Profit on above item (%).	Item	1,00
15	Attendance on ditto (%).	Item	1,00
	MECHANICAL INSTALATION		
16	Provide the amount of R 110 000.00 (One hundred and ten thousand Rand) for Mechanical Installation.	Item	1,00
17	Profit on above item (%).	Item	1,00
18	Attendance on ditto (%).	Item	1,00
	SIGNAGE		
19	Provide the amount of R 80 000.00 (Eighty thousand Rand) for Signage.	Item	1,00
20	Profit on above item (%).	Item	1,00
21	Attendance on ditto (%).	Item	1,00
	TOTEM		
22	Provide the amount of R 65 000.00 (Fifty thousand Rand) for Totem.	Item	1,00
23	Profit on above item (%).	Item	1,00
24	Attendance on ditto (%).	Item	1,00
	The following allowance will be measured and valued in accordance with these Bills of Quantities.		
	BUILDERS WORK		
25	Provide the amount of R 200 000.00 (Two hundred thousand Rand) for Builders Work.	Item	1,00
	Bill Total		
	Section Total		

THLABANE STATION 11			
Item	Description	UNIT	Quantity
	SECTION NO. 0 : Single Section		
	BILL NO.1 : ALTERATIONS (PROVISIONAL)		
	(CPAP WORK GROUP No.102 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for trades (2008 Edition) and the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES:		
	View site:		
	Before submitting his tender the contractor shall 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 any variations of the tender in respect of the nature and extent of the work or of inferior or damaged materials will be entertained.		
	Explosive:		
	No explosives whatsoever may be used for demolition purposes unless otherwise stated.		

	General		
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent.		
	Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any connections that may be necessary shall be made with proper fittings, to the satisfaction of the Representative/Agent.		
	Prices for taking out of doors and frames shall include for removing door stops, cabin hooks, etc and making good floor and wall finishes to match existing.		
	With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork.		
	Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary.		
	The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)		
	The contractor shall make provision for propping all air conditioning plants and duct for allowing to below plants.		
	Disposal of asbestos-cement:		
	Disposal of asbestos cement is to be recycled or disposed off under controlled conditions by a registered asbestos contractor in compliance with the Occupational Health and Safety Act (Act 85/1993), Asbestos Regulations as per the instructions from the Representative/Agent.		
	REMOVAL OF EXISTING WORK		
	Breakind down/off and remiving reinforced concrete including cutting off and removing reinforcement:		
1	Columns.	m³	
	Taking up/off and removing:		
2	Rubble, broken tiles, plant growth including roofs, etc.	m³	
	Taking down and removing roofs, floors, panelling, ceilings, partitions, etc:		
3	Gypsum plasterboard ceilings, including suspension grid, hangers, etc.	m²	
	Taking out/off and removing joinery fittings, etc:		
4	Granite counter 750mm wide x 32mm thick.	m	
	Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screeds, plaster, etc:		
5	Screed from floors.	m²	
6	Plaster from walls.	m²	
	Hacking up/off and removing tile floor and wall finishes, including removing motar bed or backing and preparing concrete or brick surfaces for new screeds, plaster or tile finishes:		
7	Tiles on walls.	m²	
	Carefully taking up/off and removing brick pavers, etc, temporary storing for later re-use in similar new position:		
8	220 x 110 x 50mm Brick pavers.	m²	
	CORE DRILLING, ETC		
	Core drilling:		
9	50mm Diametre core drill through 250mm concrete slab, wall or beam.	No	
10	100mm Diametre core drill through 250mm concrete slab, wall or beam.	No	
	BUDGETARY ALLOWANCE		
11	Provide the amount of R 200 000.00 (Two hundred thousand Rand) for work associated with defects.	Item	
	Bill Total		
	BILL NO.2 : EARTHWORKS (PROVISIONAL)		
	(CPAP WORK GROUP No.104 UNLESS OTHERWISE STATED)		

	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Nature of ground:		
	The nature of the ground is assumed to be loose sandy material, therefore earth, but possibly interspersed with hard rock or soft rock.		
	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, etc:		
	Prices for filling and backfilling shall include for all selection and any multiple handling of material, etc.		
	EXCAVATION ETC		
	Excavation in earth not exceeding 2000mm deep:		
1	Holes.	m ³	5,00
	Back excavation of vertical sides of excavation in earth for working space, including backfilling compacted to 95% Mod AASHTO density:		
2	Exceeding 500mm and not exceeding 1500mm deep for placing and removing formwork to walls etc 500mm away from excavated face.	m ²	14,00
	Extra over trench and hole excavation in earth for excavation in:		
3	Soft rock.	m ³	3,00
4	Hard rock.	m ³	2,00
	Extra over back excavation in earth for working space for excavation in soft rock:		
5	Exceeding 500mm and not exceeding 1500mm deep for placing and removing formwork to walls etc 500mm away from excavated face.	m ²	2,00
	Extra over back excavation in earth for working space for excavation in hard rock:		
6	Exceeding 500mm and not exceeding 1500mm deep for placing and removing formwork to walls etc 500mm away from excavated face.	m ²	2,00
	Extra over all excavations for carting away:		
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.	m ³	5,00
	Risk of collapse of excavations:		
8	Sides of trench and hole excavations not exceeding 1500mm deep.	m ²	11,00
	Keeping excavations free of water:		
9	Keeping excavations free of all water other than subterranean water.	Item	1,00
	FILLING, ETC.		
	Selected cohesionless material obtained from the excavation and/or prescribed stock piles on site compacted to 95% Mod. AASHTO density:		
10	Backfilling to trenches, holes, etc.	m ³	3,00
	Earth filling supplied and carted on to site by the Contractor compacted to 95% Mod AASHTO density:		
11	Under paving etc of G5 material in accordance with SABS 1200 DM compacted to 95% Mod AASHTO density.	m ³	26,00
12	Under paving etc of G7 material in accordance with SABS 1200 DM compacted to 95% Mod AASHTO density.	m ³	29,00
	Approved clean sand filling supplied and carted onto site by the Contractor compacted to 100% Mod. AASHTO density:		
13	Under floors, steps, paving, etc.	m ³	34,00
	Compaction of surfaces:		
14	Compaction of ground surface under floors, paving, etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density.	m ²	303,00
	Prescribed density tests on filling:		

15	Modified AASHTO density test.	No	5,00
	Bill Total		
	BILL NO.3 : CONCRETE, FORMWORK AND REINFORCEMENT (PROVISIONAL)		
	(CPAP WORKGROUP NO.110 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	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 Representative/Agent. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Representative/Agent. (Test cubes are measured separately).		
	Concrete:		
	A minimum of 50 to 70% of the absolute quantity of Portland cement, as an average across all mixes, is to be replaced with industrial waste products (such as flyash or slag or silica fume), or with oversized aggregate. No industrial waste product may come from industrial facilities that are co-fired with hazardous waste.		
	A minimum of 10% of all aggregate used for structural purposes is to be recycled concrete aggregate (RCA) or slag aggregate. RCA must be classified as Class 1 RCA in accordance with Australian code HB 155-2002, "Guide to the Use of Recycled Concrete and Masonry Materials". No natural aggregates are to be used for non-structural purposes (eg building base course, sub-grade to footpaths and backfill to service trenches)		
	All concrete mixes and aggregates to be approved by the structural engineer. All backfill and sub base mixes to be approved by the structural engineer with Australian code HB 155-2002, "Guide to the Use of Recycled Concrete and Masonry Materials". No natural aggregates are to be used for non-structural purposes (eg building base course, sub-grade to footpaths and backfill to service trenches)fsfasdaFAF Concrete and Masonry Materials". No natural aggregates are to be used for non-structural purposes (eg building base course, sub-grade to footpaths and backfill to service trenches)		
	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.		
	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 reasons. 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.		
	Formwork should be designed to be re-used without a subsequent loss in quality of the concrete finish.		
	The design of the formwork is to be submitted for approval by the architect. Formwork is to be inspected by the architect prior to placement of concrete.		
	Classification of formwork:		
	Smooth-special: Formwork shall be metal or wrought timber with a degree of accuracy II as per SANS 1200G. Surfaces of the concrete must be completely rubbed or treated to form a smooth finish of uniform texture, appearance and colour.		
	Elements of the works should be finished as follows:		
	Foundations and concrete that is not visible: ROUGH		
	Floor slab: Power floated and prepared to allow for later screeding		
	Formed and unformed surfaces of visible concrete elements apart from the floor slab. (Includes all walls, columns and the concrete infill between Kassel Kerb and walls): SMOOTH SPECIAL		
	Reinforcement:		
	All concrete reinforcing steel must have a minimum of 95% recycled content.		
	Repairs:		
	A method statement for any repair work to the concrete or finishing work done after the shutters are stripped is to be provided for approval by the architect and structural engineer.		

	The approved methods are to be assessed after application to the test panel for final approval by the architect and engineer prior to proceeding with the works.		
	Documentation:		
	The contractor is to identify all concrete uses on site and describe the mix and product used. The contractor is to ensure the supplier confirms:		
	The quantities of Portland cement, industrial waste products and aggregate (both recycled and non-recycled) supplied to site.		
	That no industrial waste product came from industrial facilities co-fired with hazardous waste.		
	That where recycled concrete aggregate is used, it is classified as Class 1 RCA in accordance with Australian code HB 155-2002		
	The contractor is to confirm the total mass of steel re-inforcing used within the building structure, and is to obtain from the supplier:		
	Confirmation of the total quantity of steel re-inforcing supplied for the building structure.		
	The post-consumer recycled content of the steel reinforcing.		
	Construction breaks:		
	The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the architect and the structural engineer for their records.		
	Use of suspended reinforced concrete slabs:		
	The contractor is advised that 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., propping through the floors below may be required. The location of these areas and any necessary propping shall be approved by the structural engineer. The cost of this propping will be for the contractor's account.		
	Costs associated with these preambles:		
	Cost stemming from these preambles are to be included within the rates of the associated items hereunder, if not specifically measured.		
	UNREINFORCED CONCRETE		
	15Mpa/25mm Concrete:		
1	Surface blinding under footings and bases.	m ³	1,00
	REINFORCED CONCRETE		
	30 MPa/19mm Concrete:		
2	Bases.	m ³	2,00
3	Totem columns.	m ³	8,00
	TEST BLOCKS		
	Test blocks:		
4	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes.	Sets	3,00
	FORMWORK (CPAP WORK GROUP No. 111)		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)		
	Rough formwork to sides:		
5	Bases.	m ²	5,00
	OFF-SHUTTER SMOOTH FORMWORK (DEGREE OF ACCURACY II)		
	Smooth formwork to sides:		
6	Totem columns.	m ²	36,00
	Boxing in soft formwork to form:		
7	25 x 25mm Vertical chamfers at corners.	m	13,00
	MOVEMENT JOINTS ETC		
	One layer three-ply asphaltic waterproofing membrane with fibre felt carrier between horizontal concrete and brick surfaces, including cement mortar bed:		
8	Not exceeding 300mm wide.	m	25,00
	REINFORCEMENT (CPAP WORK GROUP No. 114)		

	High tensil steel reinforcement to structural concrete work:		
9	Various diameter rod reinforcement.	Tonnes	1,50
	Bill Total		
	BILL NO.4 : PRECAST CONCRETE (PROVISIONAL)		
	(CPAP WORKGROUP NO.112 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Sizes:		
	Blocks, sills, etc measured linear shall be made in suitable lengths. Large size setting out drawings shall be prepared where necessary and submitted to the Representative/Agent for approval before moulds are made.		
	General:		
	Where kerbstones, blocks, etc are laid in ground descriptions shall be deemed to include necessary excavations, filling in and ramming.		
	PRECAST CONCRETE		
	Precast concrete left smooth from the mould, including bedding, jointing, pointing, etc:		
1	1800mm Long x 450mm wide x 715mm high bench on concrete footing (footing elsewhere measured).	No	2,00
	REINFORCEMENT:		
	High tensile steel reinforcement to structural concrete work:		
2	Various diameter rod reinforcement.	Tonnes	0,05
	Bill Total		
	BILL NO.5 : MASONRY (PROVISIONAL)		
	(CPAP WORKGROUP NO.118 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	BRICKWORK		
	Sizes in descriptions:		
	Where sizes in descriptions are given in units, 'one brick' shall represent the length and 'half brick' the width of the brick.		
	Specification:		
	Block paving to be manufactured in accordance with SABS Specification 1058 to the following compressive strength:		
	Class 25 or 35MPa.		
	Paving to be laid in accordance with SABS 1200MJ, SABS 1058 and the Concrete Manufacturers Association's specifications		
	Clean dry jointing sand complying with SABS 1200MJ is to be swept into joints between road stones		
	All block paving to be inspected and resanded after 3 months.		
	BRICKWORK IN SUPERSTRUCTURE		
	Brickwork of NFP bricks in Class I mortar:		
1	Half brick walls.	m²	39,00
2	One brick walls.	m²	12,00
3	250mm Hollow walls of two half brick skins, including wire ties.	m²	13,00
4	270mm Hollow walls of two half brick skins, including wire ties.	m²	9,00

	BRICKWORK SUNDRIES		
	Sundries:		
5	Closing 60mm cavity of hollow wall horizontally with brickwork half brick wide.	m	2,00
	Brickwork reinforcement:		
6	75mm Wide reinforcement built in horizontally.	m	35,00
7	150mm Wide reinforcement built in horizontally.	m	11,00
	PAVING		
	Take from store paving of 220 x 110 x 60mm 'Corobrik Champagne' or other equal and approved clay paving bricks on and including 20mm thick clean sand bed with sand and cement mixture swept into joints and lightly hosed down, including preparation of ground or filling:		
8	Paving in herringbone pattern to falls .	m²	303,00
9	Paving to ramps.	m²	31,00
	Take from store paving of 210 x 60 x 60mm 'Corobrik Onyx Piazza' or other equal and approved clay paving bricks with butt joints on 20mm thick clean sand bed with sand and cement mixture swept into joints and hosed down:		
10	210mm Wide header course edgings.	m	190,00
11	210mm Wide brick-on-flat header course borders, bands, etc on and including 250 x 150mm thick unreinforced concrete bedding, haunching, etc, including excavation, bacfilling, cartaway, etc.	m	106,00
	300 x 300 x 60mm Pigmented precast concrete block paving on and including 20mm thick clean sand bed, including preparation of ground or filling:		
12	600mm Wide directional tactile bands.	m	56,00
13	600 x 600mm Wide warning tactile isolated panel.	No	1,00
14	1800 x 600mm Wide warning tactile isolated panel.	No	4,00
	MOVEMENT JOINTS		
	Expansion joints with closed cell expanded polyethylene between concrete and brick surfaces:		
15	10mm Vertical joints not exceeding 300mm wide.	m	29,00
16	10mm Horizontal joints not exceeding 300mm wide.	m	32,00
	Bill Total		
	BILL NO.6 : WATERPROOFING (PROVISIONAL)		
	(CPAP WORKGROUP NO.120 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	DAMPPROOFING OF WALLS AND FLOORS		
	One layer of 375 micron embossed damp proofing course:		
1	In walls	m²	5,00
	JOINT SEALANTS ETC		
	Approved silicone sealant:		
2	5 x 5mm Fillet joints around sanitary fittings.	m	36,00
	Approved polyethylene sealing compound, including backing cord, primer, etc:		
3	10 x 10mm In vertical expansion joints.	m	45,00
	Bill Total		
	BILL NO.7 : CARPENTRY AND JOINERY (PROVISIONAL)		
	(CPAP WORKGROUP NO.126 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		

	SUPPLEMENTARY PREAMBLES		
	Particle board:		
	Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type		
	b) SABS 1301 Particle board: interior type.		
	Joinery:		
	Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc.		
	Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.		
	Fixing:		
	Items described as nailed shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.		
	Decorative laminate finish:		
	Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish.		
	References:		
	References in brackets in descriptions refer to Architects drawings and details issued together with these Bill of Quantities for tender purposes.		
	DOORS ETC		
	Solid core flush doors with commercial veneer suitable for painting on both sides and 8mm thick exposed hardwood edge strip to tops, sides and bottoms, hung to steel frames:		
1	40mm Door size 1050 x 2255mm high (DO2).	No	2,00
2	40mm Door size 890 x 2255mm high (DO3, D16, D17, D18, D19).	No	6,00
	Bitcon Industries' or other equal and approved security door with commercial veneer on both sides (refer drawing no. RRT/AR/WC/SCH-531):		
3	Anti Bandit' security door size 1050 x 2255mm high, including 3mm thick galvanised pressed steel frame for 250mm hollow brick wall and preparing frame for door closer and lock (D01).	No	2,00
	Bill Total		
	BILL NO.8 : CEILINGS, ETC (PROVISIONAL)		
	(CPAP WORKGROUP NO. 129 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Descriptions:		
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.		
	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 have been given.		
	Proprietary suspended ceilings:		
	Electrical light fittings, diffusers, panels, etc. generally are lay-in units of the same dimensions as the suspension grid described and allowance must 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 is to take cognisance thereof).		
	CEILINGS, ETC		
	INSULATION		
	Isover Aerolite' or other equal and approved insulation:		
1	100mm Insulation closely fitted and laid on top of suspension system, etc.	m²	7,00
	SUSPENDE CEILINGS:		
	6.4mm 'Lafarge' or other equal and approved gypsum plasterboard with taped joints and jointed with 'Lafarge' or other equal and approved jointing compound on 'Lafarge' or other equal and approved steel brandering and suspension system, including main and cross tees, necessary hangers, grid, etc, all strictly accordance with the manufacturers specifications:		
2	Ceiling suspended not exceeding 1000mm below concrete soffit.	m²	29,00

3	Extra over ceilings for 635 x 635mm access panel of white epoxy coated aluminium 'T' frame with 580 x 580mm white epoxy steel hinged pan and fitted flush to opening.	No	1,00
	9mm 'Lafarge' or other equal and approved gypsum tapered edge plasterboard with taped joint and jointed with 'Lafarge' or other equal and approved jointing compound on 'Lafarge' or other equal and approved steel brander system, including main and cross tees, necessary hangers, grid, etc and the whole finished with 'Lafarge Skimlite' or other equal and approved plaster trowelled smooth to polished surface all strictly accordance with the manufacturers specification:		
4	Ceiling suspended not exceeding 1000mm below concrete soffits.	m ²	8,00
	12mm 'Lafarge Pregybel' or other equal and approved perforated accoustic ceiling tapered edge plasterboard with taped joint and jointed with 'Lafarge' or other equal and approved jointing compound on 'Lafarge' or other equal and approved steel brander system, including main and cross tees, necessary hangers, grid, etc and the whole finished with 'Lafarge Skimlite' or other equal and approved plaster trowelled smooth to polished surface all strictly accordance with the manufacturers specification:		
5	Ceiling suspended not exceeding 1000mm below concrete soffits.	m ²	232,00
	2mm Thick 'Dove Grey' powder coated aluminium ceilings, etc suspended on and including aluminium sud-frames, including necessary hangers, bolts, etc:		
6	Ceiling suspended not exceeding 1000mm below concrete soffits.	m ²	44,00
7	Horizontal bulkheads suspended exceeding 1000mm and not exceeding 2000mm below concrete soffits.	m ²	39,00
8	Horizontal closing panels not exceeding 1000mm below concrete soffits.	m ²	17,00
9	Circular cutting.	m	1,00
10	Vertical bulkheads 730mm high suspended not exceeding 1000mm below concrete soffits.	m	36,00
11	Vertical bulkheads 300mm high suspended exceeding 1000mm and not exceeding 1000mm below concrete soffits.	m	39,00
12	Vertical bulkheads 400mm high suspended exceeding 1000mm and not exceeding 2000mm below concrete soffits.	m	6,00
13	Vertical bulkheads 730mm high suspended not exceeding 1000mm below concrete soffits circular on plan to 98mm radius.	m	1,00
14	Vertical bulkheads 400mm high suspended exceeding 1000mm and not exceeding 2000mm below concrete soffits circular on plan to 98mm radius.	m	1,00
	CORNICES		
	Lafarge' other equal and approved cornices:		
15	45 x 35mm Pre-painted aluminium plaster trims plugged.	m	75,00
	Bill Total		
	BILL NO.9 : FLOOR COVERINGS (PROVISIONAL)		
	(CPAP WORKGROUP NO.130 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	FLOOR COVERINGS		
	POLISH, SEALERS, ETC		
	Two coats 'abecote WD 337' or other equal and approved epoxy emulsion paint applied strictly in accordance with the manufacturers instructions:		
1	On screeded granolithic floors.	m ²	4,00
	Bill Total		
	BILL NO.10 : IRONMONGERY (PROVISIONAL)		
	(CPAP WORKGROUP NO.132 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	General:		

	The following ironmongery have been measured as complete types per door i.e. the components of the types have not been separately measured. The descriptions, therefore, of such types shall be deemed to include all components, assembling, screwing on with matching screws, etc.		
	Trade names:		
	Trade names referred to on the Architect's schedules shall be or other equal and approved .		
	References:		
	The references given in the descriptions are to the respective types of ironmongery specified on the Architect's schedules annexed to these Bills of Quantities/accompanying these Bills of Quantities for tender purposes.		
	Finishes to ironmongery:		
	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.		
	THE FOLLOWING IN IRONMONGERY SET TYPES		
	Dorma' or other equal and approved hinges, bolts, locks, etc ironmongery set:		
1	Ironmongery set 01.	No	1,00
2	Ironmongery set 02.	No	5,00
3	Ironmongery set 03.	No	3,00
4	Ironmongery set 04.	No	1,00
5	Ironmongery set 05.	No	1,00
	BATHROOM FITTINGS		
	Franke' or other equal and approved brushed stainless steel:		
6	RODX672' Wall mounted double toilet roll holder with spindle system, plugged.	No	1,00
7	RODX619' Wall mounted soap dispenser, plugged.	No	1,00
8	RODX605' Wall mounted hygiene waste bin, plugged.	No	1,00
9	BS611V' Wall mounted sanitary towel disposal, plugged.	No	1,00
10	CNTXPAR' Angle side grab rail, plugged.	No	1,00
11	CNTBR' Cistern back rail.	No	1,00
	Koala Kare' or other equal and approved brushed stainless steel:		
12	KB110-SSRE' Horizontal recessed-mounted baby changing station.	No	1,00
	Bill Total		
	BILL NO.11 : STRUCTURAL STEELWORK (PROVISIONAL)		
	(CPAP WORKGROUP NO. 134 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Descriptions:		
	Descriptions of bolts shall be deemed to include nuts and washers.		
	Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete.		
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.		
	Paint Specification:		
	All steelwork to be degreased, wire brushed and painted all in accordance with the Engineer's specifications included with these Bills of Quantities for tender purposes.		
	HOT DIPPED GALVANISED STEEL GRILLES		
	Welded and bolted overhead grille bolted to brickwork or concrete:		

1	40 x 40 x 5mm Angle support frame.	Tonnes	0,16
2	Mentis RS80' or other equal and approved rectagrid mesh grill, including angle frame, bolts, etc.	m²	2,00
	PAINTED HOT DIPPED GALVANISED STEEL RAINWATER PIPES		
	2.5mm Welded hot rolled sheet rainwater pipes, including holder bats, brackets, etc.:		
3	114mm Diameter pipes.	Tonnes	0,45
4	Extra over 114mm diameter pipe for shoe.	No	4,00
5	Extra over 114mm diameter pipe for swaneck.	No	4,00
	Bill Total		
	BILL NO.12 : METALWORK (PROVISIONAL)		
	(CPAP WORKGROUP NO. 136 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Descriptions:		
	Descriptions of bolts shall be deemed to include nuts and washers.		
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.		
	Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.		
	References:		
	The references given in the descriptions are to be respective types of handrailing or balustrading detailed on the Architect's drawing issued together with these Bills of Quantities for tender purposes.		
	BRUSHED STAINLESS STEEL LEAN RAIL, SEATS, ETC.		
	Welded and bolted lean rails including flats, angles, posts, hollow sections, bolts, rails, etc. Complete as per Architect's drawings, sections, details, etc:		
1	Horizontal lean rail 663mm long x 890mm high overall complete (type 1).	No	6,00
2	Horizontal lean rail 1763mm long x 890mm high overall complete (type 2).	No	4,00
	Welded and bolted benches including flats, angles, posts, hollow sections, bolts, etc. complete as per Architect's drawings, sections, details, etc:		
3	Shaped bench 1220mm long x 850mm high extreme complete (refer drawing no. RRT/AR/WC/DET-606).	No	4,00
	SUNDRY GALVANISED STEELWORK		
	Welded and bolted threshold plate including flats, angles, bars, bolts, etc.:		
4	Threshold plate size 1775 x 477 x 40mm deep complete (mat elsewhere measured).	No	12,00
	6mm 'EPDM' or other equal and approved rubber mat glued to steel plate with 'Balcotan 100' or other equal and approved glue accordance with the manufacture's specification.:		
5	Mat size 1775 x 477mm wide.	No	12,00
	Welded and bolted tiling angle, etc:		
6	50 x 50 x 5mm Angle.	Kg	52,00
7	170 x 50 x 5mm Flat fixing lug 170mm long two holed for bolts.	Kg	24,00
8	Hole through 5mm steel for bolts.	No	72,00
9	M6 chemical anchor bolts 100mm long.	No	72,00
	Welded and bolted manhole cover framework, etc:		
10	25 x 25 x 3mm Angle supports.	Kg	8,00
11	30 x 30 x 3mm Angle framing welded back to back.	Kg	10,00
12	1000 x 700 x 3mm Thick cover plates (In no. 1).	Kg	70,00
13	70 x 50 x 3mm Flat fixing lug 70mm long one holed for bolts (In no. 8).	Kg	2,00

14	50 x 6mm Flat stiffener plates.	Kg	4,00
15	Hole through 3mm steel for bolts.	No	32,00
16	40 x 40 x 10mm Square slotted lifting plate.	No	4,00
	ALUMINIUM SHOPFRONTS, ETC. (CPAP WORKGROUP NO. 140 UNLESS OTHERWISE STATED)		
	DESIGN, SUPPLY AND INSTALLATION OF CURTAIN WALLS, ETC		
	The tenderer shall undertake full design responsibility of these shopfronts and shall indemnify the professional design team of all design responsibility. The Architect drawings are for design intent only and approval of shop drawings will only be to ensure that this design proposal is maintained. The approval of shop drawings shall not alleviate the contractor of his responsibility		
	Where the design requires approval by specialist consultant (i.e. façade engineer, etc.) the tenderer shall allow the cost hereof within his/her tender offer.		
	All fitting and fixing details shall be in accordance with the contractors specialist design and approved by the Architects.		
	All butt joints to be sealed with an approved silicone sealant with the minimum tensile strength of 1.0Mpa.		
	Glass specification:		
	The specialist glazing contractor shall ensure that he/she prepares or has prepared on his/her behalf, in response to the requirements of the glazed façade Performance Specification, a detailed engineering design, together with shop-drawings of the said façade. Detailed shop-drawings together with the specifications of the glass and framing proposed, shall be submitted to the Project Architect (ARG Design) for approval. No work shall be put in hand until written approval has been received. The said glazed façade design, drawings and specifications submitted for approval shall be endorsed by a suitable qualified and competent structural façade engineer employed or retained by the glazing contractor for that purpose.		
	Notes:		
	Tenderers are to note that all dimensions indicated on these tender drawings are approximate only. The successful tenderer will be required to undertake an on site measurement of openings prior to fabrication of aluminium elements. No claim will be entertained should he/she fail to do so.		
	Tenderers are to allow for approved sealants on both sides around windows, doors, shopfronts, etc.		
	Glazing:		
	All glazing shall conform to the national regulations.		
	Glazing shall comply with SAGGA regulations. Glass performance glass as shown in drawings. Glass thickness shall comply with SAGGA regulation.		
	Approved powder coated aluminium shopfronts, etc glazed in accordance with the Engineer specification, including ironmongery, etc plugged to brickwork or concrete or fixed to steelwork:		
17	Shopfront approximately 4400mm long x 2780mm high complete.	No	4,00
18	Shopfront approximately 1920mm long x 2000mm high complete.	No	4,00
19	Shopfront approximately 4200mm long x 2000mm high complete.	No	4,00
20	Shopfront approximately 6200mm long x 2000mm high complete.	No	2,00
21	Shopfront approximately 3610mm long x 2000mm high complete.	No	2,00
22	Shopfront approximately 2510mm long x 2000mm high complete.	No	2,00
23	Shopfront approximately 15530mm long x 2000mm high complete.	No	2,00
24	Shopfront approximately 4242mm long x 2780mm high with and including automated fire escape door complete.	No	2,00
25	Fixed light above cladding band approximately 29715mm girth x 785mm high complete.	No	2,00
26	Automated sliding door size 1800 x 2400mm high complete.	No	12,00
	ALUMINIUM COVER BOXES, ETC		
	3mm Thick 'Dove Grey' powder coated aluminium cover box, etc fixed to structural steelwork.		
27	Cover boxes approximately 155mm girth.	m	8,00
28	Cover boxes approximately 240mm girth.	m	51,00
29	Cover boxes approximately 270mm girth.	m	51,00
30	Cover boxes approximately 430mm girth.	m	8,00
31	Cover boxes approximately 450mm girth including 30mm grip.	m	65,00
32	Cover boxes approximately 480mm girth.	m	28,00

33	Cover boxes approximately 645mm girth.	m	45,00
34	Cover boxes approximately 670mm girth.	m	4,00
35	L-Shaped cover boxes approximately 700mm girth.	m	44,00
36	30 x 30mm Box section.	m	221,00
37	50 x 25mm Box section.	m	190,00
38	55 x 30mm Box section.	m	282,00
39	30 x 30mm Angle.	m	12,00
40	80 x 110mm Mullion.	m	8,00
41	80 x 120mm Mullion.	m	8,00
42	Intermediate mullion verall size approximately 260 x 312mm.	m	16,00
43	Intermediate mullion verall size approximately 260 x 50mm.	m	6,00
44	Intermediate mullion verall size approximately 260 x 380mm.	m	16,00
45	Intermediate mullion verall size approximately 260 x 220mm.	m	8,00
	ALUMINIUM WINDOWS, DOORS, ETC.		
	Dove Grey' powder coated aluminium louvred windows as per Architect's specification, approved sealant all around on both sides, etc plugged to brickwork or concrete (refer drawing no. RRT/AR/WC/DET-521):		
46	Window size 350 x 350mm high (Type W1 & W2).	No	2,00
	SECURITY PAYROLL WINDOWS		
	Gannebo' or other equal and approved security payroll window for indoor use suitable for 270mm walls, fixed to brickwork or concrete or steelwork.		
47	L-shaped window approximately 2250mm girth x 1615mm high complete (refer drawing no. RRT/AR/WC/DET-622).	No	1,00
	FENCING		
	Beta fence 3510' or other equal and approved fencing including, posts, brackets, angles, bolts, gouting, etc fixed to concrete:		
48	Fencing 1640mm high complete.	m	68,00
	Bill Total		
	BILL NO.13 : PLASTERING (PROVISIONAL)		
	(CPAP WORKGROUP NO. 142 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SCREEDS		
	Screeds on concrete:		
1	30mm Thick on floors and landings.	m ²	154,00
	GRANOLITHIC		
	Untinted granolithic on concrete:		
2	30mm Thick on floors and landings.	m ²	297,00
	INTERNAL PLASTER		
	Cement plaster on brickwork:		
3	On walls.	m ²	59,00
4	On narrow widths.	m ²	5,00
	EXTERNAL PLASTER		
	Cement plaster on brickwork:		
5	On walls.	m ²	29,00

6	On narrow widths.	m ²	1,00
	Bill Total		
	BILL NO.14 : TILING (PROVISIONAL)		
	(CPAP WORKGROUP NO. 144 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Descriptions:		
	Unless described as fixed with adhesive to plaster (plaster elsewhere measured), 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.		
	WALL TILING		
	100 x 100 x 5mm 'Evaluation' or other equal and approved gloss ceramic tiles fixed with 'Weber Tylon Ceramic fix 6' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
1	On walls.	m ²	12,00
	200 x 200 x 6mm 'Evaluation' or other equal and approved gloss ceramic tiles fixed with 'Weber Tylon Ceramic fix 6' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
2	On walls.	m ²	3,00
	Take from store 300 x 600mm 'Blanco Relieve Grespania Meteor' or other equal and approved porcelain tiles fixed with 'Weber Tylon porcelain fix 12' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
3	On walls.	m ²	24,00
	FLOOR TILING		
	Take from store 300 x 300mm 'Moka Natural Grespania Meteor' or other equal and approved porcelain tiles fixed with 'Weber Tylon porcelain fix 12' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
4	On floors.	m ²	262,00
5	Skirtings 150mm high of cut tiles.	m	19,00
6	On timber manhole cover size 1000 x 700mm.	No	1,00
	Take from 300 x 300mm 'Centre Blanco Grespania City' or other equal and approved porcelain tiles fixed with 'Weber Tylon porcelain fix 12' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
7	600mm Wide directional tactile bands.	m	40,00
	Take from store 300 x 300mm 'Park Blanco Grespania City' or other equal and approved porcelain tiles fixed with 'Weber Tylon porcelain fix 12' or other equal and approved adhesive on screeds (screeds elsewhere measured) and flush pointed with tinted 'Weber Tylon WB 33' or other equal and approved jointing compound:		
8	600 x 600mm Warning tactile isolated panel.	No	5,00
9	1200 x 600mm Warning tactiles isolated panel.	No	8,00
10	2250 x 600mm Warning tactiles isolated panel.	No	1,00
	CORNER PROJECTORS, DIVIDING STRIPS, ETC		
	Kirk Marketing' or other equal and approved brushed stainless steel trims, etc:		
11	Trim type 1.	m	26,00
12	Trim type 2.	m	23,00
13	Trim type 3.	m	28,00
	Bill Total		
	BILL NO.15 : PLUMBING AND DRAINAGE (PROVISIONAL)		

	(CPAP WORKGROUP NO.148 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	HDPE 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.		
	Copper pipes:		
	Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be approved type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.		
	Fixing of pipes:		
	Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. Casting in, building in or suspending not exceeding 1000mm below suspension level.		
	Reducing fittings:		
	Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm 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. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.		
	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'.		
	Laying, backfilling, bedding, etc of pipes:		
	Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.		
	Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB: Earthworks (Pipe trenches)		
	Flush pans:		
	Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary.		
	Stainless steel basins, sinks, wash troughs, urinals, etc:		
	Stainless steel for economybasins, domestic sinks, worktops and wash troughs shall be type 430 (17/0):		
	Stainless steel for urinals, basins, quality sinks, wash trough, institutional equipment, etc shall be type 304 (18/8):		
	Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.		
	Waste unions:		
	Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.		
	RAINWATER DISPOSAL		
	Approved HDPE pipes:		
1	75mm Diameter rainwater pipes.	m	21,00
	Extra over HDPE rainwater pipes for fittings:		
2	75mm Bend.	No	5,00
3	75mm Junction.	No	1,00
	Saint Gobain' or other equal and approved fullbore outlets:		
4	75mm Diameter 'Purus Barge' or other equal and approved polypropylene floor drain, including 150mm diameter lockable floor grating complete.	No	1,00
5	150mm Diameter 'Purus Barge' or other equal and approved polypropylene floor drain, including 150mm diameter lockable floor grating complete.	No	1,00

	SANITARY FITTINGS		
	Franke' or other equal and approved brushed stainless steel:		
6	Floor mounted disabled wc suite comprising stainless steel pan, concealed 'Valsir Tropea 3' or other equal and approved concealed cistern and 'Valsir Tropea 2' or other equal and approved antivandal metal plate actuator complete.	No	1,00
7	Oval A wall mounted wash hand basin with one taphole on and including mounting plates, fixing bolts, 50mm splashback, etc.	No	1,00
8	DSG wall mounted drip-in sink, including stainless steel buckets, fixing bolts, 90mm splashback, etc.	No	1,00
	WASTE UNIONS ETC		
	Chromium plated brass:		
9	32mm Basin waste union.	No	1,00
10	38mm Bath or sink waste union.	No	1,00
	TRAPS ETC		
	Chromium plated brass:		
11	32mm Bottle trap.	No	1,00
12	38mm Bottle trap.	No	1,00
	TAPS, VALVES, ETC		
	Brass:		
13	15mm Star hose bibtap.	No	1,00
14	28mm Stopcock.	No	1,00
15	15mm Elbow action pillar tap.	No	1,00
16	15mm Angle valve.	No	2,00
17	75mm Long extension piece.	No	1,00
18	28mm In-line strainer.	No	1,00
	SANITARY PLUMBING		
	uPVC pipes:		
19	40mm Pipes.	m	6,00
20	110mm Pipes.	m	2,00
	Extra over uPVC pipes for fittings:		
21	40mm Bend.	No	4,00
22	110mm Pan connector bend.	No	1,00
23	110mm Reducing junction.	No	1,00
24	110mm Gully.	No	5,00
25	Testing waste pipe system.	Item	1,00
	WATER SUPPLIES		
	Class 2 copper pipes:		
26	15mm Pipes.	m	6,00
27	22mm Pipes.	m	2,00
28	28mm Pipes.	m	1,00
	Extra over class 2 copper pipes for brass compression fittings:		
29	15mm Fittings.	No	3,00
30	22mm Fittings.	No	2,00
31	28mm Fittings.	No	1,00
	Sundries:		
32	Testing water pipe system.	Item	1,00

33	450 x 450mm Cast iron stopcock box, including brick chamber below not exceeding 500mm deep internally.	No	1,00
	Bill Total		
	BILL NO.16 : GLAZING (PROVISIONAL)		
	(CPAP WORKGROUP NO.150 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	MIRRORS, ETC.		
	6mm 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:		
1	Mirror size 420 x 840 mm high with six screws.	No	1,00
	Bill Total		
	BILL NO.17 : PAINTWORK (PROVISIONAL)		
	(CPAP WORKGROUP NO. 152 UNLESS OTHERWISE STATED)		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	SUPPLEMENTARY PREAMBLES		
	Paint Specification		
	All painting shall be done in accordance with 'Midas' or other equal and approved specifications.		
	PAINTWORK ETC TO NEW WORK		
	ON FLOATED PLASTER		
	One coat waterbased plaster primer and two coats superior quality, low sheen, washable, pure acrylic emulsion paint:		
1	On internal walls.	m ²	185,00
2	On external walls.	m ²	41,00
	One coat waterbased plaster primer and two coats medium quality, slight sheen, emulsion paint:		
3	On ceilings.	m ²	359,00
	ON PLASTER BOARD		
	One coat waterbased plaster primer and two coats medium quality, slight sheen, emulsion paint:		
4	On ceilings.	m ²	241,00
	ON SKIMMED PLASTER BOARD		
	One coat waterbased plaster primer and two coats medium quality, slight sheen, emulsion paint:		
5	On ceilings and cornices.	m ²	91,00
	ON BAGGED BRICKWORK, ETC		
	One coat waterbased plaster primer and two coats superior quality, low sheen, washable, pure acrylic emulsion paint:		
6	On bagged brickwork.	m ²	36,00
	ON METAL		
	One coat waterbased metal primer, one coat universal undercoat and two coats pure gloss enamel paint:		
7	On door frames.	m ²	21,00
8	On gates, screens, etc (both sides measured over the full flat area).	m ²	33,00
	ON WOOD		
	One coat wood primer, one coat universal undercoat and two coats pure gloss enamel paint:		

9	On doors	m²	46,00
	Bill Total		
	BILL NO.18 : PROVISIONAL SUMS		
	The Tenderer is referred to the relevant clauses in the separate documents Model Preambles for Trades (2008 Edition) and to Supplementary Preambles which are incorporated at the front of this Bill of Quantities.		
	Note: All Provisional Sums are NETT i.e. there is no cash discount		
	ARTWORK		
1	Provide the amount of R 170 000.00 (One hundred and seventy thousand Rand) for Artwork	Item	1,00
2	Profit on above item (%).	Item	1,00
3	Attendance on ditto (%).	Item	1,00
	ELECTRICAL AND ELECTRONICS INSTALLATION		
4	Provide the amount of R 890 000.00 (Eight hundred and ninety thousand Rand) for Electrical Installation.	Item	1,00
5	Profit on above item (%).	Item	1,00
6	Attendance on ditto (%).	Item	1,00
	GATE		
7	Provide the amount of R 20 000.00 (Twenty thousand Rand) for Gate to the link.	Item	1,00
8	Profit on above item (%).	Item	1,00

MUNICIPALITY

THE CONSTRUCTION OF RUSTEN STRUCTURE ZONE A

(BOOK 2 OF 3)

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G RAPID TRASPORT STATIONS SUPERSTRUCTURE ZONE A

G RAPID TRASPORT STATIONS SUPERSTRUCTURE ZONE A

Revised 1999) published by the South African Association of Quantit

mittee, Edition 5.0 (Reprint 1), July 2007. The additions, deletions and
clause numbers for which allowance must be made in the Bills of Qu

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veral items. Such prices and rates shall cover all costs and expense
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