

| Item No | | Quantity | Rate | Amount |
|---------|--|----------|------|--------|
| | <p><u>PROCUREMENT DOCUMENT</u><u>Incorporating Provisional Bills of Quantities for Development Bank South Africa for the INFRASTRUCTURE DEVELOPMENT AND MAINTENANCE at the existing HLUTHANKUNGU PRIMARY SCHOOL</u></p> <p><u>Development Bank South Africa</u></p> <p><u>HLUTHANKUNGU PRIMARY SCHOOL</u></p> <p><u>GENERAL NOTES & INVITATION TO TENDER</u></p> <p><u>1. PROJECT DESCRIPTION</u></p> <p><u>The scope of work covered by this contract comprises the following:</u></p> <p><u>1. Demolition of existing structures 2. Construction of new ablution facilities, gate house, administration block, standard classrooms, Grade R classroom and kitchen 3. Provision of new rainwater harvesting tanks 4. Provision of new walkways 5. New fencing to ablutions</u></p> <p><u>2. GENERAL NOTES</u></p> <p><u>2.1 The tenderer's attention is drawn to, inter alia, the following as contained in this document:</u></p> <p><u>2.1.1 The agreement is to be the JBCC® Principal Building Agreement (Edition 4.1 Code 2101, March 2005) prepared by the Joint Building Contracts Committee . The tenderer is deemed to have referred to the document for the full intent and meaning of each clause</u></p> <p><u>2.1.2 The Bills of Quantities have been drawn up in accordance with the "Standard System of Measuring Building Work Seventh Edition (Revised 2015)" published by the Association of South African Quantity Surveyors</u></p> <p>Section No. 1 Bill No. 1 Secondary Scope BoQ</p> | | | |

2.1.3 The Model Preambles for Trades (2008 edition), as published by the Association of South African Quantity Surveyors, shall be deemed to be incorporated in the bills of quantities and no claims arising from brevity of description of items, fully described in the said Model Preambles, will be entertained

2.1.4 "Supplementary Preambles" are incorporated in the bills of quantities to satisfy the requirements of the project and shall take precedence over the provisions of the said Model Preambles

2.1.5 Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the said Model Preambles

2.1.6 The units of measurement described in the Bills of Quantities are metric units. Abbreviations which may be used in the Bills of Quantities are as follows:

| | | |
|----------------------|-----------------|-----------------|
| mm | = | |
| millimetre | m | linear |
| metre m ² | = | square metre |
| m ³ | = | cubic metre km |
| | = | kilometre |
| ha | = | hectare h |
| | = | hour kg |
| = | kilogram | t |
| | = | ton |
| L | = | litre |
| kl | = | kilolitre |
| kN | = | kilonewton MN |
| | = | meganewton |
| MPa | = | mega pascal kW |
| | = | kilowatt |
| % | = | percent No |
| | = | number |
| sum | = | lump sum PC Sum |
| = | Prime Cost Sum | Prov Sum |
| = | Provisional Sum | |

3. SITE INSPECTION

3.1 A compulsory site clarification meeting with representatives of the Employer will take place at TBC

Development Bank South Africa

HLUTHANKUNGU PRIMARY SCHOOL

TENDER DATA

1. SITE INSPECTION

1.1 It is a condition of tender that the Contractor shall have carried out a full and detailed inspection of the site prior to the submission of his/her tender for this project By such inspection, the Contractor shall be deemed to be fully informed as to the nature and degree of complexity of the work, the constructional problems related thereto, the conditions under which the work is to be carried out, the means of access to the site and generally of all matters which may influence his tender No claim of any nature whatsoever will be considered, due to failure on the part of the Contractor to fulfil his obligation in terms of this clause

2. TENDER DOCUMENTATION

2.1 The tenderer is referred to the Schedule of Drawings & Specifications for reference to the drawings, specifications, etc bound into/accompanying this document and issued herewith

2.2 Cognisance must be taken of all the information on the drawings and specifications issued with this document when pricing

2.3 Should the tenderer consider the information provided inadequate, the tenderer shall contact the Principal Agent to obtain the necessary information required as no claim in this respect will be considered after receipt of tenders

2.4 No alteration, erasure, omission or addition is to be made to the text and conditions of this Procurement Document and should any such alteration, amendment, note or addition be made, the same will not be recognised, but the reading of the procurement document as prepared will be adhered to

2.5 Tenderers are advised that any qualifications made may result in their tender being rejected. Tenders are to be submitted strictly in accordance with the conditions indicated in the Procurement Documents

3. PRICING

3.1 This contract is a fixed price contract. The contract value shall therefore NOT be adjusted for "escalation" costs or Contract Price Adjustment Provision (CPAP)

3.2 The Contractor's prices for all items throughout the bills of quantities shall take account of and include for all of the obligations, requirements and specifications given in the said Model Preambles and/or in any supplementary preambles

3.3 Where Architect's or Engineer's specifications and/or drawings, where issued, are in conflict with the Model Preambles for Trades 2008 and/or any Supplementary Preambles, the Architect's or Engineer's specification and drawings, as the case may be, are to take preference Where the drawings and Architect's or Engineer's specifications are in conflict, the Contractor is to obtain written clarification from the Principal Agent prior to the closing of tenders

3.4 Unless otherwise stated, items are measured net in accordance with the drawings and no allowance is made for waste

3.5 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 several items

Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described and shall cover the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the tender is based as well as overhead charges and profit Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out

3.6 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 a nil rate is entered will be considered to be covered by the other prices or rates in the Bills of Quantities

3.7 Except where rates only are required, insert all amounts to be included in the total tendered price in the "Amount" column and show the corresponding total tendered price

4. TENDERS

4.1 The tenderer is required to submit the entire fully completed procurement document including a fully completed priced bills of quantities at tender submission. Only those tenders that have been completed on the issued hard copy tender document shall be considered

4.2 The tender sum is to include VAT (Value-Added Tax), as provided for in the Form of Tender

4.3 The lowest or any tender will not necessarily be accepted

4.4 Late submissions will NOT be accepted

4.5 Telephonic, telegraphic, faxed or email tenders will not be accepted

4.6 This tender shall remain in full legal force for ninety (90) calendar days. The tenderer accepts liability for damages as may be suffered by the Employer should the tender validity period not be honoured

4.7 Before submission of any tender, the Tenderer should check the number of pages, and if any are found to be missing or duplicated, or the figures or writing indistinct, or if the Pricing Data contain any obvious errors, the Tenderer must apply to the Employer's agent at once to have the same rectified, as no liability will be admitted by the Employer in respect of errors in any tender due to the foregoing

4.8 In the event of tendered rates or lump sums being declared by the Employer and/or his agents to be unacceptable because they are either excessively low or high or not in proper balance with other rates or lump sums, the Tenderer may be required to produce evidence and advance arguments in support of these tendered rates or lump sums If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the tenderer to amend these rates and lump sums The Tenderer will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as agreed on by the Employer and/or his agents, but shall be done without altering the tender offer as tendered Should the Tenderer fail to amend his Tender in a manner acceptable to the Employer, the Employer may reject the tender

4.9 The Employer or his Agents will not be responsible for nor pay any expenses or losses, which the Tenderer may incur in the preparation of his tender

5. DETAILS OF TENDERERS

5.1 The Employer reserves the right to carry out a financial investigation of any tenderer

SECTION 1

BILL NO 1

PRELIMINARIES

BUILDING AGREEMENT AND PRELIMINARIES

The JBCC® Principal Building Agreement (Edition 4.1 Code 2101, March 2005) prepared by the Joint Building Contracts Committee ® - NPC shall be the applicable building agreement, amended as hereinafter described, together with the associated documentation as prepared by the Joint Building Contracts Committee (JBCC)

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The ASAQs Preliminaries Revision 1 (February 2016) published by the Association of South African Quantity Surveyors for use with The said JBCC Principal Building Agreement shall be deemed to be incorporated in these bills of quantities

The Contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause thereof

These clauses are hereinafter referred to by clause number and heading only. 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 abovementioned documents

Where any item is not relevant to this specific contract, such item is marked N/A, signifying "not applicable"

The Bills of Quantities have been drawn up in accordance with the "Standard System of Measuring Building Work Seventh Edition (Revised 2015)" published by The South African Association of Quantity Surveyors

The quantities or specifications contained in these bills of quantities are not to be used for the calculation or ordering of materials

PREAMBLES FOR TRADES

The General Preambles for Trades (2017 edition) as published by The Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

Supplementary preambles are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles shall take precedence over the provisions of the said Model Preambles

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Where Architect's or Engineer's specifications or drawings (where issued) are in conflict with the General Preambles for Trades 2017 or any Supplementary Preambles, the Architect's or Engineer's specification and drawings, as the case may be, are to take preference. Where the drawings and Architect's or Engineer's specifications are in conflict, the Contractor is to obtain written clarification from the Principal Agent prior to the closing of tenders.

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 said Model Preambles and in any supplementary preambles, drawings and/or specifications

PRICING OF PRELIMINARIES

Should the Contractor select Option A in terms of clause 26.0 in the Contract Data for the purpose of adjustment of these preliminaries, the amount entered into the amount column in these preliminaries is to be divided into one or more of the three categories provided, namely: F - An amount which shall not be varied (Fixed) V - An amount which shall be varied in proportion to the contract value as compared with the contract sum (Value) T - An amount which shall be varied in proportion to the construction period as compared to the initial construction period excluding revisions to the construction period for which the Contractor is not entitled to adjustment of the contract value in terms of the agreement (Time)

SECTION A: PRINCIPAL BUILDING AGREEMENT

INTERPRETATION

1 1.0 Definitions and Interpretation F: V:
..... T:

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| 2 | <p>2.0 Law, Regulations and Notices Occupational Health and safety Act 1993 Without limiting the generality of the provisions of clause 2.0 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 as contained in the "Project Health and Safety Specification prepared by Frontline Consultants" accompanying this tender document, 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 "Section 1, Bill 2 Occupational Health and Safety" for compliance with the act and the regulations and the provisions of the aforementioned health and safety specification F: V: T:</p> | Item |
| 3 | <p>3.0 Offer an Acceptance F: V: T:</p> | Item |
| 4 | <p>4.0 Assignment and Cession F: V: T:</p> | Item |
| 5 | <p>5.0 Contract Documents Value Added Tax Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT) Contract drawings Refer to Part C3: Scope of Works for a list of the contract drawings [5.1] F: V: T:</p> | Item |
| 6 | <p>6.0 Employer's Agents F: V: T:</p> | Item |
| 7 | <p>7.0 Design Responsibility F: V: T:</p> | Item |
| <u>INSURANCE AND SECURITY</u> | | |
| 8 | <p>8.0 Works Risk F: V: T:</p> | Item |
| 9 | <p>9.0 Indemnities F: V: T:</p> | Item |
| 10 | <p>10.0 Insurances F: V: T:</p> | Item |
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| 11 | <p>11.0 rityClause 11.1.2 - OMITTEDAdd the following Clause 11.1.6 "A security held by the Employer shall be for the due fulfilment of the Contractor's obligations in terms of this agreement"Clause 11.4 to 11.5 - OMITTEDF: V: T: </p> <p><u>EXECUTION</u></p> | Item |
| 12 | <p>15.0 Preparation for and Execution of the Works F: V: T:</p> | Item |
| 13 | <p>12.0 Duties of the PartiesOffice accommodationThe Contractor shall provide, maintain and remove on practical completion air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site. Such offices shall be kept clean and fit for use at all times [12.2.18]F: V: T: Notice boardThe Contractor shall erect in a position approved by the Principal Agent, maintain and remove on practical completion a notice board recommended by the South African Institute of Architects and as approved by the Principal Agent listing the names and logos of the Employer, the Contractor, and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the Principal Agent for such notice boards to be erected [12.2.18]F: V: T:Access to water, sewer, stormwater and electricity connectionsThe Employer is not in a position to identify access to water, sewer, stormwater and/or electricity connections to the site as may be suitable for the execution of the works. The Contractor is to allow what he considers to be required and no claims for additional cost or loss shall be entertained [12.1.5]F: V: T: Statutory and other noticesThe Contractor shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the works by the Contractor. The Contractor shall pay all deposits or fees in this regard [12.1.6]F: V: T: Clause 11.1.7 is amended as follows:- commence the works within naught (0) working days.....F: V: T:</p> | Item |

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| 14 | 13.0 Setting out 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 the rectification of any such encroachments F: V: T: | Item |
| 15 | 14.0 Nominated Subcontractors Clause 14.1.4 is amended as followsinstruct the Contractor [17.1.14]..... Clause 14.7.2 is amended as followsthe cost of completing such n/s subcontract works [27.1.8] Clause 14.7.3 is amended as followsthe cost of completing such n/s subcontract works [27.2.8] F: V: T: | Item |
| 16 | 15.0 Selected Subcontractors Clause 15.7.2 is amended as followsthe cost of completing such n/s subcontract works [27.1.8] Clause 15.7.3 is amended as followsfor the account of the Contractor [27.2.8] F: V: T: | Item |
| 17 | 16.0 Direct Contractors Refer Contract Data [CD 16,0] Clause 16.1.3 is amended as followscaused by the direct contractor(s) [26.5] Attendance on direct contractors In respect of direct contractors the contractor shall:- · Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials · Allow the use of personnel welfare facilities, where provided · Provide water, lighting and single phase electric power to a position where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation · Permit the direct Contractor to use erected scaffolding, hoisting facilities, etc provided by the Contractor, in common with others having the like right, while it remains erected on the site [16.1] F: V: T: | Item |
| 18 | 17.0 Contract Instructions Contract Instructions issued in terms of 17.0 Clause 17.1.3 is amended as follows:- The site [13.1.1 and 13.1.2] Clause 17.1.5 is amended as follows:-n/s subcontract agreement [27.1.8] F: V: T: | Item |
| <u>COMPLETION</u> | | |
| 19 | 18.0 Interim Completion F: V: T: | Item |

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| 20 | 19.0 Practical Completion F: V: T: | Item |
| 21 | 20.0 Sectional Completion Completion in sections is not applicable Clause 20.2.2 is amended as followsto reach final completion [21.6.2] F: V: T: | Item |
| 22 | 21.0 Defects Liability Period and Final Completion Clause 21.1 is amended as followshas been satisfactorily completed [21.6.1]..... Clause 21.9 is amended by adding the followingafter the inspection period, [21.4; 21.6.1]..... F: V: T: | Item |
| 23 | 22.0 Latent Defects Liability Period F: V: T: | Item |
| 24 | 23.0 Revision of Date for Practical Completion Clause 23.2.1 is amended as follows Delayed possession of the site [21.1.6] The removal and replacement of materials and/or workmanship which do not conform to specifications and/ or contract drawings and / or Contract Instructions [17.0] shall not constitute grounds for the extension of the construction period [23.0] nor for the adjustment of the contract value [26.0] F: V: T: | Item |
| 25 | 24.0 Penalty for Late or Non-completion F: V: T: | Item |

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PAYMENT

26 25.0 Payment Clause 25.1 is amended to read: 25.1
For the purpose of the payment reduction
[11.1.6 as Added], the value of the works [25.3.1] and
materials and goods [25.3.2]: 25.10.1 Ninety percent
(90%) of such value in interim payment certificates
issued up to the date of practical completion 25.10.2
Ninety five percent (95%) of such value in
interim payment certificates issued on the date of
practical completion up to but excluding the final
payment certificate 25.10.3 One hundred per cent
(100%) of such value in the final payment certificate
except where the amount certified is in favour of the
employer. In such an event the payment reduction shall
remain at the adjustment level applicable to the Clause
25.10.2 as amended The first sentence of 25.7 is
amended to read: "...payment certificate within thirty (30)
calendar days of the date for issue..." Clause 25.10.3 is
amended by adding the following: "...final payment
certificate [25.13; 26.10] Add the following Clause
25.12.4 "Terminate the agreement [29.14.7] where the
listed options [25.12.1-3] have failed" Materials and
goods prematurely on site Materials and goods brought
onto the site prematurely without authorisation by the
principal agent shall not be authorised for payment
[25.3.2] Materials and goods prematurely on
site Materials and goods brought onto the site
prematurely without authorisation by the principal agent
shall not be authorised for payment [25.3.2] Materials
and goods stored off site Materials and goods stored off
site without authorisation by the principal agent shall not
be authorised for payment [25.3.2] F: V:
..... T:

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| 27 | <p>26.0 Adjustment to the Contract Value and Final Account This is a fixed price contract and therefore the Contract Value WILL NOT be adjusted according to CPAP Fluctuations in costs All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor [25.3.4] Prices submitted Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing Tenant installations/users requirements delayed Where works related to tenant installations/users requirements may have to be delayed and / or not be executed prior to practical completion, the employer reserves the right to omit such work without compensation to the contractor for loss of profit or any other loss which the contractor may suffer as a result of such omission. Cost of claims All costs incurred by the contractor in the preparation of claims shall be borne by the contractor. The contractor shall review, assess and adjudicate any claims received by him from any subcontractor and thereafter submit same to the principal agent with a recommendation in order to assist the principal agent in adjudicating the claim [26.6] F: V: T:</p> | Item |
| 28 | <p>27.0 Recovery of Expense and/or Loss F: V: T:</p> <p><u>SUSPENSION AND TERMINATION</u></p> | Item |
| 29 | <p>28.0 Suspension by the Contractor Clause 28.2 is amended to read:remedied a default..... F: V: T:</p> | Item |
| 30 | <p>29.0 Termination Clause 29.1.2 is amended by deleting "within the period stated [CD]" Clause 29.14.1 is amended by adding "....guarantee for payment [11.4-11.5,..." Clause 29.14.2 is amended as follows ".....to the contractor [12.1.7]" F: V: T:</p> <p><u>DISPUTE RESOLUTION</u></p> | Item |
| 31 | <p>40.0 Dispute Resolution F: V: T:</p> | Item |
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AGREEMENT

The second sentence starting with "Any provision in this agreement....." and ending with ".....by the contractor at any time" shall be deleted in its entirety The required information of the contracting parties and the amount of the accepted contract sum shall be inserted in the contractual agreement for signature of the agreement by the contracting parties

- 32 Post tender information agreed with the Contractor e.g.
In view of the delayed contract commencement and the amendments to the drawings, the construction period will be extended to 13 months (Refer Item 6 of the Letter of Intent) F: V: T:

Item

CONTRACT DATA

A TENDER INFORMATION

The Tenderer is referred to Section C1.2 of this tender document for the Contract Data provided by the Employer

SECTION B: PRELIMINARIES

1.0 INTERPRETATION

- 33 1.1 Definitions F: V:
T:

Item

- 34 1.2 Interpretation F: V:
T:

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2.0 DOCUMENTS

- 35 2.1 Checking of documents The tenderer shall inspect the drawings at the principal agent's office prior to submission of the tender and thoroughly acquaint himself with the nature and degree of complexity of the works. F: V: T:

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- 36 2.2* Provisional bills of quantities F: V:
T:

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| 37 | 2.3* Availability of construction documentation The budgetary allowances allocated for subsequent trades included in this document will be will be measured and valued in accordance with clause 32 of the Principal Building Agreement and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances F: V: T: | Item |
| <u>3.0 PREVIOUS WORK AND ADJOINING PROPERTIES</u> | | |
| 38 | 3.1* Previous work - dimensional accuracy F: V: T: | Item |
| 39 | 3.2* Previous work - defects F: V: T: | Item |
| 40 | 3.3* Inspection of adjoining properties F: V: T: | Item |
| <u>4.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURER'S INSTRUCTIONS</u> | | |
| 41 | 4.1 Samples of materials F: V: T: | Item |
| 42 | 4.2 Workmanship samples F: V: T: | Item |
| 43 | 4.3 Shop drawings F: V: T: | Item |
| 44 | 4.4 Compliance with manufacturers' instructions F: V: T: | Item |
| <u>5.0 DEPOSITS AND FEES</u> | | |
| 45 | 5.1 Deposits and fees F: V: T: | Item |
| <u>6.0 TEMPORARY SERVICES</u> | | |
| 46 | 6.1* Water F: V: T: | Item |
| 47 | 6.2* Electricity F: V: T: | Item |

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| 48 | 6.3* Ablution and welfare facilities F: V: T: | Item |
| 49 | 6.4* Communication facilities F: V: T: | Item |
| <u>7.0 PRIME COST AMOUNTS</u> | | |
| 50 | 7.1 Responsibility for prime cost amounts F: V: T: | Item |
| <u>8.0 SPECIAL ATTENDANCE ON N/S SUBCONTRACTORS</u> | | |
| 51 | 8.1 General attendance F: V: T: | Item |
| 52 | 8.2 Special attendance F: V: T: | Item |
| <u>9.0 GENERAL</u> | | |
| 53 | 9.1* Protection of the works F: V: T: | Item |
| 54 | 9.2* Protection/isolation of existing/sectionally occupied works F: V: T: | Item |
| 55 | 9.3 Security of the works F: V: T: | Item |
| 56 | 9.4 Notice before covering work F: V: T: | Item |
| 57 | 9.5* Disturbance F: V: T: | Item |
| 58 | 9.6* Environmental disturbance F: V: T: | Item |
| 59 | 9.7 Works cleaning and clearing F: V: T: | Item |
| 60 | 9.8 Vermin F: V: T: | Item |
| 61 | 9.9 Overhand work F: V: T: | Item |
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PROVISIONAL SUMS FOR

10.0 SCHEDULE OF VARIABLES

Information necessary for elections and completion of those clauses contained in the schedule which are necessary for tender purposes is given hereunder. Where no information is given it shall mean that no specific requirements are expected

10.1 Provisional bills of quantities [2.2] The quantities are provisional YES

10.2 Availability of construction information [2.3] Construction documentation is complete NO

10.3 Previous work - dimensional accuracy [3.1] No previous work

10.4 Previous work - defects [3.2] No previous work

10.5 Inspection of adjoining properties [3.3]

10.6 Water [6.1] Option C (by employer - metered)

10.7 Electricity [6.2] Option A (by contractor)

10.8 Ablution facilities [6.3] Option A (by contractor)

10.9 Communication facilities [6.4] No specific requirements

10.10 Protection of the works [9.1] No specific requirements

10.11 Protection/isolation of existing/sectionally occupied works [9.2] Protection is required YES

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10.12 Disturbance [9.5] The following specific requirements also apply: The contractor shall be responsible for and take all precautions in controlling all forms of pollution during the contract period due to noise, artificial light, 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 The surrounding buildings will be occupied and functioning during these works and the contractor is to ensure that the works are carried out with as little mess and noise as possible and with a minimum of disturbance to adjoining and close buildings and properties and their occupants. The contractor is to make use of appropriate plant and methods of execution which result in the least possible noise factors. All machinery shall be fully muffled. The contractor shall keep the site, structures and materials well watered during the operations to prevent dust and shall provide, erect and maintain all temporary tarpaulins, dust and weatherproof screens, barriers and temporary plumbing that may be necessary during the progress of the works. The contractor shall liaise with the Principal Agent in order to ensure that all reasonable measures are taken to control noise, dust and vibration that may detrimentally affect activities and equipment. The contractor shall ensure that the functioning of the campus is not disturbed or disrupted, except where special arrangements are made with the Principal Agent. The contractor may not carry out construction operations outside of normal working times without the permission of the Principal Agent. The above requirements are to be strictly adhered to since the surrounding buildings are occupied mainly with students who will be writing and/or studying for examinations over certain periods during the contract period

10.13 Environmental disturbance [9.6] The contractor shall be responsible for and take all precautions in controlling all forms of pollution during the contract period due to noise, artificial light, 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

SECTION C: SPECIFIC PRELIMINARIES

C1 : CONFIDENTIALITY

- 62 The Contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the works. No information regarding this project shall be published or disclosed without the prior written consent of the Employer. F: V: T:

Item

C2 : CONTRACT INSTRUCTIONS

- 63 Contract instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the Contractor. F: V: T:

Item

C3 : SITE LEVELS

- 64 Before commencement of the works the Contractor shall carry out and provide the Principal Agent for approval a survey of the existing site levels in sufficient detail to enable the preparation of a final account. F: V: T:

Item

C4 : UNAUTHORISED PERSONS ON SITE

- 65 The Contractor shall not permit unauthorised persons onto and workmen to lodge on the site. F: V: T:

Item

C5 : PLANT AND LABOUR RECORD

- 66 At the end of each week the Contractor shall provide the Principal Agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all subcontractors on the works each day and the number, type and capacity of all plant, excluding hand tools, currently used on the works. F: V: T:

Item

Section No. 1
Bill No. 1
Secondary Scope BoQ

C6 : TARGET LABOUR

- 67 At the end of each week the Contractor shall provide the Principal Agent with a written record, with signed confirmation by the Community Liaison Officer, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all subcontractors on the works each day in respect of Target Labour. In respect to "Target Labour", the minimum rate for any and all workers contracted for this project shall be R100 per day F: T: V:

Item

Section No. 1
Bill No. 1
Secondary Scope BoQ

**C7 : USE OF LOCAL LABOUR FROM THE
EMPLOYER'S AREAS OF OPERATION**

68 It is a requirement of the contract that the work be executed in such a manner as to maximise the use of local labour from the employer's areas of operation in order to provide the local community with employment opportunities. The tenderer is to identify all activities for which it is intended to employ workers from the local community, and full details thereof are to be provided. The total value of the work that is to be of a local labour nature may be a consideration in the adjudication process. Once a tender is accepted the activities and number of persons stated in the above-mentioned Form shall become the minimum contractual commitment. In applying the principles set out above, it is a specific requirement of this tender that the successful tenderer employs, in consultation with the employer's representative, unemployed persons from the ranks of the local communities and the immediate surroundings, who possess the appropriate skills required for a contract of this nature. In order to achieve the recruitment of local labour, the employer would establish, a database of unemployed persons, indicating their specialised training, previous experience and employment, etc. The successful tenderer will be required to directly employ suitable persons recruited from the employer's database and ensure that all legislative requirements regarding their employment are complied with and provide the employer with the necessary documentary proof, if required. The contractor is required to produce weekly records suitably detailed to enable the employer's representative to monitor the achievement of the required local labour percentages. The contractor is required to provide the employer's database for the purposes of assessing skills transfer from informal skills training. The contractor is required to provide informal skills training so that the required standard of workmanship is maintained. Any difficulty experienced by the tenderer/contractor in the procurement of the required percentages of local labour is to be referred immediately to the employer's representative. F: V: T:

Item

Section No. 1
Bill No. 1
Secondary Scope BoQ

C8 : GUARANTEES

- 69 Where guarantees are called for, the Contractor shall obtain a written guarantee, addressed to the Employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent no later than the works completion date. The guarantee shall state that workmanship, materials and installation are guaranteed for a specified period from the final completion date and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice from the Principal Agent to do so. This guarantee will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the Contractor. The Principal Agent shall be the sole judge of the cause responsible for defect of the works and his decision shall be final and binding in terms of clause 40.2 of the agreement F: V: T:

Item

C9 : WARRANTIES FOR MATERIAL AND WORKMANSHIP

- 70 Where warranties for materials and/or workmanship are called for, the Contractor shall obtain a written warranty, addressed to the Employer, from the firm supplying the materials and/or doing the work and shall deliver same to the Principal Agent on the certified completion of the contract. The warranty shall state that workmanship, materials and installation are guaranteed for a specified period from the date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the Contractor F: V: T:

Item

C10 : OVERTIME

- 71 Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the Contractor unless the Principal Agent has specifically authorised, in writing, prior to execution thereof, that costs for such overtime are to be borne by the Employer F: V: T:

Item

Section No. 1
Bill No. 1
Secondary Scope BoQ

C11 : REINSTATEMENT OF DAMAGED AREAS ON THE SITE OR EMPLOYERS' PROPERTIES IN GENERAL CAUSED BY CONSTRUCTION OPERATIONS, ETC

- 72 Before commencing with the works and/or moving on to site, the Contractor shall arrange with the Principal Agent to inspect, among others, existing buildings, structures, roads, pavings, kerbs, channels and fences on and around the site and the Contractor's "site yard" The Contractor shall compile a report, noting all conditions that the works could affect, paying particular attention to cracks, defects and existing levels related to structures, roads, pavings, kerbs, channels and fences, which later could be claimed to have been caused or disturbed by the construction operations. The report shall also include levels and/or photographs taken by the Contractor Certified copies of the report shall be lodged with the Principal Agent before the work commences and site establishment, who shall within five (5) working days of receipt of the report inspect the areas of concern and confirm in writing acceptance or rejection thereof noting reasons for the rejection The cost associated with the compilation of the report shall be for the Contractor's account 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
F: V: T:

Item

C12 : CO-OPERATION OF CONTRACTOR FOR COST MANAGEMENT

- 73 It is specifically agreed that the Contractor accepts the obligation of assisting the agents in implementing proper cost management on this project. The Contractor will be advised by the Principal Agent of all cost management procedures which will be implemented to ensure that the final account does not exceed the budget F: V: T:
.....

Item

Section No. 1
Bill No. 1
Secondary Scope BoQ

**C13 : BLACK ECONOMIC EMPOWERMENT AND
PREFERENTIAL PROCUREMENT**

74 The Employer applies and promotes the principles of black economic empowerment. In terms of the Employer's current procurement policy, this project has been identified as a project targeting enterprises with equity ownership by Previously Disadvantaged Individuals (PDIs) performing as prime contractors, joint venture partnerships, subcontractors, suppliers, manufacturers, and/or service providers. Tenderers are required to submit proof with regard to the percentage claimed for other specific goals (if applicable) should they wish to be awarded points in this regard. "Previously Disadvantaged Individuals (PDIs)" means South African citizens: (1) who are socially and economically disadvantaged by the legacy of the South African political dispensation prior to 28 April 1994; (2) who are individuals who fall into population groups that had no franchise in national elections prior to the introduction of the 1984 constitution and the tricameral parliamentary system, subject to persons obtaining South African citizenship after 2 February 1990 demonstrating traceable South African parentage. "Equity Ownership" means the percentage of an enterprise or business owned by individuals or, in respect of a private company, the percentage of a company's shares that are owned by individuals, who are actively involved in the management of the enterprise or business and exercise control over the enterprise, commensurate with their degree of ownership at the closing date of the tender. "Management" in relation to an enterprise or business, means an activity inclusive of control and performed on a daily basis, by any person who is a principal executive officer of the enterprise/business, by whatever name that person may be designated, and whether or not that person is a Director. F: V: T:

Item

Section No. 1
Bill No. 1
Secondary Scope BoQ

C14 : FINANCIAL INVESTIGATION

- 75 Tenderers must be prepared to furnish the following documentation at own cost within seven (7) days of being called upon to do so: - Audited financial statements for the past three financial years plus a certified financial statement covering the period from the end of the last financial year to date. If audited statements are not readily available provisional certified statements must be submitted - A resolution of the board of directors authorising the signatory to certify such statements - An extract of the relevant memorandum and article(s) of association from which it is clear that the company is empowered to issue such statement - A list of all major shareholders indicating the percentage shareholding of each F: V: T:

Item

C15 : HAZARDOUS MATERIAL FROM DEMOLITIONS

Should the Contractor encounter any hazardous material during demolitions, such material shall be removed and disposed of strictly in accordance with standards and requirements prescribed by the Principal Agent. On completion, the Contractor shall provide a post-decontamination hazardous material survey (i.e. Close-out report) confirming that all Asbestos, lead and/or polychlorinated biphenyls (PCB) have been safely and completely removed from the site and disposed off as prescribed

C16: NOTES TO TENDERER

- 76 All requirements as stated in the "Notes to Tenderer" shall be met and adhered to at all times F: V: T:

Item

Section No. 1
Bill No. 1
Secondary Scope BoQ

C17 : PROJECT NOTICE BOARD

- 77 The Contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board/s size 3 x 3 m, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick all round outer edges and projecting 12 mm from face boarding and rounded on front edge. The board shall be securely fixed to and including a suitable supporting structure of timber of tubular posts and braces. The graphics, colours, font, wording, etc. on the board shall be as instructed by the Principal Agent. The number of project notice boards required is: (One) 1
F:..... V:..... T:.....

Item

SUMMARY OF CATEGORIES

Category : Fixed

R..... **Category : Value**

R..... **Category : Time**

R.....

SECTION TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 1

EARTHWORKS

PREAMBLES

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SUPPLEMENTARY PREAMBLES

Nature of ground:

Section No. 1
Bill No. 1
Secondary Scope BoQ

The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"

Subterranean water:

No subterranean water is expected

Excavation for working space in rock:

Notwithstanding clause 11 page 7 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

Carting away of excavated material:

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

Filling:

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

Testing:

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

Formwork:

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"

Section No. 1
Bill No. 1
Secondary Scope BoQ

DEMOLITIONS

Demolishing and removing:

| | | | |
|----|---|----|---|
| 78 | Single storey toilet block with pitched roof, 3.00 x 4.80m on plan and 3.50m high at eaves, comprising reinforced concrete surface beds, 230mm external walls, 110mm internal walls, and sheet metal roof coverings on timber trusses, 5 loo's, etc. (removal of pit and backfill elsewhere) | No | 1 |
| 79 | Single storey toilet block with pitched roof, 7.64 x 13.07m on plan and 3.50m high at eaves, comprising reinforced concrete surface beds, 230mm external walls, 110mm internal walls, and sheet metal roof coverings on timber trusses, 16 loo's, etc. (removal of pit and backfill elsewhere) | No | 1 |
| 80 | Single storey classroom building with pitched roof, 6.25 x 7.63m on plan and 3.50m high at eaves, comprising reinforced concrete surface beds, 230mm external walls, and sheet metal roof coverings on timber trusses | No | 1 |
| 81 | Toilet pit approximately 3.00 x 4.80m on plan and 1.80m high, comprising reinforced concrete surface beds, 230mm walls, including sucking out and disposal of soil waste by a registered waste disposal company, and backfill pit with hardcore from demolitions and G5 from commercial sources compacted to 95% Mod AASHTO density | No | 1 |
| 82 | Single storey classroom building with pitched roof, 12.00 x 12.00m on plan and 3.50m high at eaves, prefabricated structure comprising reinforced concrete surface beds at walkways, 230mm walls and sheet metal roof coverings on timber rafters | No | 1 |
| 83 | Single storey classroom building with pitched roof, 9.50 x 7.00m on plan and 3.50m high at eaves, prefabricated structure comprising reinforced concrete surface beds at walkways, 230mm walls and sheet metal roof coverings on timber rafters | No | 1 |

Section No. 1
Bill No. 1
Secondary Scope BoQ

| | | | |
|---|--|----|-------|
| 84 | Toilet pit approximately 7.64 x 13.07mm on plan and 1.80mm high, comprising reinforced concrete surface beds, 230mm walls, including sucking out and disposal of soil waste by a registered waste disposal company, and backfill pit with hardcore from demolitions and G5 from commercial sources compacted to 95% Mod AASHTO density | No | 1 |
| <u>SITE CLEARANCE, ETC</u> | | | |
| <u>Site clearance:</u> | | | |
| 85 | Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth | m2 | 1,247 |
| <u>REMOVAL OF TREES, ETC</u> | | | |
| <u>Cutting down and removing, grubbing up roots, filling in holes with earth filling obtained from excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u> | | | |
| 86 | Tree exceeding 200mm and not exceeding 500mm girth | No | 8 |
| <u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u> | | | |
| <u>Excavate in earth not exceeding 2m deep:</u> | | | |
| 87 | Reduced levels under floors | m3 | 186 |
| 88 | Trenches | m3 | 267 |
| 89 | Sewer pit | m3 | 233 |
| <u>Extra over trench and hole excavations in earth for excavations in:</u> | | | |
| 90 | Soft rock | m3 | 27 |
| 91 | Hard rock | m3 | 4 |
| <u>Extra over all excavations for carting away:</u> | | | |
| 92 | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor | m3 | 521 |
| Section No. 1 Bill No. 1 Secondary Scope BoQ | | | |

| | | | |
|--|--|----|------|
| | <u>Risk of collapse of excavations:</u> | | |
| 93 | Sides of trench and hole excavations not exceeding 1,5m deep | m2 | 135 |
| 94 | Sides of trenches and hole excavations exceeding 1,5m deep | m2 | 186 |
| | <u>Keeping excavations free of water:</u> | | |
| 95 | Keeping excavations free of all water other than subterranean water | | Item |
| | <u>FILLING, ETC OTHER THAN BULK</u> | | |
| | <u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u> | | |
| 96 | Backfilling to trenches, holes, etc | m3 | 168 |
| | <u>Soilcrete 8% batch mixing:</u> | | |
| 97 | Backfilling to trenches, holes, etc | m3 | 35 |
| | <u>G5 hardcore filling material supplied by the Contractor and compacted to 95% Mod AASHTO density:</u> | | |
| 98 | Under floors, steps, paving, etc | m3 | 111 |
| | <u>G7 hardcore filling material supplied by the Contractor and compacted to 95% Mod AASHTO density:</u> | | |
| 99 | Under floors, steps, paving, etc | m3 | 90 |
| | <u>Compaction of surfaces:</u> | | |
| 100 | Compaction of ground surface under floors, paving, etc including scarifying for a depth of 300mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod AASHTO density | m2 | 697 |
| | <u>Prescribed density tests on filling:</u> | | |
| 101 | "Modified AASHTO Density" test | No | 1 |
| Section No. 1 Bill No. 1 Secondary Scope BoQ | | | |

SOIL POISONING

Soil insecticide in accordance with SABS 1165:

| | | | |
|-----|--|----|-------|
| 102 | Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc and filling in furrows and ramming | m2 | 677 |
| 103 | Ditto, but to bottoms and sides of trenches, holes, etc | m2 | 1,217 |

BILL NO. 1 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 2

CONCRETE, FORMWORK AND REINFORCEMENT

PREAMBLES

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SUPPLEMENTARY PREAMBLES

Cost of tests:

The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SANS 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 Principal Agent. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Principal Agent. (Test cubes are measured separately)

Section No. 1
Bill No. 1
Secondary Scope BoQ

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 soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1.5m and not exceeding 3.5m high unless otherwise described

REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES

25MPa/19mm concrete:

| | | | |
|-----|-------------------------------|----|-----|
| 104 | Strip footings | m3 | 106 |
| 105 | Surface beds on waterproofing | m3 | 67 |
| 106 | Aprons | m3 | 38 |

REINFORCED CONCRETE CAST ON/IN FORMWORK

25MPa/19mm concrete:

| | | | |
|-----|----------------|----|----|
| 107 | Pit cover slab | m3 | 12 |
|-----|----------------|----|----|

TEST CUBES

| | | | |
|-----|---|------|------|
| 108 | Making and testing sets of three 150 x 150 x 150mm concrete strength test cubes | Sets | 43.0 |
|-----|---|------|------|

Section No. 1
Bill No. 1
Secondary Scope BoQ

CONCRETE SUNDRIES**Finishing top surfaces of concrete smooth with wood trowel:**

| | | | |
|-----|---|----|-----|
| 109 | Surface beds, etc to falls | m2 | 754 |
| 110 | Aprons to slope and falls to form V-shape in top of apron | m2 | 390 |

ROUGH FORMWORK (DEGREE OF ACCURACY III)**Rough formwork to sides:**

| | | | |
|-----|--|---|-----|
| 111 | Edges, risers, etc. not exceeding 300mm high or wide | m | 446 |
|-----|--|---|-----|

Rough formwork to soffits:

| | | | |
|-----|--|----|----|
| 112 | Pit slabs | m2 | 72 |
| 113 | Leave or form 110mm diameter hole through 200mm thick concrete slab and permanent formwork | No | 21 |
| 114 | Leave or form 235mm diameter hole tapering to 200mm diameter at bottom, through 200mm thick concrete slab and permanent formwork | No | 21 |

MOVEMENT JOINTS, ETC**Expansion joints with "Sondor Jointex" polyethylene expansion joint filler with tear-off strips in floors:**

| | | | |
|-----|--------------------------------------|---|-----|
| 115 | 10mm Joints not exceeding 300mm high | m | 908 |
|-----|--------------------------------------|---|-----|

REINFORCEMENT**Mild steel reinforcement to structural concrete work:**

| | | | |
|-----|---|---|------|
| 116 | Mild steel bar reinforcement (8 to 40 mm diameter bars) | t | 0.30 |
|-----|---|---|------|

High tensile steel reinforcement to structural concrete work:

| | | | |
|-----|---|---|------|
| 117 | High tensile steel bar reinforcement (8 to 40 mm diameter bars) | t | 3.30 |
|-----|---|---|------|

Section No. 1
Bill No. 1
Secondary Scope BoQ

Fabric reinforcement:

| | | | |
|-----|---|----|-----|
| 118 | Type 193 fabric reinforcement in concrete surface beds, etc | m2 | 848 |
| 119 | Type 395 fabric reinforcement in concrete surface beds, etc | m2 | 86 |
| 120 | Type 617 fabric reinforcement in concrete pit slab | m2 | 73 |

BILL NO. 2 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 3

PRECAST CONCRETE

PREAMBLES

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SUPPLEMENTARY PREAMBLES

Sizes:

Blocks, sills, etc measured linear shall be made in suitable handling lengths. Large size setting out drawings shall be prepared where necessary and submitted to the Principal Agent for approval before moulds are made

General:

Where kerb stones, blocks, etc are laid in ground, descriptions shall be deemed to include necessary excavation, filling in and ramming

Section No. 1
Bill No. 1
Secondary Scope BoQ

PRECAST CONCRETE PIT COVERS

Precast concrete finished smooth on exposed surfaces, including bedding, jointing and pointing, with two Y10 galvanised handles 680mm girth bent to detail and cast into top of slab and cover placed in position on top of pit

| | | | |
|-----|--------------------------------------|----|----|
| 121 | 1045 x 375 x 100mm Thick cover block | No | 8 |
| 122 | 1100 x 375 x 100mm Thick cover block | No | 10 |
| 123 | 1155 x 375 x 100mm Thick cover block | No | 10 |
| 124 | 1750 x 375 x 100mm Thick cover block | No | 2 |
| 125 | 1930 x 375 x 100mm Thick cover block | No | 2 |

BILL NO. 3 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 4

MASONRY

PREAMBLES

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SUPPLEMENTARY PREAMBLES

BRICKWORK

General:

Section No. 1
Bill No. 1
Secondary Scope BoQ

Non-load bearing brickwork is to be built to full height less 20mm gap next to the ceiling and is to be left for 14 days before grouting up in 1:3 cement mortar

Sizes in descriptions:

Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick

Hollow walls:

Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole

Bagged and sealed walls:

Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating

Face bricks:

Bricks shall be ordered timeously to obtain uniformity in size and colour All face brickwork shall be regularly cleaned down as the work proceeds and shall be protected as necessary by an approved method

Pointing:

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include smooth floated square recessed, hollow recessed, weathered pointing, etc

BLOCKWORK IN FOUNDATIONS

M200 cement hollow blocks in class II mortar with cavities filled with 10Mpa mass concrete

126

200mm Wide wall

m2

159

Section No. 1
Bill No. 1
Secondary Scope BoQ

BRICKWORK IN FOUNDATIONS**Brickwork of NFP bricks in class II mortar:**

| | | | |
|-----|-----------------|----|-----|
| 127 | One brick walls | m2 | 240 |
|-----|-----------------|----|-----|

2,5mm Brickwork reinforcement:

| | | | |
|-----|--|---|-------|
| 128 | 150mm Wide reinforcement built in horizontally | m | 2,885 |
|-----|--|---|-------|

"Corobrick Firelight Satin" face bricks built in horizontal stretcher bond with recessed horizontal and vertical joints:

| | | | |
|-----|--|----|-----|
| 129 | Extra over brickwork for face brickwork in foundations | m2 | 103 |
|-----|--|----|-----|

BRICKWORK SUPERSTRUCTURE**Brickwork of NFP bricks in class II mortar:**

| | | | |
|-----|-------|----|---|
| 130 | Piers | m3 | 4 |
|-----|-------|----|---|

| | | | |
|-----|------------------|----|-----|
| 131 | Half brick walls | m2 | 241 |
|-----|------------------|----|-----|

| | | | |
|-----|----------------------------------|----|----|
| 132 | Half brick walls in beam filling | m2 | 74 |
|-----|----------------------------------|----|----|

| | | | |
|-----|-----------------|----|-----|
| 133 | One brick walls | m2 | 863 |
|-----|-----------------|----|-----|

BRICKWORK SUNDRIES**2,5mm Galvanised brickwork reinforcement:**

| | | | |
|-----|---|---|-----|
| 134 | 75mm Wide reinforcement built in horizontally | m | 625 |
|-----|---|---|-----|

| | | | |
|-----|--|---|-------|
| 135 | 150mm Wide reinforcement built in horizontally | m | 1,902 |
|-----|--|---|-------|

Prestressed fabricated concrete lintels including necessary temporary supports:

| | | | |
|-----|--|---|-----|
| 136 | 110 x 75mm Lintels in lengths not exceeding 3m | m | 253 |
|-----|--|---|-----|

Turning pieces to lintels etc:

| | | | |
|-----|---------------------------|---|----|
| 137 | 110mm Wide turning pieces | m | 10 |
|-----|---------------------------|---|----|

| | | | |
|-----|---------------------------|---|----|
| 138 | 230mm Wide turning pieces | m | 14 |
|-----|---------------------------|---|----|

Section No. 1
Bill No. 1
Secondary Scope BoQ

| | | | |
|--|---|----|-----|
| | <u>Galvanised hoop iron cramps, ties, etc:</u> | | |
| 139 | 30 x 1,6mm Cramp 1600mm long with one end fixed to timber and other end built into brickwork | No | 188 |
| | <u>Bagging of 1:3 cement and sand mixture including painting with bitumen:</u> | | |
| 140 | On brick walls, piers, etc | m2 | 302 |
| | <u>FACE BRICKWORK</u> | | |
| | <u>"Corobrick Firelight Satin FBA" face bricks built in horizontal stretcher bond with ruled horizontal and vertical joints:</u> | | |
| 141 | Extra over brickwork for face brickwork | m2 | 758 |
| 142 | Extra over brickwork for brick-on-edge header course lintels, pointed on both face and 110mm soffit | m | 10 |
| 143 | Extra over brickwork for brick-on-edge header course lintels, pointed on both faces and 230mm soffit | m | 14 |
| 144 | Fair raking cutting | m | 36 |
| 145 | Fair cutting and fitting around pipe not exceeding 100mm diameter | No | 24 |
| | <u>Brick-on-edge header course copings, sills, etc of fair face bricks pointed with flush joints faces:</u> | | |
| 146 | 180mm Wide sills of cut brick-on-edge header course set sloping and slightly projecting | m | 10 |
| BILL NO. 4 TOTAL CARRIED TO SUMMARY | | | |
| | <u>SECTION 2</u> | | |
| | <u>BILL NO 5</u> | | |
| | <u>WATERPROOFING</u> | | |
| | ----- | | |
| | <u>PREAMBLES</u> | | |
| | Section No. 1 | | |
| | Bill No. 1 | | |
| | Secondary Scope BoQ | | |

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SUPPLEMENTARY PREAMBLES

Waterproofing:

Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs

DAMPPROOFING OF WALLS AND FLOORS

One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):

| | | | |
|-----|----------|----|----|
| 147 | In walls | m2 | 94 |
|-----|----------|----|----|

One layer 250 micron green polyethylene damp proof membrane (SANS 952-1985 type C) sealed at laps with self-adhesive pressure sensitive tape:

| | | | |
|-----|--------------------|----|-----|
| 148 | Under surface beds | m2 | 694 |
|-----|--------------------|----|-----|

One layer 500 micron orange polyethylene waterproof sheeting (SANS 952-1985 type A) sealed at laps with PVC self-adhesive tape:

| | | | |
|-----|--------------------------|----|-----|
| 149 | Vertically against walls | m2 | 248 |
|-----|--------------------------|----|-----|

Section No. 1
Bill No. 1
Secondary Scope BoQ

Three coats "Sika Cemflex" or similar approved cementitious waterproofing system, applied at a rate of 1,5kg/m2 per coat:

| | | | |
|-----|--------------------|----|-----|
| 150 | On concrete floors | m2 | 644 |
| 151 | On brick walls | m2 | 321 |

BILL NO. 5 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 6

ROOF COVERINGS

PREAMBLES

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 and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said Model Preambles

SUPPLEMENTARY PREAMBLES

Guarantee:

Profiled metal roof sheeting and accessories shall be supplied with a 5 year guarantee and be installed by an approved installer

PROFILED METAL SHEETING AND ACCESSORIES

Section No. 1
Bill No. 1
Secondary Scope BoQ

0,58mm "Safintra Widedek" or similar approved galvanised heavy industrial interlocking roof sheeting in single lengths and accessories, with "Classicor" (colour Rain Cloud) finish to one side, fixed to timber purlins:

| | | | |
|-----|---|----|-----|
| 152 | Roof covering with pitches not exceeding 25 degrees | m2 | 984 |
| 153 | Ridge coverings 462mm girth | m | 99 |
| 154 | Narrow and broad flute closers | m | 67 |
| 155 | Opening through roof sheeting for 110mm diameter uPVC pipe including flashing | No | 21 |

BILL NO. 6 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 7

CARPENTRY AND JOINERY

PREAMBLES

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 and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

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SUPPLEMENTARY PREAMBLES

Fixing:

Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete

Section No. 1
Bill No. 1
Secondary Scope BoQ

Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere

Joinery:

Descriptions of frames shall be deemed to include frames, transomes, rails, etc

Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts

Particle board

All particle board shall comply with SABS Specification 1300 and 1301 as described in the Specification OW 371 - 4th revision October 1993

Decorative thermosetting plastic laminate covering:

Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish

Sizes:

Sizes are nominal and the Contractor shall make allowance in his prices for minor variances in stated finished sizes of timber doors, door members, door frames, architraves, etc

Prices

Prices for all joinery work are to include for general framing, housing and notching, arris rounded angles, glueing, blocking, planting on, screwing, adhesives, dowels, pellets, cross tongues, screws and nails and setting up complete and also for all square cutting and waste. Tops shall be secured with metal or hardwood buttons

Treatment of timer:

All structural timber to be CPR treated.

ROOFS, ETC**Sawn softwood:**

| | | | |
|-----|-----------------------|---|-------|
| 156 | 50 x 75mm Purlin | m | 1,281 |
| 157 | 50 x 75mm Runner | m | 28 |
| 158 | 50 x 75mm Bracing | m | 295 |
| 159 | 50 x 75mm Trimmer | m | 361 |
| 160 | 114 x 38mm Wall plate | m | 188 |

Sundries:

| | | | |
|-----|--|----|-----|
| 161 | Two coats creosote on sawn timbers | m2 | 321 |
| 162 | Hurricane clips | No | 474 |
| 163 | 2,5mm Galvanised wire ties double wound securely around purlin truss connections | No | 440 |

**PLATE NAILED TIMBER ROOF TRUSS
CONSTRUCTION, ETC****SUPPLEMENTARY PREAMBLES****Trusses are at maximum 1200mm centres**

The roof coverings is sheet metal to a pitch of 17.5 degrees on 50 x 76mm purlins at mainly 1000mm centres

All trusses are to be fabricated/manufactured in a factory by "Gangnail" Specialists approved by the Principal Agent

All trusses shall be designed by a Registered Professional Engineer and in accordance with SABS 0163: Code of Practice for the Design of Timber Structures

The Manufacturer of the trusses shall supply a written guarantee that the trusses are designed, manufactured and erected to support the roof covering specified The guarantee shall be valid for a period of 10 (ten) years

Section No. 1
Bill No. 1
Secondary Scope BoQ

Sawn softwood:

| | | | |
|-----|---|----|----|
| 164 | Roof truss 3740mm span, 600mm overhang both sides with 17.5 degree pitch | No | 8 |
| 165 | Roof truss 3820mm span, 600mm overhang both sides with 17.5 degree pitch | No | 7 |
| 166 | Roof truss 4840mm span, 600mm overhang both sides with 17.5 degree pitch | No | 8 |
| 167 | Roof truss 5000mm span, 600mm overhang both sides with 17.5 degree pitch | No | 8 |
| 168 | Roof truss 15500mm span, 750mm overhang both sides with 17.5 degree pitch | No | 8 |
| 169 | Roof truss 11500mm span, 750mm overhang both sides with 17.5 degree pitch | No | 3 |
| 170 | Roof truss 9500mm span, 750mm overhang both sides with 17.5 degree pitch | No | 23 |
| 171 | Roof truss 9000mm span, 750mm overhang both sides with 17.5 degree pitch | No | 7 |
| 172 | Roof truss 7500mm span, 750mm overhang both sides with 17.5 degree pitch | No | 10 |
| 173 | 50 x 152mm rafters | m | 15 |
| 174 | 38 x 114mm rafters | m | 3 |
| 175 | 38 x 228mm rafters | m | 88 |

EAVES, VERGES, ETC**"Marley" PVC foam or similar approved fascia and barge boards:**

| | | | |
|-----|--|---|-----|
| 176 | 15 x 225mm Fascias and barge boards, including aluminium H-profile joiners | m | 202 |
| 177 | 15 x 225mm Barge boards, including aluminium H-profile joiners | m | 183 |

DOOR FRAMES

Section No. 1
Bill No. 1
Secondary Scope BoQ

| | | | |
|---|---|----|----|
| | <u>Wrought hardwood door frames</u> | | |
| 178 | 50 x 50 x 1800mm Long door frame, once rebated, plugged | No | 44 |
| | <u>DOORS, ETC</u> | | |
| | <u>Medium duty hardboard faced door:</u> | | |
| 179 | Door 880 x 1800mm high | No | 22 |
| | <u>Solid core hardwood panel door with commercial veneer:</u> | | |
| 180 | Door 813 x 2032mm high | No | 16 |
| | <u>TDM Hardwood BB door with SAP subframe with double top and bottom rails, tongue and groove boarding in v-joint rail, 20 x 150mm middle ledge, 20 x 225mm bottom ledge and 20 x 110mm braces hung to steel door frames</u> | | |
| 181 | Door 813 x 1981mm high | No | 4 |
| | <u>"Blaco" wrought Saligna ledged and braced battened door with 40 x 110mm stiles and top rail, 20 x 115mm middle ledge, 20 x 225mm bottom ledge and 20 x 110mm braces</u> | | |
| 182 | 44mm Door 813 x 2032 mm high | No | 20 |
| 183 | 44mm Door 728 x 2032mm high | No | 2 |
| BILL NO. 7 TOTAL CARRIED TO SUMMARY | | | |
| | <u>SECTION 2</u> | | |
| | <u>BILL NO 8</u> | | |
| | <u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u> | | |
| | ----- | | |
| | <u>PREAMBLES</u> | | |
| <p>Section No. 1 Bill No. 1 Secondary Scope BoQ</p> | | | |

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SUPPLEMENTARY PREAMBLES

Fixing:

Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be 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 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere

Ceilings:

Unless otherwise described, ceilings shall be deemed to be horizontal

Bulkheads:

Bulkheads are defined as those portions of ceilings which are stepped down from the general ceiling level in a particular room or area and which generally occur along the perimeter. Their purpose is either to conceal services or to create architectural features

Bulkheads have only been described as such where they conform to the above definition and where the horizontal or vertical dimensions do not exceed 900mm. Where these dimensions are more than 900mm such portions of ceilings have been included in the appropriate general items of ceilings

Unless otherwise described, bulkheads shall be deemed to be horizontal along the length

Openings:

Prices for openings for light fittings, ventilation grilles, air conditioning diffusers, etc are to include for any necessary additional support, trimming around, etc

Steel components:

All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121

NAILED-UP CEILINGS

9mm Rhinoboard with H-profile metal cover strips to joints:

| | | | |
|-----|--|----|-----|
| 184 | Ceilings including 38 x 50mm sawn softwood brander at 450mm centres in both directions | m2 | 541 |
| 185 | Extra over ceiling for 650 x 650mm trap door of 38 x 50mm wrought softwood rebated framing with one cross brander, covered with ceiling board and fitted flush in opening, including necessary trimmers around | No | 4 |

Wrought softwood cornices:

| | | | |
|-----|-------------------------------------|---|-----|
| 186 | 20 x 75mm Bevelled cornices, nailed | m | 534 |
|-----|-------------------------------------|---|-----|

BILL NO. 8 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 9

IRONMONGERY

PREAMBLES

Section No. 1
Bill No. 1
Secondary Scope BoQ

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SUPPLEMENTARY PREAMBLES

Proprietary items:

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items Prices are to be based on the specific products/articles specified. Should tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures, etc clarifying the features of the products/articles offered On request returnable samples are to be provided to the Principal Agent for consideration

Locks:

Notwithstanding Clause 4 of the "Ironmongery" trade of the "Standard System of Measuring Building Work", descriptions of locks shall be deemed to include two keys per lock

Finishes to ironmongery:

Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacqueredCH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelledAN Anodised natural AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded

| | | | |
|-----|--|----|-----|
| | . | | |
| | <u>HINGES, BOLTS, ETC</u> | | |
| | <u>Brass:</u> | | |
| 187 | 100 x 75mm LD medium duty butt hinge | No | 126 |
| 188 | 50 x 25mm LD polished barrel bolt and keep | No | 22 |
| | <u>LOCKS</u> | | |
| | <u>"Union" or similar approved</u> | | |
| 189 | "MG47" padlock | No | 16 |
| | <u>"Solid"</u> | | |
| 190 | Art 390/313 4-lever mortise lockset and satin chrome plated handles | No | 41 |
| | <u>LETTERS, NAMEPLATES, ETC</u> | | |
| | <u>180 x 180mm High sign with "7 year" green vinyl symbol on 0,6mm thick white Chromadek coated sheet metal plate, four times holed for screws or plugs</u> | | |
| 191 | Male sign | No | 4 |
| 192 | Female sign | No | 4 |
| 193 | Disabled sign | No | 1 |
| | <u>BATHROOM FITTINGS</u> | | |
| | <u>"Railman" or similar approved:</u> | | |
| 194 | 32mm "Code SR2" stainless steel rear grab rail around cistern, plugged | No | 1 |
| 195 | 32mm "Code DL2" stainless steel dog-leg side grab rail, plugged | No | 1 |
| | <u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC</u> | | |
| | Section No. 1 | | |
| | Bill No. 1 | | |
| | Secondary Scope BoQ | | |

Chalkboard to comply with CKS 38-1980 complete with chalkrail

| | | | |
|-----|--|----|----|
| 196 | Chalkboard 4800 x 1200mm high, plugged | No | 13 |
|-----|--|----|----|

| | | | |
|-----|---|----|----|
| 197 | Pinning board 4800 x 1000mm high, plugged | No | 13 |
|-----|---|----|----|

BILL NO. 9 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 10

METALWORK

PREAMBLES

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SUPPLEMENTARY PREAMBLES

Descriptions of bolts, anchors, etc:

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

Items described as "holed for bolt(s)" shall be deemed to exclude the bolts, unless otherwise described

Section No. 1
Bill No. 1
Secondary Scope BoQ

Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres

Fixing:

Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete Where items are described as "bolted", the bolts are measured elsewhere as stated in clause N.7 of the Model Preambles

GALVANISED STEEL GATES, SCREENS, ETC

Welded galvanized mild steel screens, gates, etc:

| | | | |
|-----|--|----|---|
| 198 | 877 x 2250mm High single steel gate and frame comprising 38 x 50 x 3mm RHS frame bolted to brick wall or concrete on 600mm centres, the gate comprising 38 x 50 x 3mm RHS frame with two 50 x 5mm flat section rails, the gate filled in with 12mm diameter bars on 150mm centres, the gate fitted with three 100mm long bullet hinges and angle section noses for padlock, padlock elsewhere), complete including all holes, etc. | No | 8 |
| 199 | 877 x 2250mm High double steel gate and frame comprising 38 x 50 x 3mm RHS frame bolted to brick wall or concrete on 600mm centres, the gate comprising 38 x 50 x 3mm RHS frame with two 50 x 5mm flat section rails, the gate filled in with 12mm diameter bars on 150mm centres, the gate fitted with three 100mm long bullet hinges and angle section noses for padlock, padlock elsewhere), complete including all holes, etc. | No | 1 |

GALVANISED PRESSED STEEL DOOR FRAMES

1,6mm Double rebated frames suitable for one brick walls with two 100mm brass butt hinges per door leaf:

| | | | |
|-----|---|----|----|
| 200 | Frame for door 813 x 2032mm high | No | 44 |
| 201 | Door 1524 x 2134mm high with rebated frame suitable for half brick wall and with lever lock | No | 1 |

GALVANISED STEEL WINDOWS, DOORS, ETC

Section No. 1
Bill No. 1
Secondary Scope BoQ

| | | | |
|-----|--|----|----|
| | <u>Standard steel school type windows, bottom hung open in SABS approved complete with brass fittings and factory fitted burglar bars</u> | | |
| 202 | Window type 4BH, 889 x 457mm high | No | 13 |
| 203 | Window NC2, 1022 x 949mm high | No | 2 |
| 204 | Window type NC4, 1511 x 949mm high | No | 1 |
| 205 | Window type ND2F, 1022 x 1245mm high | No | 27 |
| 206 | Window type NE2, 1022 x 654mm high | No | 1 |
| 207 | Window type composite type 14BH OVER 9-F/LT, 889 x 1250mm high | No | 18 |
| 208 | Window type composite 4BH over 4BH, 889 x 914mm high | No | 2 |
| 209 | Window type 14-BH, 889 x 854mm high | No | 13 |
| 210 | "Light duty" strongroom door and frame 965 x 2210mm high overall with a mass of 480kg | No | 1 |
| | <u>STEEL ROLLER SHUTTERS, ETC</u> | | |
| | <u>Powder coated galvanised steel roller shutters with 76mm slats (18kg/m2)</u> | | |
| 211 | Manual push-up class B fire resistant slatted roller shutter for 2400 x 1340mm high opening with fusable link, including galvanised mild steel T-section rail bolted to floor and walls for locking devices including rubber seals, etc complete | No | 1 |
| | BILL NO. 10 TOTAL CARRIED TO SUMMARY | | |
| | <u>SECTION 2</u> | | |
| | <u>BILL NO 11</u> | | |
| | <u>PLASTERING</u> | | |
| | ----- | | |
| | <u>PREAMBLES</u> | | |
| | Section No. 1 Bill No. 1 Secondary Scope BoQ | | |

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SUPPLEMENTARY PREAMBLES

Moisture tests:

Before any finishes, coverings, etc are applied to screeds, plastering, etc or any other in-situ finish moisture tests are to be carried out to the complete satisfaction of the Principal Agent to ensure that these surfaces have the correct moisture content for the finish to be applied

Labours, etc

Labours such as fair, rounded and chamfered edges, trowel cuts, throats, V-joints, angles, etc shall be deemed to be included in the descriptions

GRANOLITHIC

Method:

The method to be used shall be either the monolithic method or the bonded method

Preparation:

For granolithic applied monolithically, the concrete floor shall be swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after it has hardened, the slab surface shall be hacked (preferably by mechanical means) until all laitance, dirt, oil, etc is dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before applying the granolithic

Mix:

Unless otherwise described, granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic

Panels:

Granolithic shall be laid in panels not exceeding 14m² for monolithic finishes, not exceeding 9,5m² for bonded finishes and not exceeding 6m² for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

Where possible joints between panels shall be positioned over joints in the floor slab and shall be at least 3mm wide through the full thickness of the finish, separated by strips of wood or fibreboard and finished with V-joints

Laying:

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

Section No. 1
Bill No. 1
Secondary Scope BoQ

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

Curing, seasoning and protection:

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

Colour:

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

CEMENT PLASTER

Unless otherwise described, cement plaster shall be taken to mean Class 1 cement plaster i.e. 1:4 cement:sand plaster (common cement)

SAMPLE BLOCKS

Sample blocks of the various plaster finishes applicable to this project shall be prepared for approval by the Principal Agent

GRANOLITHIC

Untinted granolithic, on concrete:

| | | | |
|-----|-----------------------------------|----|-----|
| 212 | 30mm Thick on floors and landings | m2 | 546 |
| 213 | Skirtings 100mm high | m | 176 |

INTERNAL PLASTER

Cement plaster 1:5 steel trowelled, on brickwork:

| | | | |
|-----|------------------|----|-------|
| 214 | On walls | m2 | 1,392 |
| 215 | On narrow widths | m2 | 12 |

BILL NO. 11 TOTAL CARRIED TO SUMMARY

Section No. 1
Bill No. 1
Secondary Scope BoQ

SECTION 2

BILL NO 12

PLUMBING AND DRAINAGE

PREAMBLES

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SUPPLEMENTARY PREAMBLES

Wire gratings:

Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings

French drains:

Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site

Septic tanks:

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

Section No. 1
Bill No. 1
Secondary Scope BoQ

Stainless steel basins, sinks, wash troughs, urinals, etc:

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0) Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8) Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8) Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable

Sealing of edges:

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved mildew resistant silicone and prices must include therefore

uPVC pipes and fittings:

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

uPVC pressure pipes and fittings:

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

Copper pipes:

Pipes shall be hard drawn and half-hard "Maksal" pipes of the class described. 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 "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground

Copper pipes are to be installed in accordance with the latest revision of the Code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc to be strictly in accordance with the manufacturer's requirements with special attention to copper flux composition

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 claims for extra bushes, reducers, etc will be entertained

Fixing of pipes:

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

Paper wrapping to pipes:

Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings

Disinfection of water pipework:

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

"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps
Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

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

Laying, backfilling, bedding, etc of pipes:

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium-pressure pipelines SABS 1200LD : Sewers SABS 1200LE : Stormwater drainage Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB : Earthworks (Pipe trenches) Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes) Unless otherwise described, bedding of rigid pipes shall be Class B bedding

General:

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately) Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured) and shall have straight or side outlets and "P" or "S" traps as necessary

Description of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

As-built drawings:

Where required, the Contractor shall prepare an updated set of as-built drawings. At completion of the contract the Contractor shall hand these drawings to the Principal Agent for reproducing onto the originals for handing over to the Employer (provision for allowance of as-built drawings elsewhere)

RAINWATER DISPOSAL

PVC gutters and rainwater pipes:

| | | | |
|-----|---|----|----|
| 216 | 93mm Deep half round gutters | m | 67 |
| 217 | Extra over gutter for stopped end | No | 16 |
| 218 | Extra over gutter outlet for 93mm pipe to rainwater harvesting tank | No | 8 |

"Ogee" seamless aluminium prepainted gutters and rainwater pipes:

| | | | |
|-----|--------------------|---|-----|
| 219 | 100 x 75mm Gutters | m | 104 |
|-----|--------------------|---|-----|

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Secondary Scope BoQ

| | | | |
|--|--|----|----|
| 220 | 100 x 75mm Rainwater downpipes | m | 82 |
| 221 | Extra over gutter for stopped end | No | 24 |
| 222 | Extra over gutter for outlet for 100 x 75mm pipe | No | 24 |
| 223 | Extra over rainwater pipe for shoe | No | 24 |
| 224 | Extra over rainwater pipe for eaves or plinth offset | No | 24 |
| <u>SANITARY FITTINGS</u> | | | |
| <u>"Atlas Charlog" or similar approved:</u> | | | |
| 225 | 570 x 395mm "Christy" wash hand basin with galvanised bracket, bolted to brick wall | No | 18 |
| 226 | 370 x 480 x 430mm High "200 VIP" pedestal or similar approved, complete with seat and pan fixed to concrete floor | No | 23 |
| 227 | 320 x 350 x 490mm High bowl urinal complete with galvanised brackets, waterless urinal fitting and waste, bolted to brick wall | No | 6 |
| <u>WASTE UNIONS, ETC</u> | | | |
| <u>"Cobra Watertech" or similar approved:</u> | | | |
| 228 | 32mm Code 303 CP basin waste union and code 309CP anti-theft plug | No | 18 |
| <u>TRAPS, ETC</u> | | | |
| <u>"Cobra Watertech" or similar approved:</u> | | | |
| 229 | 50mm Rubber S-trap | No | 18 |
| <u>TAPS, VALVES, ETC</u> | | | |
| <u>"Cobra Watertech" or similar approved:</u> | | | |
| 230 | 15mm Code 232/350 FCP angle regulating valve and flexible connection pipe | No | 36 |
| 231 | 15mm Basin pillar tap | No | 18 |
| 232 | Wall type kitchen tap mixer | No | 1 |
| Section No. 1 | | | |
| Bill No. 1 | | | |
| Secondary Scope BoQ | | | |

SANITARY PLUMBING

uPVC soil and vent pipes:

| | | | |
|-----|-------------------------|---|----|
| 233 | 50mm Pipes | m | 23 |
| 234 | 50mm Pipes under floors | m | 60 |
| 235 | 110mm Pipes | m | 81 |

Extra over uPVC soil and vent pipes for fittings:

| | | | |
|-----|---------------------|----|----|
| 236 | 50mm Bend | No | 90 |
| 237 | 50mm Junction | No | 18 |
| 238 | 110mm Air vent cowl | No | 23 |

Testing:

WATER SUPPLIES

Class 1 copper pipes:

| | | | |
|-----|--|---|----|
| 239 | 15mm Pipes | m | 45 |
| 240 | 22mm Pipes | m | 21 |
| 241 | 15mm Pipes chased into brickwork including brown paper lagging | m | 18 |

Extra over Class 1 copper pipes for capillary fittings:

| | | | |
|-----|---------------|----|-----|
| 242 | 15mm Fittings | No | 108 |
| 243 | 22mm Fittings | No | 24 |

Extra over Class 1 copper pipes for brass compression fittings:

| | | | |
|-----|--|----|----|
| 244 | 22mm Fittings | No | 12 |
| 245 | 1400 x 500mm polished stainless steel sink with two 343 x 410 x 157mm deep end bowls, on cupboards | No | 2 |

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Secondary Scope BoQ

FIRE APPLIANCES, ETC.

| | | | |
|-----|---|----|---|
| 246 | 4,5kg Dry chemical powder fire extinguisher | No | 1 |
|-----|---|----|---|

Testing:

| | | | |
|-----|---------------------------|--|------|
| 247 | Testing water pipe system | | Item |
|-----|---------------------------|--|------|

AS-BUILT DRAWINGS

| | | | |
|-----|--------------------------------|--|------|
| 248 | Provision of as-built drawings | | Item |
|-----|--------------------------------|--|------|

BILL NO. 12 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 13

GLAZING

PREAMBLES

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 and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said Model Preambles

SUPPLEMENTARY PREAMBLES

Float glass:

The term "float glass" is used for monolithic annealed glass

Laminated glass:

Laminated glass to have polyvinyl butyral (PVB) interlayer(s)

Section No. 1
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Secondary Scope BoQ

GLAZING TO STEEL WITH PUTTY

4mm Clear float glass sand blasted to one side

249 Panes not exceeding 0,5mm2

m2

85

BILL NO. 13 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 14

PAINTWORK

PREAMBLES

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 and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

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SUPPLEMENTARY PREAMBLES

PAINT SPECIFICATIONS

All painting shall be done in accordance with "Midas" or similar approved specifications, unless otherwise described

COLOURS

Unless otherwise described, all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SANS 1091. When staining timber, the resultant colour or shade must be to the complete satisfaction of the Principal Agent before any over coating or preservative is applied

Section No. 1
Bill No. 1
Secondary Scope BoQ

| | | | |
|--|--|----|-------|
| . | | | |
| <u>PAINTWORK, ETC TO NEW WORK</u> | | | |
| <u>ON INTERNAL FLOATED PLASTER SURFACES</u> | | | |
| <u>One coat primer and two coats "Wall 'n All" emulsion paint:</u> | | | |
| 250 | Walls | m2 | 1,404 |
| <u>ON INTERNAL GYPSUM BOARD SURFACES</u> | | | |
| <u>Prime, sand, undercoat and apply two coats "PVA" paint, on:</u> | | | |
| 251 | Ceilings and beams | m2 | 541 |
| <u>ON FIBRE-CEMENT BOARD SURFACES</u> | | | |
| <u>Prime and apply two coats acrylic emulsion paint on:</u> | | | |
| 252 | Fascia and barge boards, including priming metal jointing strips | m2 | 123 |
| <u>ON METAL SURFACES</u> | | | |
| <u>Degrease, prepare and paint one coat "Metal Prime Grey", one coat universal undercoat and two coats "Midaflow" gloss enamel paint, on:</u> | | | |
| 253 | Door frames | m2 | 41 |
| <u>ON PVC</u> | | | |
| <u>Degrease, prepare and paint one coat primer, one coat universal undercoat and two coats gloss enamel paint, on:</u> | | | |
| 254 | On pipes | m2 | 28 |
| <u>ON WOOD SURFACES</u> | | | |
| <u>Pink wood primer</u> | | | |
| 255 | Back side of door frames not exceeding 150mm girth | m | 79 |
| Section No. 1 Bill No. 1 Secondary Scope BoQ | | | |

One coat wood primer, one coat alkyd based universal undercoat and one coat "Midaflow" gloss enamel paint, on:

| | | | |
|-----|---------------------------------------|----|-----|
| 256 | Doors | m2 | 204 |
| 257 | Door frames not exceeding 150mm girth | m | 79 |
| 258 | Cornices not exceeding 150mm girth | m | 534 |

BILL NO. 14 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 15

STRUCTURAL STEELWORK

PREAMBLES

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 and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said Model Preambles

SUPPLEMENTARY PREAMBLES

Specification:

All structural steel must comply with SANS 1200H (Degree of Accuracy II)

Section No. 1
Bill No. 1
Secondary Scope BoQ

All hot rolled structural steel sections must comply with SAN S 1432 grade 300W, unless otherwise specified on the drawings

Unless otherwise designated, all bolts and nuts will be grade 4.6 to SANS 135 and BS 916. 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

All connections must be welded all round with a 6mm fillet weld, unless otherwise specified on the drawings

Drawings and shop details:

The Contractor shall be responsible for preparing shop drawings and details which must be submitted to the Principal Agent for approval prior to commencement of fabrication.

Before commencing any fabrication, the steel fabricator must check the accessibility of the site and design the sizes of individual parts accordingly

Hot-dipped galvanizing:

After fabrication and prior to delivery to site, all steelwork described as hot-dipped galvanized, is to be descaled and thoroughly cleaned by pickling, after which it is to be hot dip galvanized in accordance with the requirements of SANS 763

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

STEEL COLUMNS AND BEAMS

Welded columns in single lengths with flat base, cap,

bearer and connection plates, bolted to concrete:

| | | | |
|-----|---------------------------|---|------|
| 259 | 100 x 100 x 3mm thick SHS | t | 0.70 |
|-----|---------------------------|---|------|

BOLTS, FASTENERS, ETC

| | | | |
|-----|-------------------------------|----|----|
| 260 | 12mm Diameter chemical anchor | No | 76 |
|-----|-------------------------------|----|----|

PAINTING

One coat of plascon synlac industrial enamel (Product

Section No. 1
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Secondary Scope BoQ

Code: SL 2000 series) to dry film thickness of 30-50um.
on:

261

Structural galvanised steel columns, beams, etc

m2

30

BILL NO. 15 TOTAL CARRIED TO SUMMARY

SECTION 2

BILL NO 16

FLOOR COVERINGS

PREAMBLES

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 and no claims arising from brevity of description of items fully described in the said Model

Preambles will be entertained

The following "Supplementary Preambles" are incorporated

in this bill to satisfy the requirements of the project and shall

take precedence over the provisions of the said Model

Preambles

SUPPLEMENTARY PREAMBLES

Fixing:

Floor coverings, wall linings, etc shall, where applicable, be

fixed with adhesive as recommended by the manufacturers

of the flooring, linings, etc

Sanding:

Sanding shall be done by using dustless sanders

Section No. 1

Bill No. 1

Secondary Scope BoQ

FLOOR COVERINGS

Fully flexible vinyl floor sheeting:

262 On floors

m2

446

BILL NO. 16 TOTAL CARRIED TO SUMMARY

SECTION 3

BILL NO 1

STORMWATER DRAINAGE

(ALL TRADES)

PREAMBLES

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The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said Model Preambles

SUPPLEMENTARY PREAMBLES

Stormwater channels:

Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc and disposal of surplus material on site

French drains:

Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site

Section No. 1
Bill No. 1
Secondary Scope BoQ

Septic tanks:

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

uPVC pipes and fittings:

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

uPVC pressure pipes and fittings:

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

High density polyethylene (HDPE) pipes and fittings:

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

"Polycop" polypropylene pipes:

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings. Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

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

Disinfection of water pipework:

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

"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps
Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

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

Laying, backfilling, bedding, etc of pipes:

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium-pressure pipelines SABS 1200LD : Sewers SABS 1200LE : Stormwater drainage Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB : Earthworks (Pipe trenches) Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes) Unless otherwise described, bedding of rigid pipes shall be Class B bedding

General:

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

As-built drawings:

Where required, the Contractor shall prepare an updated set of as-built drawings. At completion of the contract the Contractor shall hand these drawings to the Principal Agent for reproducing onto the originals for handing over to the Employer (provision for allowance of as-built drawings elsewhere)

SITE CLEARANCE, ETC

Site clearance:

| | | | |
|-----|--|----|-----|
| 263 | Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth | m2 | 120 |
|-----|--|----|-----|

EARTHWORKS

Excavations, etc.

| | | | |
|-----|-----------------------------|----|---|
| 264 | Reduced levels under floors | m3 | 5 |
| 265 | Tank stand base | m3 | 8 |

Extra over excavations in earth for excavation in:

| | | | |
|-----|-----------|----|---|
| 266 | Soft rock | m3 | 1 |
| 267 | Hard rock | m3 | 2 |

Section No. 1
Bill No. 1
Secondary Scope BoQ

| | | | |
|--|---|----|----|
| | <u>Extra over all excavations for carting away:</u> | | |
| 268 | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor | m3 | 13 |
| | <u>Risk of collapse of excavations:</u> | | |
| 269 | Sides of trench and hole excavations not exceeding 1,5m deep | m2 | 6 |
| | <u>Back excavation of vertical sides of excavations in earth for working space including backfilling compacted to 95% Mod AASHTO density:</u> | | |
| 270 | Not exceeding 0,5m deep for placing and removing formwork to walls against excavated face | m2 | 20 |
| | <u>Filling, etc.</u> | | |
| 271 | Selected imported G6 natural gravel 150mm layers and spread, level, water and compact to 93% Mod AASHTO density | m3 | 15 |
| 272 | Compaction of ground surface under pavings, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density | m2 | 74 |
| | <u>CONCRETE, FORMWORK AND REINFORCEMENT</u> | | |
| | <u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u> | | |
| | <u>25MPa/19mm concrete:</u> | | |
| 273 | Aprons | m3 | 6 |
| 274 | Surface bed | m3 | 5 |
| 275 | Tank stand raft | m3 | 8 |
| | <u>CONCRETE SUNDRIES</u> | | |
| Section No. 1 Bill No. 1 Secondary Scope BoQ | | | |

| | | | |
|--|--|----|-----|
| | <u>Finishing top surfaces of concrete smooth with wood trowel:</u> | | |
| 276 | Aprons to slope and falls to form V-shape in top of apron | m2 | 50 |
| | <u>Rough formwork to sides:</u> | | |
| 277 | Tank stand raft | m2 | 20 |
| 278 | Edges, risers, etc. not exceeding 300mm high or wide | m | 56 |
| | <u>Fabric reinforcement:</u> | | |
| 279 | Type 193 fabric reinforcement in concrete surface beds, etc | m2 | 74 |
| 280 | Type 395 fabric reinforcement in concrete surface beds, etc | m2 | 24 |
| | <u>Expansion joints with "Sondor Jointex" polyethylene expansion joint filler with tear-off strips in floors:</u> | | |
| 281 | 10mm Joints not exceeding 300mm high | m | 89 |
| | <u>BRICKWORK SUPERSTRUCTURE</u> | | |
| | <u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls, etc:</u> | | |
| 282 | One brick walls | m2 | 43 |
| | <u>2,5mm Brickwork reinforcement:</u> | | |
| 283 | 150mm Wide reinforcement built in horizontally | m | 120 |
| | <u>"Corobrick Firelight Satin" face bricks built in horizontal stretcher bond with recessed horizontal and vertical joints:</u> | | |
| 284 | Extra over brickwork for face brickwork | m2 | 24 |
| | <u>Brick-on-edge header course copings, sills, etc of fair face bricks pointed with flush joints faces:</u> | | |
| 285 | Brick-on-edge header course coping to one brick walls | m | 40 |
| Section No. 1 Bill No. 1 Secondary Scope BoQ | | | |

| | | | |
|---------------------|--|----|----|
| | <u>Sundries</u> | | |
| 286 | 10mm Diameter U-shaped galvanised high tensile steel anchor 500mm girth build 400mm deep into top of blockwork | No | 16 |
| | <u>SCREEDS</u> | | |
| | <u>Cement mortar:</u> | | |
| 287 | Average 50mm thick bedding to tank and floated to falls | m2 | 17 |
| | <u>EXTERNAL PLASTER</u> | | |
| | <u>Cement plaster steel floated, on blockwork:</u> | | |
| 288 | On walls | m2 | 40 |
| 289 | On narrow widths | m2 | 7 |
| | <u>ON EXTERNAL FLOATED PLASTER SURFACES</u> | | |
| | <u>One coat primer, one coat acrylic and two coats pure acrylic paint, on:</u> | | |
| 290 | Walls | m2 | 47 |
| | <u>PLUMBING</u> | | |
| | <u>PVC Polywater pipes:</u> | | |
| 291 | 12mm Pipe | m | 48 |
| | <u>Extra over PVC pipes for fittings:</u> | | |
| 292 | 12mm Fittings | No | 96 |
| | <u>uPVC Pipes from gutters</u> | | |
| 293 | 110mm Pipes | m | 24 |
| | <u>Extra over uPVC pipes for fittings:</u> | | |
| 294 | 110mm Bend | No | 12 |
| Section No. 1 | | | |
| Bill No. 1 | | | |
| Secondary Scope BoQ | | | |

| | | | |
|-----|--|--|-----|
| | <u>Tanks</u> | | |
| 295 | 5,000L "Jojo" low profile water tank on stand (stand elsewhere) with "Charlog pro close" PVC tap, filled half with water, tied down with four 8 gauge double twisted galvanised wires to galvanised bars (bars elsewhere) | No | 4 |
| | SECTION 3 | BILL NO. 1 TOTAL CARRIED TO SUMMARY | |
| | <u>BILL NO 2</u> | | |
| | <u>SOIL DRAINAGE</u> | | |
| | ----- | | |
| | <u>PREAMBLES</u> | | |
| | <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 and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained</u> | | |
| | ----- | | |
| | <u>SOIL DRAINAGE</u> | | |
| | <u>Heavy duty (Class 34) uPVC sewer and drain pipes:</u> | | |
| 296 | 110mm Pipes (no excavations) | m | 30 |
| 297 | 110mm Pipes laid in and including trenches not exceeding 1m deep | m | 200 |
| | <u>Extra over heavy duty (Class 34) uPVC sewer and drain pipes for fittings:</u> | | |
| 298 | 110mm Junction | No | 60 |
| 299 | 110mm Bend | No | 40 |
| 300 | 110mm Reducing junction | No | 84 |
| 301 | 110mm Access pipe | No | 48 |
| 302 | 110mm Rodding eye | No | 20 |
| | Section No. 1 Bill No. 1 Secondary Scope BoQ | | |

Soak way:

| | | | |
|-----|--|---|----|
| 303 | Soak way 900 x 700mm deep complete with excavations, pipes, backfill, etc. | m | 40 |
|-----|--|---|----|

Testing:

| | | | |
|-----|------------------------------|--|------|
| 304 | Testing soil drainage system | | Item |
|-----|------------------------------|--|------|

BILL NO. 2 TOTAL CARRIED TO SUMMARY

SECTION 3

BILL NO 3

ROADS AND PAVING

(ALL TRADES)

PREAMBLES

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SUPPLEMENTARY PREAMBLES

Nature of ground:

The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"

Should the Contractor encounter any "soft" or "hard" rock in the excavations, he shall immediately notify the Engineer who shall be the sole arbiter as to what constitutes "soft" or "hard" rock for final account purposes

Section No. 1
Bill No. 1
Secondary Scope BoQ

Subterranean water:

No subterranean water is expected

Excavation for working space in rock:

Notwithstanding clause 11 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

Carting away of excavated material:

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

Filling:

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

Testing:

Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D

Maintenance period:

The maintenance period to civil works such as roads, parking and related earthworks shall be twelve calendar months

SITE CLEARANCE, ETC

Section No. 1
Bill No. 1
Secondary Scope BoQ

| | | | |
|--|--|----|-----|
| | <u>Site clearance:</u> | | |
| 305 | Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth | m2 | 443 |
| | ----- | | |
| | <u>PAVINGS, ETC</u> | | |
| | <u>SUPPLEMENTARY PREAMBLES</u> | | |
| | <u>Testing of material and filling:</u> | | |
| | <u>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</u> | | |
| | <u>EARTHWORKS</u> | | |
| | <u>Excavate in earth not exceeding 2m deep:</u> | | |
| 306 | Reduced levels under floors | m3 | 122 |
| | <u>Extra over all excavations for carting away:</u> | | |
| 307 | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor | m3 | 122 |
| | <u>Compaction of surfaces:</u> | | |
| 308 | Compaction of ground surface under pavings, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod AASHTO density | m2 | 443 |
| | <u>Prescribed density tests on filling:</u> | | |
| 309 | "Modified AASHTO Density" test | No | 12 |
| | <u>Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasien 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/m2:</u> | | |
| 310 | Under paving, etc | m2 | 443 |
| Section No. 1 Bill No. 1 Secondary Scope BoQ | | | |

| | | | |
|--|--|------|------|
| | <u>G5 hardcore filling material supplied by the Contractor and compacted to 95% Mod AASHTO density:</u> | | |
| 311 | Under floors, steps, paving, etc | m3 | 122 |
| | <u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u> | | |
| | <u>25MPa/19mm concrete:</u> | | |
| 312 | Paving | m3 | 45 |
| 313 | 150 x 250mm Thickening to edge of paving including all necessary formwork, excavation, carting away, etc. | m | 144 |
| | <u>TEST CUBES</u> | | |
| 314 | Making and testing sets of three 150 x 150 x 150mm concrete strength test cubes | Sets | 18.0 |
| | <u>Finishing top surfaces of concrete smooth with wood trowel:</u> | | |
| 315 | Ramps to falls | m2 | 443 |
| | <u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u> | | |
| | <u>Rough formwork to sides:</u> | | |
| 316 | Edges, risers, etc. not exceeding 300mm high or wide | m | 144 |
| | <u>MOVEMENT JOINTS, ETC</u> | | |
| | <u>Expansion joints with "Sondor Jointex" polyethylene expansion joint filler with tear-off strips in floors:</u> | | |
| 317 | 10mm Joints not exceeding 300mm high | m | 111 |
| | <u>REINFORCEMENT</u> | | |
| | <u>Fabric reinforcement:</u> | | |
| 318 | Type 193 fabric reinforcement in concrete surface beds, etc | m2 | 443 |
| BILL NO. 3 TOTAL CARRIED TO SUMMARY | | | |
| Section No. 1 Bill No. 1 Secondary Scope BoQ | | | |

SECTION 3

BILL NO 4

FENCING

(ALL TRADES)

PREAMBLES

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 and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

SITE CLEARANCE, ETC

Site clearance:

| | | | |
|-----|--|----|-----|
| 319 | Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth | m2 | 459 |
|-----|--|----|-----|

FENCING

Galvanised diamond mesh with 50mm aperture of 2mm diameter wire tied to posts with 2mm mild steel wire

| | | | |
|-----|--|---|-----|
| 320 | Four strands of 1.6mm thick twisted double strand wire with 3 barbs incorporated in each twist every 150mm fixed to posts with 2.5mm galvanised binding wire, mechanically strain between straining posts and/or gate and corner posts | m | 253 |
| 321 | 700mm Aluzinc flat wrap fixed to 2 of 4 strings of barbed wire with wire ties | m | 253 |
| 322 | 50 x 50 x 2.5mm Mesh 1.8m high | m | 253 |

Section No. 1
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| | | | |
|----------------------------|--|--|----|
| 323 | 50mm Diameter x 2.8mm thick diagonal stay 2500mm long, flattened, drilled and bolted to posts with M12 x 150mm stay bolts at one end with 200 x 200 x 6mm flat section base plate to the other end, planted 380mm deep in and including 750 x 450 x 600mm high 20MPa 19mm mass concrete base, including excavations, backfilling, carting away, etc | No | 4 |
| 324 | 50mm Diameter x 2.8mm thick intermediate post 2400mm high with welded mushroom end cap, with 200 x 200 x 6mm flat section base plate with opening at the other end, planted 600mm deep in and including 450 x 450 x 900mm high 20MPa 19mm mass concrete base, including excavations, backfilling, carting away, etc | No | 56 |
| 325 | 100mm Diameter x 3mm thick straining- or gate post for 1800mm high fence, post 2400mm long with welded mushroom end cap, with 300 x 300 x 6mm flat section base plate with opening at the other end, planted 600mm deep in and including 450 x 450 x 900mm high 20MPa 19mm mass concrete base, including excavations, backfilling, carting away, etc | No | 18 |
| 326 | 1350 x 1800mm High pedestrian gate of 50mm diameter x 2.8mm thick tubular frame and one diagonal brace, filled in with 50 x 50 x 2.5mm weldmesh including 10mm fixing rods, cadmium plated security spikes screwed to top rail, complete with two hinges, bolts, barrel bolt, etc. | No | 2 |
| 327 | 4200 x 1800mm High double swing gate of 50mm diameter x 2.8mm thick tubular frame and diagonal brace per leave, filled in with 50 x 50 x 2.5mm weldmesh including 10mm fixing rods, cadmium plated security spikes screwed to top rail, complete with two hinges, bolts, barrel bolts, 100 x 100 x 200mm deep concrete block with sleeve, etc. | No | 1 |
| SECTION 4 | | BILL NO. 4 TOTAL CARRIED TO SUMMARY | |
| BILL NO. 1 | | | |
| SUBCONTRACT AMOUNTS | | | |
| ----- | | | |
| PREAMBLES | | | |
| General: | | | |
| Section No. 1 | | | |
| Bill No. 1 | | | |
| Secondary Scope BoQ | | | |

Subcontract amounts are net. Subcontract amounts are for material and equipment supplied and installed complete by firms of specialists

Each subcontract amount may comprise more than one element of work. Therefore, each subcontract amount may include for work to be carried out by more than one subcontractor

Profit:

Where stated, the Contractor may allow for profit if required

General attendance on nominated/selected subcontractors:

The item "General Attendance" which follows each subcontract amount for nominated/selected subcontractors' work, shall be deemed to cover all the Contractor's costs incurred in providing free of charge to the nominated/selected subcontractors, the following:

1. Access to the site and places where the subcontract work is to be carried out, including the reasonable use of any temporary personnel hoists erected by the Contractor

2. The provision of water and lighting and of single phase electric power to a position within 50 metres of the place where the subcontract work is to be carried out but excluding water, fuel and power for commissioning of any installation

3. The provision of an area for the subcontractor to establish temporary office accommodation and workshops and for the storage of plant and materials

4. The use of erected scaffolding belonging to the Contractor, in common with others having the like right, while it remains erected on the site

5. The use, at reasonable times by arrangement, of the Contractor's erected hoisting equipment

6. Making good in all trades and cleaning down and removal of rubbish on completion

Section No. 1
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Special attendance on nominated/selected subcontractors:

Where stated, special attendance, as set out in clause 8.1 of section B of the Preliminaries, will be described in detail in this bill

Builder's work:

Builder's work in connection with specialist services is given elsewhere in these bills of quantities

ELECTRICAL INSTALLATION

| | | | |
|-----|---|------|------------|
| 328 | Subcontract amount of R800 000,00 (Eight Hundred Thousand Rand) electrical installation | Item | 800,000.00 |
| 329 | Profit | Item | |
| 330 | General attendance | Item | |

JOINERY FITTINGS

| | | | |
|-----|--|------|------------|
| 331 | Subcontract amount of One Hundred and Fifty Thousand Rand joinery fittings | Item | 150,000.00 |
| 332 | Profit | Item | |
| 333 | General attendance | Item | |

METALWORK

| | | | |
|-----|---|------|------------|
| 334 | Subcontract amount of One Hundred Thousand Rand metalwork | Item | 100,000.00 |
| 335 | Profit | Item | |
| 336 | General attendance | Item | |

ADDITIONAL ALTERATIONS

| | | | |
|-----|--|------|-----------|
| 337 | Subcontract amount of Fifty Thousand Rand additional alterations | Item | 50,000.00 |
| 338 | Profit | Item | |

Section No. 1
Bill No. 1
Secondary Scope BoQ

| FINAL SUMMARY | | Amount | |
|---------------|--|--------|-----|
| Section No | | | |
| 1 | Section 1 - Preliminaries | | |
| 2 | Section 2 - Building Works | | |
| | Earthworks | | |
| | Concrete, Formwork and Reinforcement | | |
| | Precast Concrete | | |
| | Masonry | | |
| | Waterproofing | | |
| | Roof Coverings, Etc. | | |
| | Carpentry and Joinery | | |
| | Ceilings, Partitions and Access Flooring | | |
| | Ironmongery | | |
| | Metalwork | | |
| | Plastering | | |
| | Plumbing and Drainage | | |
| | Glazing | | |
| | Paintwork | | |
| | Structural Steel | | |
| | Floor Coverings | | |
| 3 | Section 3 - External Works | | |
| | Stormwater Drainage | | |
| | Soil Drainage | | |
| | Roads and Paving | | |
| | Fencing | | |
| 4 | Section 4 - Provisional Allowances | | |
| | SUB TOTAL | ST | |
| | CONTINGENCIES | | |
| | Allow the sum of 5% (five percent) of the above sub total for Contingencies to be spent as the Principal Agent may direct and to be deducted in whole or in part if not required | TAX | 5% |
| | TOTAL INCLUDING CONTINGENCIES | ST | |
| | VALUE ADDED TAX (15%) | TAX | 15% |
| | TOTAL | | |