Item No		Quantity	Rate	Amount

SECTION 1 - PRELIMINARIES

BILL NO. 1

PRELIMINARIES

- -

BUILDING AGREEMENT AND PRELIMINARIES

The JBCC Series 2000 Principal Building Agreement (March 2005 edition 4.1) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described together with the associated documentation as prepared by the Joint Building Contracts Committee

The JBCC Preliminaries (May 2005 edition) published by the Joint Building Contracts Committee 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

Carried Forward R

Brought Forward		R	
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			
Where Architect's or Engineer's specifications or drawings (where issued) are in conflict with the above Preambles, etc, 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			
Carried Forward		R	

Brought Forward		R	

PRICING OF PRELIMINARIES

If option A as set out in clause B10.3.1 hereinafter is to be used for the adjustment of the preliminaries each item priced is to be allocated to one or more of the three categories "F", "V" or "T" as the case may be below such item, where:

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)

Items not priced in these Preliminaries shall be deemed to be included elsewhere in these Bills of Quantities

- -

Carried Forward		R	

Section No. 1
Preliminaries
Bill No. 1
PRELIMINARIES

	Brought Forward		R	
	SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT			
	DEFINITIONS			
1	1.0 Definitions and Interpretation 1.0 Clause 1.1 Definition of "**Commencement Date**" is added: **"COMMENCEMENT DATE"** means the date that the **agreement**, made in terms of the Form of Offer and Acceptance, comes into effect Clause 1.1 Definition of "**Construction Period**" is amended by replacing it with the following: **"CONSTRUCTION PERIOD"** means the period commencing on the commencement date and ending on the date of practical completion Clause 1.1 Definition of "**Interest**" is amended by replacing it with the following: "**INTEREST**" means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be in terms of the legislation of the Republic of South Africa, and in particular: (a) In respect of interest owed by the **employer**, the interest rate as determined by the Minister of Justice and Constitutional Development, from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No. 55 of 1975), will apply; and (b) in respect of interest owed to the **employer**, the interest rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), will apply.			
	Carried Forward		R	

	Brought Forward		R	
	Clause 1.6.4 is amended by replacing it with the following: No clause F: ..... V: ..... T:	Item		
	OBJECTIVE AND PREPARATION			
2	2.0 Offer, Acceptance and Performance F: ..... V: ..... T:	Item		
3	3.0 Documents 3.7 is amended by the addition of the following: The Contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the site, to which the Employer, Principal Agent and agents shall have access at all times F: ..... V: ..... T:	Item		
4	4.0 Design Responsibility F: ..... V: ..... T:	Item		
5	5.0 Employer's Agent 5.1.2 is amended to include clauses 32.6.3, 34.3 and 34.4 F: ..... V: ..... T:	Item		
	Carried Forward		R	

Section No. 1
Preliminaries
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	Brought Forward			R	
6	6.0 Site Representative F: ..... V: ..... T:		Item		
7	7.0 Compliance with Regulations Note: The provisions herein include inter alia, compliance with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), and in particular with Regulation 5(1) requiring the compilation of a health and safety plan, as well as Regulation 6(1) requiring the appointment of a construction supervisor See also clause C10 of Section C - Specific Preliminaries F: ..... V: ..... T:		Item		
8	8.0 Works Risk F: ..... V: ..... T:		Item		
9	9.0 Indemnities F: ..... V: ..... T:		Item		
10	**10.0 WORKS INSURANCES** Clause 10.0 is amended by the addition of the following clauses:				
	Carried Forward			R	

Brought Forward		R	
10.5 Damage to the Works			
(a) Without in any way limiting the **contractor's** obligations in terms of the contract, the **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and security measures and other steps for the protection and security of the **works** as the **contractor** may deem necessary			
(b) The **contractor** shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**			
(c) The **employer** shall carry the risk of damage to or destruction of the **works** and material paid for by the **employer** that is the result of the excepted risks as set out in 10.6			
(d) Where the **employer** bears the risk in terms of this contract, the **contractor** shall, if requested to do so, reinstate any damage or destroyed portions of the **works** and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof			
10.6 Injury to Persons or loss of or damage to Properties			
(a) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or neglect of any person for whose actions the **employer** is legally liable			
Carried Forward		R	

	Brought Forward		R	
(b)	The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or neglect of any person for whose actions the **employer** is legally liable			
(c)	The **contractor** shall, upon receiving a **contract instruction** from the **principal agent,** cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the **employer** shall be entitled to cause it to be made good and to recover the cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**			
(d)	The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**			
(e)	Where the execution of the works involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor** shall and will remain adequately insured or insured against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed			
(f)	The **contractor** shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the **works**			
	Carried Forward		R	

Brought Forward		R	
10.7 High risk insurance In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply: 10.7.1 **Damage to the works** The **contractor** shall, from the commencement **date** of the **works** until the date of the **certificate of practical completion** bear the full risk of and hereby indemnifies and holds harmless the **employer** against any damage to and/or destruction of the **works** consequent upon a catastrophic ground movement as mentioned above. The **contractor** shall take such precautions and security measures and other steps for the protection of the **works** as he may deem necessary When so instructed to do so by the Principal Agent, the Contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works, at the contractor's own costs **10.7.2 Injury to persons or loss of or damage to property** The **contractor** shall be liable for and hereby indemnifies and holds harmless the **employer** against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above			
Carried Forward		R	

	Brought Forward		R	
	The **contractor** shall be liable for and hereby indemnifies the **employer** against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract			
	10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty-one (21) **calendar days** of the **commencement date** but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so			
	10.7.4 The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor's** default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the **employer** and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole			
	F: ..... V: ..... T:	Item		
11	11.0 Liability Insurances			
	F: ..... V: ..... T:	Item		
12	12.0 Effecting Insurances			
	F: ..... V: ..... T:	Item		
13	13.0 *No clause*	N/A		
	Carried Forward		R	

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	Brought Forward		R	
14	**14.0 SECURITY** Clauses 14.1 - 14.8 are amended by replacing them with the following: 14.1 In respect of contracts with a **contract sum** up to R1 million, the **security** to be submitted by the **contractor** to the **employer** will be as a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT) 14.1.1 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A) 14.1.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction security or portions thereof to the **contractor** 14.2 In respect of contracts with a **contract sum** above R1 million, the **contractor** shall have the right to select the **security** to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the **schedule**. Such **security** shall be provided to the **employer** within twenty-one (21) **calendar days** from **commencement date**. Should the **contractor** fail to select the **security** to be provided or should the **contractor** fail to provide the **employer** with the selected **security** within twenty-one (21) **calendar days** from **commencement date**, the **security** in terms of 14.7 shall be deemed to have been selected. 14.3 Where **security** as a cash deposit of ten per cent (10%) of the **contract sum** (excluding VAT) has been selected: 14.3.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**			
	Carried Forward		R	

Brought Forward		R	
14.3.2 Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to three per cent (3%) of the **contract value** (excluding VAT), and refund the balance to the **contractor**			
14.3.3 Within twenty-one (21) **calendar days** of the date of **final completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to one per cent (1%) of the **contract value** (excluding VAT) and refund the balance to the **contractor**			
14.3.4 On the date of payment of the amount in the final **payment certificate**, the **employer** shall refund the remainder of the cash deposit to the **contractor**			
14.3.5 The **employer** shall be entitled to recover expense and loss from the cash deposit in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the cash deposit **security** or portions thereof to the **contractor**			
14.3.6 The parties expressly agree that neither the **employer** nor the **contractor** shall be entitled to cede the rights to the deposit to any third party			
14.4 Where **security** as a variable construction guarantee of ten percent (10%) of the **contract sum** (excluding VAT) has been selected:			
14.4.1 The **contractor** shall furnish the **employer** with an acceptable variable construction guarantee equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**			
14.4.2 The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form included in the invitation to tender			
14.4.3 The **employer** shall return the variable construction guarantee to the **contractor** within fourteen (14) **calendar days** of it expiring			
Carried Forward		R	

Brought Forward		R	
14.4.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall issue a written demand in terms of the variable construction guarantee			
14.5 Where **security** as a fixed construction guarantee of five per cent (5%) of the **contract sum** (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected:			
14.5.1 The **contractor** shall furnish a fixed construction guarantee to the **employer** equal in value to five per cent (5%) of the **contract sum** (excluding VAT)			
14.5.2 The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of **practical completion**			
14.5.3 The **employer** shall return the fixed construction guarantee to the **contractor** within fourteen (14) **calendar days** of it expiring			
14.5.4 The payment reduction of the value certified in a **payment certificate** shall be in terms of 31.8 (A) and 34.8			
14.5.5 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall be entitled to issue a written demand in terms of the fixed construction guarantee or may recover from the payment reduction or may do both			
14.6 Where **security** as a cash deposit of five per cent (5%) of the **contract sum** (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT) has been selected:			
14.6.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to five per cent (5%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**			
14.6.2 Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall refund the cash deposit in total to the **contractor**			
Carried Forward		R	

Brought Forward		R	
14.6.3 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A)			
14.6.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** may issue a written notice in terms of 33.4 or may recover from the payment reduction or may do both			
14.7 Where **security** as a payment reduction of ten per cent (10%) of the value certified in the **payment certificate** (excluding VAT) has been selected:			
14.7.1 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(B)			
14.7.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction or portions thereof to the **contractor**			
14.8 Payments made by the guarantor to the **employer** in terms of the fixed or variable construction guarantee shall not prejudice the rights of the **employer** or **contractor** in terms of this **agreement**			
14.9 Should the **contractor** fail to furnish the **security** in terms of 14.2, the **employer**, in his sole discretion and without notification to the **contractor**, is entitled to change the **contractor's** selected form of **security** to that of a ten per cent (10%) payment reduction of the value certified in the payment certificate (excluding VAT), whereafter 14.7 shall be applicable			
F: ..... V: ..... T:	Item		
Carried Forward		R	

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	Brought Forward		R	
	EXECUTION			
15	**15.0 PREPARATION FOR AND EXECUTION OF THE WORKS** Clause 15.1.1 is amended by replacing it with: No Clause Clause 15.1 is amended by the addition of the following clause: 15.1.4 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within twenty-one (21) **calendar days** of **commencement date** Clause 15.2.1 is amended by replacing it with the following clause: Give the **contractor** possession of the **site** within ten (10) **working days** of the **contractor** complying with the terms of 15.1.2 and 15.1.4 F: ..... V: ..... T:	Item		
16	16.0 Access to the Works F: ..... V: ..... T:	Item		
17	17.0 Contract Instructions F: ..... V: ..... T:	Item		
18	18.0 Setting out of the Works F: ..... V: ..... T:	Item		
19	19.0 Assignment F: ..... V: ..... T:	Item		
	Carried Forward		R	

	Brought Forward			R	
20	20.0 Nominated Subcontractors 20.1.3 is amended by replacing it with the following: Note: See item B9.1 hereinafter for adjustment of attendance on nominated subcontractors executing work allowed for under provisional sums F: ..... V: ..... T:		Item		
21	21.0 Selected Subcontractors 21 is amended by replacing it with: No Clause F: ..... V: ..... T:		N/A		
22	22.0 Employer's Direct Contractors F: ..... V: ..... T:		Item		
23	23.0 Contractor's Domestic Subcontractors F: ..... V: ..... T:		Item		
	<u>COMPLETION</u>				
24	24.0 Practical Completion F: ..... V: ..... T:		Item		
25	25.0 Work's Completion F: ..... V: ..... T:		Item		
26	26.0 Final Completion F: ..... V: ..... T:		Item		
	Carried Forward			R	

	Brought Forward		R	
27	27.0 Latent Defects Liability Period F: ..... V: ..... T:	Item		
28	28.0 Sectional Completion F: ..... V: ..... T:	Item		
29	29.0 Revision of Date for Practical Completion F: ..... V: ..... T:	Item		
30	30.0 Penalty for Noncompletion F: ..... V: ..... T:	Item		
	PAYMENT			
31	**31.0 INTERIM PAYMENT TO THE CONTRACTOR** 31.8 is amended by replacing it with the following two alternative clauses: **Alternative A** 31.8(A) Where a **security** is selected in terms of 14.1; 14.5 or 14.6, the value of the **works** in terms of 31.4.1 and **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 31.8(A).1 Ninety-five per cent (95%) of such value in interim **payment certificates** issued up to the date of **practical completion** 31.8(A).2 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**			
	Carried Forward		R	

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31.8(A).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6			
31.8(A).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 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 final **payment certificate**			
Alternative B			
31.8(B) Where **security** is a payment reduction in terms of 14.7 the value of the **works** in terms of 31.4.1 and **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:			
31.8(B).1 Ninety per cent (90%) of such value in interim **payment certificates** issued up to the date of **practical completion**			
31.8(B).2 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**			
31.8(B).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6			
31.8(B).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 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 final **payment certificate**			
Clause 31.12 is amended by deleting the following:			
Payment shall be subject to the **employer** giving the **contractor** a tax invoice for the amount due			
F: ..... V: ..... T:	Item		
Carried Forward		R	

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32	32.0 Adjustment to the Contract Value Clauses 32.5.1, 32.5.4 and 32.5.7 are amended by the addition of the following at the end of the sentence: "due to no fault of the **contractor"** F: ..... V: ..... T:	Item		
33	**33.0 RECOVERY OF EXPENSE AND LOSS** Clause 33.2 is amended by adding the following clauses: 33.2.9 the **contractor's** failure or neglect to commence with the **works** on the dates prescribed in the contract 33.2.10 the **contractor's** failure or neglect to proceed with the **works** in terms of the contract 33.2.11 the **contractor's** failure or neglect for any reason to complete the **works** in accordance with the contract 33.2.12 the **contractor's** refusal or neglect to comply strictly with any of the conditions of contract or any **contract instructions** and/or orders in writing given in terms of the contract 33.2.13 the **contractor's** estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa F: ..... V: ..... T:	Item		
34	34.0 Final Account and Final Payment Clause 34.13 is amended by replacing "seven (7) **calendar days**" with "twenty-one (21) **calendar days**" and deleting the words "subject to the **employer** giving the **contractor** a tax invoice for the amount due" F: ..... V: ..... T:	Item		
	Carried Forward		R	

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35	35.0 Payment to other Parties F: ..... V: ..... T: ..... **CANCELLATION** **36.0 CANCELLATION BY EMPLOYER - CONTRACTOR'S DEFAULT** 36.3 is amended by removing the reference to "No clause" and replacing the words "**principal agent**" with "**employer**" 36.0 is amended by the addition of the following clause: 36.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever F: ..... V: ..... T:		Item		
36	**37.0 CANCELLATION BY EMPLOYER - LOSS AND DAMAGE** 37.0 is amended by the addition of the following clause: 37.5 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever F: ..... V: ..... T:		Item		
	Carried Forward			R	

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37	**38.0 CANCELLATION BY CONTRACTOR - EMPLOYER'S DEFAULT** Clause 38.0 is amended by the addition of the following clause: 38.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever F: ..... V: ..... T:			
38	39.0 Cancellation - Cessation of the Works F: ..... V: ..... T:	Item		
39	40.0 Dispute Settlement 40.2.2 is amended by replacing "one (1) year" with "three (3) years" 40.6 is amended by removing the reference to: No clause 40.7.1 is amended by replacing "(10)" with "(15)" and by the addition of the following: Whether or not mediation resolves the dispute, the parties shall bear their own cost concerning the mediation and equally share the costs of the mediator and related costs F: ..... V: ..... T:	Item		
	Carried Forward		R	

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	SUBSTITUTE PROVISIONS				
40	41.0 State Clauses F: ..... V: ..... T:		Item		
	CONTRACT VARIABLES				
	THE SCHEDULE (DPW04EC)				
41	42.0 E-TENDER INFORMATION Tenderers are referred to section "C1.2 Contract Data" on page 56 for variables pertaining to this contract F: ..... V: ..... T:		Item		
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	SECTION B: JBCC PRELIMINARIES				
	1.0 DEFINITIONS AND INTERPRETATION				
42	1.1 Definitions and interpretation F: ..... V: ..... T:		Item		
	2.0 DOCUMENTS				
43	2.1 Checking of documents F: ..... V: ..... T:		Item		
44	2.2* Provisional bills of quantities F: ..... V: ..... T:		Item		
45	2.3* Availability of construction documentation F: ..... V: ..... T:		Item		
46	2.4* Interests of agents F: ..... V: ..... T:		Item		
47	2.5 Priced documents F: ..... V: ..... T:		Item		
48	2.6 Tender submission Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Form of Offer and Acceptance (DPW07)" F: ..... V: ..... T:		Item		
	Carried Forward			R	

Section No. 1
Preliminaries
Bill No. 1
PRELIMINARIES

	Brought Forward		R	
	3.0 THE SITE			
49	3.*1 Defined works area F: ..... V: ..... T:	Item		
50	3.2* Geotechnical investigation F: ..... V: ..... T:	Item		
51	3.3 Inspection of the site Tenderers shall complete the Site Inspection Certificate (DPW16 EC) included in the tender documents and return the same with the tender submission. F: ..... V: ..... T:	Item		
52	3.4* Existing premises occupied F: ..... V: ..... T:	Item		
53	3.5* Previous work - dimensional accuracy F: ..... V: ..... T:	Item		
54	3.6 Previous work - defects F: ..... V: ..... T:	Item		
55	3.7* Services - known F: ..... V: ..... T:	Item		
56	3.8 Services - unknown F: ..... V: ..... T:	Item		
	Carried Forward		R	

	Brought Forward		R	
57	3.9* Protection of trees F: ..... V: ..... T:	Item		
58	3.10 Articles of value F: ..... V: ..... T:	Item		
59	3.11* Inspection of adjoining properties F: ..... V: ..... T:	Item		
	4.0 MANAGEMENT OF CONTRACT			
60	4.1 Management of the works F: ..... V: ..... T:	Item		
61	4.2 Programme for the works F: ..... V: ..... T:	Item		
62	4.3 Progress meetings F: ..... V: ..... T:	Item		
63	4.4 Technical meetings F: ..... V: ..... T:	Item		
64	4.5 Labour and plant records F: ..... V: ..... T:	Item		
	Carried Forward		R	

	Brought Forward		R	
	5.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURERS' INSTRUCTIONS			
65	5.1 Samples of materials F: ..... V: ..... T:	Item		
66	5.2 Workmanship samples F: ..... T: ..... V:	Item		
67	5.3 Shop drawings F: ..... V: ..... T:	Item		
68	5.4 Compliance with manufacturers' instructions F: ..... T: ..... V:	Item		
	6.0 TEMPORARY WORKS AND PLANT			
69	6.1 Deposits and fees F: ..... V: ..... T:	Item		
70	6.2* Enclosure of the works F: ..... V: ..... T:	Item		
71	6.3 Advertising F: ..... V: ..... T:	Item		
72	6.4* Plant, equipment, sheds and offices F: ..... V: ..... T:	Item		
	Carried Forward		R	

	Brought Forward		R	
73	6.5* Main notice board F: ..... V: ..... T:	Item		
74	6.6* Subcontractors' notice board F: ..... V: ..... T:	Item		
	7.0 TEMPORARY SERVICES			
75	7.1 Location F: ..... V: ..... T:	Item		
76	7.2& Water F: ..... V: ..... T:	Item		
77	7.3& Electricity F: ..... V: ..... T:	Item		
78	7.4& Telecommunication facilities F: ..... V: ..... T:	Item		
79	7.5& Ablution facilities F: ..... V: ..... T:	Item		
	8.0 PRIME COST AMOUNTS			
80	8.1 Responsibility for prime cost amounts F: ..... V: ..... T:	Item		
	Carried Forward		R	

	Brought Forward		R	
	9.0 ATTENDANCE ON N/S SUBCONTRACTORS			
81	9.1 General attendance The schedule rates providing for attendance on **nominated subcontractors** and other **contractors**, will be adjusted only if the scope of the work has changed F: ..... V: ..... T:	Item		
82	9.2* Special attendance F: ..... V: ..... T:	Item		
83	9.3 Commissioning - fuel, water and electricity F: ..... V: ..... T:	Item		
	10.0 FINANCIAL ASPECTS			
84	10.1 Statutory taxes, duties and levies F: ..... V: ..... T:	Item		
85	10.2 & Payment for preliminaries F: ..... V: ..... T:	Item		
86	10.3 & Adjustment of preliminaries F: ..... V: ..... T:	Item		
87	10.4 Payment certificate cash flow F: ..... V: ..... T:	Item		
	Carried Forward		R	

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	Brought Forward		R	
	11.0 GENERAL			
88	11.1* Protection of the works F: ..... V: ..... T:	Item		
89	11.2* Protection / isolation of existing / sectionally occupied works F: ..... V: ..... T:	Item		
90	11.3 Security of the works F: ..... V: ..... T:	Item		
91	11.4 Notice before covering work F: ..... V: ..... T:	Item		
92	11.5* Disturbance F: ..... V: ..... T:	Item		
93	11.6* Environmental disturbance F: ..... V: ..... T:	Item		
94	11.7 Works cleaning and clearing F: ..... V: ..... T:	Item		
95	11.8 Vermin F: ..... V: ..... T:	Item		
96	11.9 Overhand work F: ..... V: ..... T:	Item		
	Carried Forward		R	

	Brought Forward		R	
97	11.10 Instruction manuals and guarantees F: ..... V: ..... T:	Item		
98	11.11 As built information F: ..... V: ..... T:	Item		
99	11.12 Tenant installations F: ..... V: ..... T:	Item		
	12.0 SCHEDULE OF VARIABLES			
	12.1 PRE-TENDER INFORMATION			
	12.1.1 Provisional bills of quantities [2.2]			
	YES			
	12.1.2 Availability of construction documentation [2.3]			
	YES			
	12.1.3 Interests of agents [2.4]			
	N/A			
	12.1.4 Defined works area [3.1]			
	Give details and/or refer Architect's site plan drawing no where available			
	12.1.5 Geotechnical Investigation [3.2]			
	Geotechnical investigation report where available			
	Carried Forward		R	

Brought Forward		R	
12.1.6 Existing premises occupied [3.4] The existing buildings on the site is occupied by school learners and staff			
12.1.7 Previous work - dimensional accuracy [3.5] N/A			
12.1.8 Previous work - defects [3.6] N/A			
12.1.9 Services - known [3.7] Not known			
12.1.10 Protection of trees [3.9] Trees not being removed must be protected.			
12.1.11 Inspection of adjoining properties [3.11] This also applies to roads and services, etc.			
12.1.12 Enclosure of the works [6.2] No specific requirements			
12.1.13 Offices [6.4.3] The Contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the Principal Agent, minimum size 6 x 3 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times			
Carried Forward		R	

Brought Forward		R	
12.1.14 Main notice board [6.5] Provide ONE (1) noticeboards, eg: The Contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3 x 3m, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms for SA. All wording shall be inscribed in dark green painted "sans serif" lettering 12.1.15 Subcontractors notice board [6.6] NO 12.1.16 Water [7.2] Option A (by contractor) 12.1.17 Electricity [7.3] Option A (by contractor) 12.1.18 Telecommunications [7.4] Telephone - YES Facsimile - YES Email - YES 12.1.19 Ablution facilities [7.5] Option A (by contractor) 12.1.20 Protection of existing/sectionally occupied works [11.2] Protection is required YES			
Carried Forward		R	

Brought Forward		R	
12.1.21 Special attendance [9.2] N/A 12.1.22 Protection of the works [11.1] No specific requirements 12.1.23 Disturbance [11.5] 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 satifaction 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 ensure that the functioning of the existing School 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 12.1.24 Environmental disturbance [11.6] No specific requirements			
Carried Forward		R	

	Brought Forward		R	
	12.2 POST-TENDER INFORMATION			
	12.2.1 Payment of preliminaries			
	[10.2] Option A or B (post tender)			
	12.2.2 Adjustment of preliminaries			
	[10.3] Option A or B (post tender)			
	12.2.3 Additional agreed preliminaries items			
	Details: To be agreed post tender where relevant			
	Carried Forward		R	

	Brought Forward		R	
	SECTION C: SPECIFIC PRELIMINARIES			
	Section C contains specific preliminary items which apply to this contract except where N/A (Not Applicable) appears against an item			
	C1: CONFIDENTIALITY			
100	The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer to acquaint himself with the nature and extent of the **works** and the manner in which they are to be executed Should any part of the drawings not be clearly intelligible to the tenderer he shall, before submitting his tender, obtain clarification in writing from the **principal agent** F: ..... V: ..... T:	Item		
	C2: TRADE NAMES			
101	Wherever a trade name for any product has been described in the **bills of quantities**, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the **principal agent** being obtained prior to the closing date for submission of tenders If prior written approval for an alternative product is not obtained,it shall be deemed that the tenderer the product described has been tendered for F: ..... V: ..... T:	Item		
	Carried Forward		R	

	Brought Forward			R	
	C3: IMPORTED MATERIALS				
102	Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable) F: ..... V: ..... T:	Item			
	C4: SECURITY CHECK OF PERSONNEL				
103	The **principal agent** may require the **contractor** to have his personnel and workmen, or a certain number of them, security classified In the event of the **principal agent** requesting the removal of a person or persons from the **works** for security reasons, the **contractor** shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the **works** and the **site** and/or to any document or information relating to the **works** F: ..... V: ..... T:	Item			
	C5: CONTRACT INSTRUCTIONS				
104	Contract instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the Contractor F: ..... V: ..... T:	Item			
	Carried Forward			R	

	Brought Forward		R	
	C6: SITE LEVELS			
105	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		
	C7: UNAUTHORISED PERSONS ON SITE			
106	The Contractor shall not permit unauthorised persons onto and workmen to lodge on the site F: ..... V: ..... T:	Item		
	C8: PLANT AND LABOUR RECORD			
107	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		
	C9: USE OF LOCAL LABOUR FROM THE EMPLOYER'S AREAS OF OPERATION			
108	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 therof are to be provided in the tender documentation The total value of the work that is to be of a local labour nature may be a consideration in			
	Carried Forward		R	

Section No. 1
Preliminaries
Bill No. 1
PRELIMINARIES

Brought Forward		R	
the adjudication process. Once a tender is accepted the activities and number of persons stated in the above-mentioned schedule 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 will 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 immdiately to the Employer's representative			
- In respect to "Target Labour", the minimum rate for any and all workers contracted for this project shall be R120 per day			
F: ..... V: ..... T:	Item		
Carried Forward		R	

Section No. 1
Preliminaries
Bill No. 1
PRELIMINARIES

	Brought Forward		R	
	C10: COMMUNITY LIASON OFFICER			
109	It is a requirement of this Contract that a Community Liaison officer (CLO) be appointed for the area represented by the Tender. The function of the CLO shall be to represent the local community in matters concerning the use of local labour on the works and to assist with and facilitate communication between the Contractor, the Engineer and the local communities. The period of appointment of the CLO shall be as stated in the Contract for Temporary Employment as a Community Liaison officer referred to below. It must be noted that the date of commencement of temporary employment of the CLO shall be no later than the date of commencement of the Contract. The identification of the approved CLO to be appointed by the Contractor under the Contract shall be resolved by the Contractor, the particular Ward Councillors in collaboration with the Local Communities. It will be required, therefore, that the successful Tenderer (i.e. the Contractor) enter into a contract for the employment of the above-mentioned CLO, the parties to which will be the Contractor, the RDP/Development Forum and the CLO. To this end a specimen Form of Contract for the Temporary Employment as a Community Liaison Officer is included in this document; this Form of Contract sets out, inter alia, the agreement between the parties, the duties and conditions of employment of the CLO (including the rate of remuneration to be paid). **As said contract will be between the Contractor and the CLO, all costs involved shall be borne by the Contractor and the tender shall be deemed to include for this.** F: ..... T: ..... V:	Item		
	Carried Forward		R	

	Brought Forward			R	
	C11: GUARANTEES				
110	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 dated 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		
	Carried Forward			R	

	Brought Forward			R	
	C12: WARRANTIES FOR MATERIAL AND WORKMANSHIP				
111	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 practical completion of the contract The warranty shall state that workmanship, materials and installation are warranteed 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			
	C13: OVERTIME				
112	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			
	Carried Forward			R	

	Brought Forward		R	
	C14: CO-OPERATION OF CONTRACTOR FOR COST MANAGEMENT			
113	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		
	C15: FINANCIAL INVESTIGATION			
114	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		
	Carried Forward		R	

	Brought Forward			R
	C16:REINSTATEMENT OF DAMAGED AREAS ON THE SITE OR EMPLOYERS' PROPERTIES IN GENERAL CAUSED BY CONSTRUCTION OPERATIONS, ETC.			
115	Before commencing the works, the Contractor shall arrange with the Principal Agent to inspect, among others, existing buildings, structures, roads, pavings, kerbs, channels and fences on the site or Employers' properties in general The Contractor shall note in writing, all conditions that the works could affect and copy the Principal Agent accordingly. The Contractor should pay 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 Where instructed by the Principal Agent, levels and photographs shall be taken by the Contractor and the cost thereof shall be for the Employer's account.Certified copies shall be lodged with the Principal Agent 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	

SUMMARY OF CATEGORIES

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

- -

	Carried to Final Summary		R

Section No. 1
Preliminaries
Bill No. 1
PRELIMINARIES

Item No		Quantity	Rate	Amount

SECTION NO. 2

BILL NO.1

ALTERATIONS (PROVISIONAL)

- -

PREAMBLES

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

SUPPLEMENTARY PREAMBLES

View site:

Before submitting his tender, the Contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished.
No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained

Old materials to become property of the Contractor:

Old materials from alterations, except where described as to be re-used or handed over, become the property of the Contractor, who must allow credit for same in the last item of the "Alterations" trade

Carried Forward R

Brought Forward		R	
Old materials to be carted away: Old materials from the alterations, except where described as to be re-used or handed over, as well as all rubbish, etc must be regularly carted from the site and not be allowed to accumulate on or around the site			
Old materials to be re-used: None of the old materials are to be used for new work, except where specifically described as being set aside for re-use			
Handing over of materials: Where certain materials or articles from demolitions or alterations are described as to be "handed over to the Employer", it shall be taken to mean "handed over by the Contractor to the Principal Agent" and such materials or articles shall be properly stored by the Contractor until handing over thereof and shall include all necessary transport The Contractor must obtain an official receipt from the Principal Agent listing the materials or articles and dates of handing over Should the Contractor fail to submit the receipt when requested to do so, it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Employer for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor			
Explosives: No explosives whatsoever may be used for demolition purposes, unless otherwise stated			
Carried Forward		R	

Brought Forward		R	
GENERAL			
The contractor shall carry out the whole of the work with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide and erect any temporarytarpaulins and temporary plumbing that may be necessary during the progress of the works, all to the satisfaction of the Architect, and remove when directed.			
Any water supplies pipes and other piping that may be met withand found necessary to disconnect or cut, shall be effectually stopped of or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the Architect.			
Doors, fanlights, fittings, frames, linings, etc shall be thoroughly overhauled before re-fixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc and easing, oiling, adjusting and repairing ironmongery if necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted wood to match timber.			
Where doors, windows, etc are described as taken out this shall be understood to include for removal of all beads, architraves, ironmongery, etc and doors which are re-fixed are to be provided with new architraves (elsewhere measured).			
Prices for taking out and removing doors and frames shall include for removing door stops, cabin locks, etc and making good to match existing.			
With regard to building up openings in existing walls, cement screeds and pavings, granolithic, etc, shall be levelled and prepared for raising of brickwork.			
Allow for making good all existing plastered walls where damaged by furniture, etc, and stopping up all screw and holes before painting.			
Making good finishes shall be deemed to iclude making good of the brick and concrete surfaces onto which new finishes are applied, where necessary.			
Carried Forward		R	

	Brought Forward		R	
	The contractor will be required to take all dimensions affecting existing building on the site and he will be held solely responsible for the accuracy of all such dimensions.			
	Hazardous materials:			
	Demolitions of buildings, services, external works, site services, etc are to include for the safe removal and disposal of asbestos or asbestos products or other hazardous materials **by approved Registered Specialists**			
	- -			
	RENOVATIONS AND ALTERATIONS			
1	Budgetary Allowance of Five Hundred and Fifty Thousand Rand for renovations and alterations to existing toilet buildings	Item		550 000.00
	DEMOLITION OF EXISTING SEPTIC TANK			
2	Budgetary Allowance of One Hundred and Fifty Thousand Rand for demolition of existing septic tank	Item		150 000.00
	Carried to Final Summary		R	

Section No. 2
Alterations
Bill No. 1
ALTERATIONS

Item No		Quantity	Rate	Amount

SECTION NO. 3

BILL NO.1

EARTHWORKS (PROVISIONAL)

- -

PREAMBLES

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

SUPPLEMENTARY PREAMBLES

Nature of ground

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

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

The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".

Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.

Carried Forward R

Brought Forward		R	
A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured			
Subterranean water:			
No subterranean water is expected			
Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith			
Excavation for working space in rock:			
Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard 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 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material			
Carried Forward		R	

	Brought Forward			R	
	Testing:				
	Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D				
	- -				
	EXCAVATIONS, FILLING, ETC				
	EXCAVATIONS, ETC				
	Excavation in earth not exceeding 2m deep:				
1	Reduced levels under floors	m3	3		
2	Trenches	m3	11		
3	Holes	m3	68		
4	Trenches and holes for thickening under surface beds, etc	m3	2		
	Extra over trench and hole excavations in earth for excavation in:				
5	Soft rock	m3	8		
6	Hard rock	m3	4		
	Extra over all excavations for carting away:				
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	81		
	Risk of collapse of excavations:				
8	Sides of trench and hole excavations not exceeding 1,5m deep	m2	107		
	Keeping excavations free of water:				
9	Keeping excavations free of all water other than subterranean water		Item		
	FILLING ETC				
	Carried Forward			R	

	Brought Forward			R	
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:				
10	Backfilling to trenches, holes, etc	m3	4		
	G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:				
11	Under floors, steps, pavings, etc	m3	9		
	Compaction of surfaces:				
12	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	39		
	Prescribed density tests on filling:				
13	"Modified AASHTO Density" test	No	20		
	SOIL POISONING				
	Soil insecticide in accordance with SANS 5859:				
14	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	61		
15	To bottoms and sides of trenches, etc	m2	48		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 1
EARTHWORKS

Item No		Quantity	Rate	Amount

SECTION NO. 3

BILL NO.2

CONCRETE, FORMWORK AND REINFORCEMENT

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Cost of tests:

Breeze concrete:

Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated

Lightweight concrete:

Lightweight concrete shall have a density of 600kg/m^3 for the top 50mm and 400kg/m^3 for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm

Carried Forward R

	Brought Forward			R	
	Waterproof concrete:				
	"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight: 1. a cement/water ratio of minimum 1.9 and maximum 2.1 2. minimum OPC content of 300kg/m3 3. Polypropolene micro fibres added to concrete at rate of 182 million per m3				
	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				
	- -				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15MPa/19mm concrete:				
1	Surface blinding under footings and bases	m3	1		
	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	Carried Forward			R	

	Brought Forward			R	
	30MPa/19mm concrete:				
	Strip footings	m3	4		
	Surface beds on waterproofing	m3	4		
	Surface beds in tank bottoms	m3	6		
	TEST BLOCKS				
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	4		
	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete smooth with a steel trowel:				
3	Surface beds, slabs, etc	m2	61		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)				
	Rough formwork to sides:				
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	51		
	MOVEMENT JOINTS, ETC				
	Expansion joints with 10mm softboard between vertical concrete and brick surfaces:				
5	Not exceeding 300mm high to edges of surface beds	m	51		
	Saw-cut joints:				
6	6 x 10mm Saw-cut joints in top of concrete	m	61		
	REINFORCEMENT (PROVISIONAL)				
	Mild steel reinforcement to structural concrete work:				
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.10		
	Carried Forward			R	

	Brought Forward			R	
	High tensile steel reinforcement to structural concrete work:				
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.23		
	Fabric reinforcement:				
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	61		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 2
CONCRETE, FORMWORK AND REINFORCEMENT

Item No		Quantity	Rate	Amount

SECTION NO. 3

BILL NO.3

MASONRY

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

BRICKWORK

General:

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

Carried Forward R

	Brought Forward			R	
	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				
	- -				
	FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:				
1	One brick walls	m2	66		
	2,5mm Brickwork reinforcement:				
2	150mm Wide reinforcement built in horizontally	m	165		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
3	Extra over brickwork for face brickwork	m2	9		
	SUPERSTRUCTURE				
	Carried Forward			R	

	Brought Forward			R	
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:				
4	One brick walls	m2	72		
	BRICKWORK SUNDRIES				
	Joint forming material in movement joints:				
5	12mm Fibre board built in vertically through brick walls	m	63		
	2,5mm Brickwork reinforcement:				
6	75mm Wide reinforcement built in horizontally	m	87		
7	150mm Wide reinforcement built in horizontally	m	233		
	Prestressed fabricated concrete lintels, including necessary temporary supports:				
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	31		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
9	Half brick wall faced on both sides	m2	21		
10	Extra over brickwork for face brickwork	m2	106		
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	7		
12	Fair raking cutting	m	10		
	Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces				
13	150mm Wide sills set sloping and slightly projecting	m	5		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 3
MASONRY

Item No		Quantity	Rate	Amount

SECTION NO. 3

BILL NO.4

WATERPROOFING

- -

PREAMBLES

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 General Preambles will be entertained

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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

- -

Carried Forward R

	Brought Forward			R	
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):				
1	In walls	m2	303		
2	In walls vertically at reveals	m2	3		
	One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:				
3	Under surface beds	m2	27		
	JOINT SEALANTS ETC				
	Two- part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc				
4	6 x 10mm In saw cut joints in floors	m	61		
	White silicone sealing compound including backing cord, bond breaker, primer, etc				
5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [LI]	m	51		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 4
WATERPROOFING

Item No		Quantity	Rate	Amount
	SECTION NO. 3			
	BILL NO.5			
	ROOF COVERINGS			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	SUPPLEMENTARY PREAMBLES			
	Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer			
	All fixing holes shall be drilled and not punched			
	Roof covering accessories shall be manufactured from the same material as used for roof covering			
	- -			
	PROFILED METAL SHEETING AND ACCESSORIES			
	Carried Forward		R	

	Brought Forward			R	
	0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:				
1	Roof coverings with pitch not exceeding 25 degrees	m2	39		
	Accessories:				
2	Apex flashings 462mm girth	m	8		
	ROOF AND WALL INSULATION				
	"Sisalation 405" or similar approved residential grade aluminium foil based insulation:				
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2	39		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 5
ROOF COVERINGS

Item No		Quantity	Rate	Amount

SECTION NO. 3

BILL NO.6

CARPENTRY AND JOINERY

- -

PREAMBLES

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 General 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 General Preambles

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

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

Carried Forward R

				R	
	Brought Forward				
	Particle board				
	All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312				
	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.				
	- -				
	ROOFS, ETC				
	Sawn softwood grade 5:				
1	38 x 114mm Wall plates bolted	m	15		
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	47		
3	50 x 76mm Purlins	m	41		
	EAVES, VERGES, ETC				
	Carried Forward			R	

	Brought Forward			R	
	Medium density plain fibre-cement fascias and barge boards:				
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	m	18		
	DOORS, ETC				
	Wrought meranti doors hung to steel frames:				
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	No	5		
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	1		
7	44mm Framed batten door 914 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D3)	No	1		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 6
CARPENTRY AND JOINERY

Item No		Quantity	Rate	Amount

SECTION NO. 3

BILL NO.7

IRONMONGERY

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Proprietary items:

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

Locks:

Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock

Carried Forward R

	Brought Forward			R	
	Finishes to ironmongery:				
	Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AN 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 BBS Brushed stainless steel				
	- -				
	CATCHES, CABIN HOOKS, ETC				
1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	5		
	LOCKS				
	"Union Assa Abloy" or similar approved:				
2	50mm Brass padlock	No	2		
3	Four lever lockset	No	2		
4	"Ref. CZ80941SC" Indicator bolt	No	5		
	HANDLES				
	"Union Assa Abloy" or similar approved:				
5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	2.0		
	Carried Forward			R	

Section No. 3
FD5 Female Ablutions
Bill No. 7
IRONMONGERY

				R	
	Brought Forward				
	DOOR CLOSERS				
	"Dorma" or similar approved:				
6	"Dorma" TS73N/EN3-4 parallel arm door closer delayed closing-push side fitting	No	1		
	LETTERS, NAMEPLATES, ETC				
	"Dorma" or similar approved:				
7	DSS-131 Engraved "Female" information sign, plugged	No	1		
8	DSS-133 Engraved "Disabled" information sign, plugged	No	1		
	SUNDRIES				
9	25mm Diameter wall mounted door stop plugged	No	7		
	BATHROOM FITTINGS				
	"Vaal Paragon" or similar approved				
10	32mm Type 9 back grab rail 800mm long plugged	No	1		
11	32mm Type 8 side grab rail 900mm girth plugged	No	1		
	"Kimberley-Clark"or similar approved:				
12	"Ref. SQ2 code 405607B" white lockable toilet roll holder	No	6		
13	Brushed stainless steel body, rust resistant, she bin, approximately 330 x 280 x 180mm etc	No	6		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 7
IRONMONGERY

Item No		Quantity	Rate	Amount
	SECTION NO. 3			
	BILL NO.8			
	METALWORK			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	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			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres			
	Carried Forward		R	

Brought Forward		R	
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			
References:			
References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered			
• 21111/FSPS/S005			
and bound into the back of these bills of quantities			
Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained			
- -			
Carried Forward		R	

				R	
	Brought Forward				
	STEEL GATES, SCREENS, ETC				
	Welded screens and gates, to brickwalls:				
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	No	1		
2	Single gate and frame size to fit standard door, size 914 x 2032mm high	No	1		
	PRESSED STEEL DOOR FRAMES				
	1,6mm Double rebated frames suitable for half brick walls:				
3	Frame for door size 813 x 2032mm high	No	5		
	1,6mm Double rebated frames suitable for one brick walls:				
4	Frame for door size 813 x 2032mm high	No	1		
5	Frame for door size 914 x 2032mm high	No	1		
	STEEL WINDOWS, DOORS, ETC				
	Standard windows:				
6	Window type NE1, 533 x 654mm high (N1)	No	6		
7	Window type NE7, 1022 x 654mm high (N2)	No	2		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 8
METALWORK

Item No		Quantity	Rate	Amount

SECTION NO. 3

BILL NO.9

PLASTERING

- -

PREAMBLES

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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 Project Manager 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

Carried Forward R

Brought Forward		R	
Sample Panels A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes			
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			
Carried Forward		R	

Brought Forward		R	
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 throughly compacted and lightly wood floated to the required levels 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			
Carried Forward		R	

	Brought Forward			R	
	TINTED WHITE CEMENT SCREEDS				
	Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations				
	NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)				
	Coarse sand is to be used for these screeds				
	All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accoprdance with the manufacturer's instructions				
	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)				
	- -				
	CEMENT SCREEDS TO CONCRETE				
	Cement screeds steel trowelled, on concrete:				
1	30mm Thick to floors	m2	22		
	SPECIAL FLOOR COATING				
	Minimum two coats approved epoxy coat, on concrete:				
2	On screed	m2	22		
	Carried Forward			R	

	Brought Forward			R	
	Prepare all surfaces as neccessary, prime with "Flowprime" primer and apply 6mm thick anti-slip "Flowcrete Flowfresh HF" or similar approved heavy duty chemical resistant antimicrobial treated polyurethane resin floor screed of approved colour and applied by an approved specialist, on:				
3	On internal plastered pit walls and floors	m2	97		
	INTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork:				
4	On walls	m2	97		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 9
PLASTERING

Item No		Quantity	Rate	Amount

SECTION NO. 3

BILL NO.10

PLUMBING AND DRAINAGE (PROVISIONAL)

- -

PREAMBLES

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SUPPLEMENTARY PREAMBLES

Wire gratings:

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

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

Carried Forward R

Brought Forward		R	
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			
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 sealant and prices must include therefor			
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			
Carried Forward		R	

Brought Forward		R	
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 **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			
Carried Forward		R	

Brought Forward		R	
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 SANS 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			
Carried Forward		R	

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

	Brought Forward			R	
	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 Project Manager for reproducing onto the originals for handing over to the Employer (provision for allowance of as-built drawings elsewhere)				
	Proprietary items:				
	Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items				
	Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.				
	Prices are to be based on the specific products/articles specified.				
	On request, returnable samples are to be provided to the Project Manager for consideration				
	- -				
	RAINWATER DISPOSAL				
	0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:				
1	150 x150mm Box gutters	m	8		
2	100 x 75mm Rainwater pipes	m	5		
3	Extra over gutter for stopped end	No	2		
	Carried Forward			R	

	Brought Forward			R	
4	Extra over gutter for outlet for 100 x 75mm pipe	No	2		
5	Extra over rainwater pipe for bend	No	2		
6	Extra over rainwater pipe for shoe	No	2		
7	Extra over rainwater pipe for eaves or plinth offset	No	2		
	Carried Forward			R	

Section No. 3
FD5 Female Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

	Brought Forward			R	
	SANITARY FITTINGS				
	Supply and install "Enviroloo systems" or similar approved:				
8	"Enviro Loo System FG-1040 STDCA/A Standard" strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvered inlets (PL.1), drying plate (PL.2), two x air inlets (PL.3), toilet pan, seat and lid (PL.4), 3500mm long outlet vent pipe (PL.5), ventilation extraction unit (PL.6) fixed to wall with vent wall bracket (PL.7), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary interconnector piping between multiple tanks, emergency outlet piping, etc	No	6		
	Precast concrete wash trough:				
9	Standard SABS approved Pre-Cast Concrete Double Wash Trough, 1080 x 650 x 850mm high with support legs fitted with standard 3/4 Brass Garden Taps, including all necessary pipework including soak away approximately 10 meters away from the wash trough, sized at 1000 x 1000 x 1000mm covered with "bidim" complete etc	No	2		
	TRAPS, ETC				
	uPVC:				
10	40 x 40mm Double bowl wash trough or sink reseal "P" or "S" trap combination	No	2		
	TAPS, VALVES, ETC				
	"Cobra Watertech" or similar approved:				
11	19mm chrome plated push button taps to wash troughs	No	4		
12	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	4		
	SANITARY PLUMBING				
	Carried Forward			R	

				R	
	Brought Forward				
	uPVC pipes:				
13	50mm Pipes	m	4		
14	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	4		
	Extra over uPVC pipes for fittings:				
15	50mm Bend	No	2		
16	50mm Junction	No	2		
17	110mm Bend	No	2		
18	110mm Junction	No	2		
	WATER SUPPLIES				
	Class 1 copper pipes with capillary couplings:				
19	15mm Pipe fixed to walls, in chases, etc	m	10		
20	Ditto, but 22mm diameter	m	20		
	Extra over Class 1 copper pipes for capillary fittings:				
21	15mm Fittings	No	4		
22	22mm Fittings	No	4		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

Item No			Quantity	Rate	Amount
	SECTION NO. 3				
	BILL NO.11				
	GLAZING				
	- -				
	PREAMBLES				
	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 General 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 General 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)				
	- -				
	GLAZING TO STEEL WITH PUTTY				
	6,38mm Obscure safety glass:				
1	Panes not exceeding 0,1m²	m2	7		
	Carried Forward to Summary of Section No. 3			R	

Item No		Quantity	Rate	Amount
	SECTION NO. 3			
	BILL NO.12			
	PAINTWORK			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	SUPPLEMENTARY PREAMBLES			
	PREPARATORY WORK TO EXISTING WORK			
	Previously painted plastered surfaces:			
	Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth			
	Previously painted metal surfaces:			
	Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal			
	Carried Forward		R	

	Brought Forward			R	
	Previously painted wood surfaces:				
	Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth				
	PAINT SPECIFICATIONS				
	All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described				
	COLOURS				
	When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied				
	Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group				
	- -				
	PAINTWORK, ETC TO NEW WORK				
	ON FIBRE-CEMENT BOARD SURFACES				
	One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:				
1	Fascias and barge boards, including priming metal jointing strips	m2	5		
	METAL SURFACES WITH				
	One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:				
2	Door frames	m2	13		
	Carried Forward			R	

	Brought Forward			R	
3	Windows	m2	7		
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7		
5	Extra over for paintwork in the "Deep" colour group	m2	27		
	ON WOOD SURFACES				
	One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:				
6	Doors	m2	25		
7	Roof timbers at eaves and verges	m2	29		
8	Extra over for paintwork in the "Deep" colour group	m2	54		
	Carried Forward to Summary of Section No. 3			R	

Section No. 3
FD5 Female Ablutions
Bill No. 12
PAINTWORK

SECTION SUMMARY - FD5 Female Ablutions

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Carried to Final Summary R

Section No. 3
FD5 Female Ablutions

Item No		Quantity	Rate	Amount

SECTION NO. 4

BILL NO.1

EARTHWORKS (PROVISIONAL)

- -

PREAMBLES

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

SUPPLEMENTARY PREAMBLES

Nature of ground

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

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

The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".

Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.

Carried Forward R

Brought Forward		R	
A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured			
Subterranean water:			
No subterranean water is expected			
Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith			
Excavation for working space in rock:			
Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard 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 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material			
Carried Forward		R	

	Brought Forward			R	
	Testing:				
	Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D				
	- -				
	EXCAVATIONS, FILLING, ETC				
	EXCAVATIONS, ETC				
	Excavation in earth not exceeding 2m deep:				
1	Reduced levels under floors	m3	4		
2	Trenches	m3	10		
3	Trenches and holes for thickening under surface beds, etc	m3	3		
	Extra over trench and hole excavations in earth for excavation in:				
4	Soft rock	m3	1		
5	Hard rock	m3	1		
	Extra over all excavations for carting away:				
6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	14		
	Risk of collapse of excavations:				
7	Sides of trench and hole excavations not exceeding 1,5m deep	m2	29		
	Keeping excavations free of water:				
8	Keeping excavations free of all water other than subterranean water		Item		
	FILLING ETC				
	Carried Forward			R	

	Brought Forward			R	
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:				
9	Backfilling to trenches, holes, etc	m3	3		
	G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:				
10	Under floors, steps, pavings, etc	m3	4		
	Compaction of surfaces:				
11	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	37		
	Prescribed density tests on filling:				
12	"Modified AASHTO Density" test	No	14		
	SOIL POISONING				
	Soil insecticide in accordance with SANS 5859:				
13	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	37		
14	To bottoms and sides of trenches, etc	m2	46		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 1
EARTHWORKS

Item No		Quantity	Rate	Amount

SECTION NO. 4

BILL NO.2

CONCRETE, FORMWORK AND REINFORCEMENT

- -

PREAMBLES

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 General Preambles will be entertained

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SUPPLEMENTARY PREAMBLES

Cost of tests:

Breeze concrete:

Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated

Lightweight concrete:

Lightweight concrete shall have a density of 600kg/m^3 for the top 50mm and 400kg/m^3 for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm

Carried Forward R

	Brought Forward			R	
	Waterproof concrete:				
	"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight: 1. a cement/water ratio of minimum 1.9 and maximum 2.1 2. minimum OPC content of 300kg/m3 3. Polypropolene micro fibres added to concrete at rate of 182 million per m3				
	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				
	- -				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15MPa/19mm concrete:				
1	Surface blinding under footings and bases	m3	1		
	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	Carried Forward			R	

	Brought Forward			R	
	30MPa/19mm concrete:				
	Strip footings	m3	4		
	Surface beds on waterproofing	m3	6		
	TEST BLOCKS				
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	3		
	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete smooth with a steel trowel:				
3	Surface beds, slabs, etc	m2	28		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)				
	Rough formwork to sides:				
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	48		
	MOVEMENT JOINTS, ETC				
	Expansion joints with 10mm softboard between vertical concrete and brick surfaces:				
5	Not exceeding 300mm high to edges of surface beds	m	63		
	Saw-cut joints:				
6	6 x 10mm Saw-cut joints in top of concrete	m	95		
	REINFORCEMENT (PROVISIONAL)				
	Mild steel reinforcement to structural concrete work:				
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.09		
	Carried Forward			R	

	Brought Forward			R	
	High tensile steel reinforcement to structural concrete work:				
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.22		
	Fabric reinforcement:				
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	28		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 2
CONCRETE, FORMWORK AND REINFORCEMENT

Item No		Quantity	Rate	Amount

SECTION NO. 4

BILL NO.3

MASONRY

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

BRICKWORK

General:

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

Carried Forward R

	Brought Forward			R	
	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				
	- -				
	FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:				
1	One brick walls	m2	12		
	2,5mm Brickwork reinforcement:				
2	150mm Wide reinforcement built in horizontally	m	71		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
3	Extra over brickwork for face brickwork	m2	4		
	SUPERSTRUCTURE				
	Carried Forward			R	

	Brought Forward			R	
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:				
4	One brick walls	m2	67		
	BRICKWORK SUNDRIES				
	Joint forming material in movement joints:				
5	12mm Fibre board built in vertically through brick walls	m	60		
	2,5mm Brickwork reinforcement:				
6	75mm Wide reinforcement built in horizontally	m	108		
7	150mm Wide reinforcement built in horizontally	m	222		
	Prestressed fabricated concrete lintels, including necessary temporary supports:				
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	41		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
9	Half brick wall faced on both sides	m2	26		
10	Extra over brickwork for face brickwork	m2	113		
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	10		
12	Fair raking cutting	m	10		
	Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces				
13	150mm Wide sills set sloping and slightly projecting	m	8		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 3
MASONRY

Item No		Quantity	Rate	Amount
	SECTION NO. 4			
	BILL NO.4			
	WATERPROOFING			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	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			
	- -			
	Carried Forward		R	

	Brought Forward			R	
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):				
1	In walls	m2	69		
2	In walls vertically at reveals	m2	3		
	One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:				
3	Under surface beds	m2	34		
	JOINT SEALANTS ETC				
	Two- part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc				
4	6 x 10mm In saw cut joints in floors	m	95		
	White silicone sealing compound including backing cord, bond breaker, primer, etc				
5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [LI]	m	63		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 4
WATERPROOFING

Item No		Quantity	Rate	Amount
	SECTION NO. 4			
	BILL NO.5			
	ROOF COVERINGS			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	SUPPLEMENTARY PREAMBLES			
	Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer			
	All fixing holes shall be drilled and not punched			
	Roof covering accessories shall be manufactured from the same material as used for roof covering			
	- -			
	PROFILED METAL SHEETING AND ACCESSORIES			
	Carried Forward		R	

				R	
	Brought Forward				
	0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:				
1	Roof coverings with pitch not exceeding 25 degrees	m2	45		
	Accessories:				
2	Apex flashings 462mm girth	m	9		
	ROOF AND WALL INSULATION				
	"Sisalation 405" or similar approved residential grade aluminium foil based insulation:				
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2	45		
	Carried Forward to Summary of Section No. 4			R	

Item No		Quantity	Rate	Amount

SECTION NO. 4

BILL NO.6

CARPENTRY AND JOINERY

- -

PREAMBLES

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 General 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 General Preambles

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

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

Carried Forward R

	Brought Forward			R	
	Particle board				
	All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312				
	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.				
	- -				
	ROOFS, ETC				
	Sawn softwood grade 5:				
1	38 x 114mm Wall plates bolted	m	17		
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	53		
3	50 x 76mm Purlins	m	49		
	EAVES, VERGES, ETC				
	Carried Forward			R	

	Brought Forward			R	
	Medium density plain fibre-cement fascias and barge boards:				
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	m	19		
	DOORS, ETC				
	Wrought meranti doors hung to steel frames:				
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	No	6		
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	1		
7	44mm Framed batten door 914 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D3)	No	1		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 6
CARPENTRY AND JOINERY

Item No		Quantity	Rate	Amount
	SECTION NO. 4			
	BILL NO.7			
	IRONMONGERY			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	SUPPLEMENTARY PREAMBLES			
	Proprietary items:			
	Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items			
	Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.			
	Prices are to be based on the specific products/articles specified.			
	On request, returnable samples are to be provided to the Project Manager for consideration			
	Locks:			
	Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock			
	Carried Forward		R	

	Brought Forward			R	
	Finishes to ironmongery:				
	Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AN 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 BBS Brushed stainless steel				
	- -				
	CATCHES, CABIN HOOKS, ETC				
1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	6		
	LOCKS				
	"Union Assa Abloy" or similar approved:				
2	50mm Brass padlock	No	2		
3	Four lever lockset	No	2		
4	"Ref. CZ80941SC" Indicator bolt	No	6		
	HANDLES				
	"Union Assa Abloy" or similar approved:				
5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	2.0		
	Carried Forward			R	

				R	
	Brought Forward				
	DOOR CLOSERS				
	"Dorma" or similar approved:				
6	"Dorma" TS73N/EN3-4 parallel arm door closer delayed closing-push side fitting	No	1		
	LETTERS, NAMEPLATES, ETC				
	"Dorma" or similar approved:				
7	DSS-131 Engraved "Female" information sign, plugged	No	1		
8	DSS-133 Engraved "Disabled" information sign, plugged	No	1		
	SUNDRIES				
9	25mm Diameter wall mounted door stop plugged	No	8		
	BATHROOM FITTINGS				
	"Vaal Paragon" or similar approved				
10	32mm Type 9 back grab rail 800mm long plugged	No	1		
11	32mm Type 8 side grab rail 900mm girth plugged	No	1		
	"Kimberley-Clark"or similar approved:				
12	"Ref. SQ2 code 405607B" white lockable toilet roll holder	No	7		
13	Brushed stainless steel body, rust resistant, she bin, approximately 330 x 280 x 180mm etc	No	7		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 7
IRONMONGERY

Item No		Quantity	Rate	Amount
	SECTION NO. 4			
	BILL NO.8			
	METALWORK			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	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			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres			
	Carried Forward		R	

Brought Forward		R	
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 **References:** References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered • 21111/FSPS/S005 and bound into the back of these bills of quantities Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained -			
Carried Forward		R	

	Brought Forward			R	
	STEEL GATES, SCREENS, ETC				
	Welded screens and gates, to brickwalls:				
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	No	1		
2	Single gate and frame size to fit standard door, size 914 x 2032mm high	No	1		
	PRESSED STEEL DOOR FRAMES				
	1,6mm Double rebated frames suitable for half brick walls:				
3	Frame for door size 813 x 2032mm high	No	6		
	1,6mm Double rebated frames suitable for one brick walls:				
4	Frame for door size 813 x 2032mm high	No	1		
5	Frame for door size 914 x 2032mm high	No	1		
	STEEL WINDOWS, DOORS, ETC				
	Standard windows:				
6	Window type NE1, 533 x 654mm high (N1)	No	7		
7	Window type NE7, 1022 x 654mm high (N2)	No	4		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 8
METALWORK

Item No		Quantity	Rate	Amount
	SECTION NO. 4			
	BILL NO.9			
	PLASTERING			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	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 Project Manager 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			
	Carried Forward		R	

Brought Forward		R	
Sample Panels A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes			
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			
Carried Forward		R	

Brought Forward		R	
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 throughly compacted and lightly wood floated to the required levels 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			
Carried Forward		R	

	Brought Forward			R	
	TINTED WHITE CEMENT SCREEDS				
	Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations				
	NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)				
	Coarse sand is to be used for these screeds				
	All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accoprdance with the manufacturer's instructions				
	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)				
	- -				
	CEMENT SCREEDS TO CONCRETE				
	Cement screeds steel trowelled, on concrete:				
1	30mm Thick to floors	m2	28		
	FLOOR AND WALL SEALERS				
	Minimum two coats approved epoxy coat, on concrete:				
2	On screed	m2	28		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 9
PLASTERING

Item No		Quantity	Rate	Amount

SECTION NO. 4

BILL NO.10

PLUMBING AND DRAINAGE (PROVISIONAL)

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Wire gratings:

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

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

Carried Forward R

Brought Forward		R	
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			
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 sealant and prices must include therefor			
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			
Carried Forward		R	

Brought Forward		R	
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 **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			
Carried Forward		R	

Brought Forward		R	
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 SANS 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			
Carried Forward		R	

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

	Brought Forward			R	
	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 Project Manager for reproducing onto the originals for handing over to the Employer (provision for allowance of as-built drawings elsewhere)				
	Proprietary items:				
	Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items				
	Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.				
	Prices are to be based on the specific products/articles specified.				
	On request, returnable samples are to be provided to the Project Manager for consideration				
	- -				
	RAINWATER DISPOSAL				
	0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:				
1	150 x150mm Box gutters	m	9		
2	100 x 75mm Rainwater pipes	m	5		
3	Extra over gutter for stopped end	No	2		
	Carried Forward			R	

	Brought Forward			R	
4	Extra over gutter for outlet for 100 x 75mm pipe	No	2		
5	Extra over rainwater pipe for bend	No	2		
6	Extra over rainwater pipe for shoe	No	2		
7	Extra over rainwater pipe for eaves or plinth offset	No	2		
	Carried Forward			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

	Brought Forward			R	
	SANITARY FITTINGS				
	"Vaal" or similar approved:				
8	455 x 290mm "Hibiscus" 7050 wash hand basin bolted to wall	No	4		
9	"Daisy Elite" 772403 close-coupled WC suite comprising pan with double flap heavy duty thermoset seat (Code: 8531Z0) and matching 9 litre cistern	No	6		
10	"Pearl Paraplegic" 7300SC paraplegic WC suite with lid, fitments, purpose made CP side flush lever and purpose made double flap white epoxy painted wooden seat	No	1		
	TRAPS, ETC				
	"Cobra Watertech" or similar approved:				
11	50mm Code 365 CP bottle trap	No	4		
	TAPS, VALVES, ETC				
	"Cobra Watertech" or similar approved:				
12	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	11		
13	15mm Code 503-21CP elbow action pillar tap	No	4		
	SANITARY PLUMBING				
	uPVC pipes:				
14	50mm Pipes	m	20		
15	110mm Pipes	m	35		
16	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	26		
17	Ditto, but 110mm diameter	m	46		
	Carried Forward			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

	Brought Forward				R
	Extra over uPVC pipes for fittings:				
18	50mm Bend	No	8		
19	50mm Junction	No	8		
20	50mm Junction with cleaning eye and lid	No	8		
21	110mm Straight pan connector	No	7		
22	110mm Bend	No	14		
23	110mm Junction	No	14		
24	110mm Reducing junction	No	21		
25	110mm Access bend	No	7		
26	110mm Double junction	No	21		
27	110mm "GI Two-way" vent valve	No	7		
	Testing:				
28	Testing waste pipe system		Item		
	WATER SUPPLIES				
	Class 1 copper pipes with capillary couplings:				
29	15mm Pipe fixed to walls, in chases, etc	m	33		
30	Ditto, but 22mm diameter	m	55		
	Extra over Class 1 copper pipes for capillary fittings:				
31	15mm Fittings	No	55		
32	22mm Fittings	No	55		
	Testing:				
33	Testing water pipe system		Item		
	Carried Forward to Summary of Section No. 4				R

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

Item No			Quantity	Rate	Amount
	SECTION NO. 4				
	BILL NO.11				
	GLAZING				
	- -				
	PREAMBLES				
	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 General 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 General 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)				
	- -				
	GLAZING TO STEEL WITH PUTTY				
	6,38mm Obscure safety glass:				
1	Panes not exceeding 0,1m²	m2	5		
	Carried Forward to Summary of Section No. 4			R	

Item No		Quantity	Rate	Amount

SECTION NO. 4

BILL NO.12

PAINTWORK

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PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

PREPARATORY WORK TO EXISTING WORK

Previously painted plastered surfaces:

Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth

Previously painted metal surfaces:

Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal

Carried Forward R

	Brought Forward			R	
	Previously painted wood surfaces: Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth **PAINT SPECIFICATIONS** All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described **COLOURS** When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group - **PAINTWORK, ETC TO NEW WORK** **ON FIBRE-CEMENT BOARD SURFACES** **One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:**				
1	Fascias and barge boards, including priming metal jointing strips	m2	5		
	METAL SURFACES WITH **One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:**				
2	Door frames	m2	15		
	Carried Forward			R	

	Brought Forward			R	
3	Windows	m2	10		
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7		
5	Extra over for paintwork in the "Deep" colour group	m2	33		
	ON WOOD SURFACES				
	One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:				
6	Doors	m2	29		
7	Roof timbers at eaves and verges	m2	33		
8	Extra over for paintwork in the "Deep" colour group	m2	62		
	Carried Forward to Summary of Section No. 4			R	

Section No. 4
SFD6 Female Educators Ablutions
Bill No. 12
PAINTWORK

SECTION SUMMARY - SFD6 Female Educators Ablutions

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Carried to Final Summary R

Section No. 4
SFD6 Female Educators Ablutions

Item No		Quantity	Rate	Amount

SECTION NO. 5

BILL NO.1

EARTHWORKS (PROVISIONAL)

- -

PREAMBLES

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

SUPPLEMENTARY PREAMBLES

Nature of ground

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

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

The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".

Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.

Carried Forward R

Brought Forward		R	
A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured			
Subterranean water:			
No subterranean water is expected			
Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith			
Excavation for working space in rock:			
Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard 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 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material			
Carried Forward		R	

	Brought Forward			R	
	Testing:				
	Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D				
	- -				
	EXCAVATIONS, FILLING, ETC				
	EXCAVATIONS, ETC				
	Excavation in earth not exceeding 2m deep:				
1	Reduced levels under floors	m3	3		
2	Trenches	m3	11		
3	Holes	m3	26		
4	Trenches and holes for thickening under surface beds, etc	m3	2		
	Extra over trench and hole excavations in earth for excavation in:				
5	Soft rock	m3	4		
6	Hard rock	m3	2		
	Extra over all excavations for carting away:				
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	37		
	Risk of collapse of excavations:				
8	Sides of trench and hole excavations not exceeding 1,5m deep	m2	61		
	Keeping excavations free of water:				
9	Keeping excavations free of all water other than subterranean water		Item		
	FILLING ETC				
	Carried Forward			R	

	Brought Forward			R	
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:				
10	Backfilling to trenches, holes, etc	m3	4		
	G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:				
11	Under floors, steps, pavings, etc	m3	5		
	Compaction of surfaces:				
12	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	33		
	Prescribed density tests on filling:				
13	"Modified AASHTO Density" test	No	5		
	SOIL POISONING				
	Soil insecticide in accordance with SANS 5859:				
14	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	63		
15	To bottoms and sides of trenches, etc	m2	48		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 1
EARTHWORKS

Item No		Quantity	Rate	Amount

SECTION NO. 5

BILL NO.2

CONCRETE, FORMWORK AND REINFORCEMENT

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Cost of tests:

Breeze concrete:

Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated

Lightweight concrete:

Lightweight concrete shall have a density of 600kg/m^3 for the top 50mm and 400kg/m^3 for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm

Carried Forward R

	Brought Forward			R	
	Waterproof concrete:				
	"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight: 1. a cement/water ratio of minimum 1.9 and maximum 2.1 2. minimum OPC content of 300kg/m3 3. Polypropolene micro fibres added to concrete at rate of 182 million per m3				
	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				
	- -				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15MPa/19mm concrete:				
1	Surface blinding under footings and bases	m3	1		
	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	Carried Forward			R	

	Brought Forward			R	
	30MPa/19mm concrete:				
	Strip footings	m3	4		
	Surface beds on waterproofing	m3	3		
	Surface beds in tank bottoms	m3	2		
	TEST BLOCKS				
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	8		
	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete smooth with a steel trowel:				
3	Surface beds, slabs, etc	m2	33		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)				
	Rough formwork to sides:				
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	51		
	MOVEMENT JOINTS, ETC				
	Expansion joints with 10mm softboard between vertical concrete and brick surfaces:				
5	Not exceeding 300mm high to edges of surface beds	m	33		
	Saw-cut joints:				
6	6 x 10mm Saw-cut joints in top of concrete	m	40		
	REINFORCEMENT (PROVISIONAL)				
	Mild steel reinforcement to structural concrete work:				
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.10		
	Carried Forward			R	

	Brought Forward			R	
	<u>High tensile steel reinforcement to structural concrete work:</u>				
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.23		
	<u>Fabric reinforcement:</u>				
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	33		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 2
CONCRETE, FORMWORK AND REINFORCEMENT

Item No		Quantity	Rate	Amount

SECTION NO. 5

BILL NO.3

MASONRY

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

BRICKWORK

General:

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

Carried Forward R

	Brought Forward			R	
	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				
	- -				
	FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:				
1	One brick walls	m2	48		
	2,5mm Brickwork reinforcement:				
2	150mm Wide reinforcement built in horizontally	m	159		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
3	Extra over brickwork for face brickwork	m2	6		
	SUPERSTRUCTURE				
	Carried Forward			R	

	Brought Forward			R	
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:				
4	One brick walls	m2	73		
	BRICKWORK SUNDRIES				
	Joint forming material in movement joints:				
5	12mm Fibre board built in vertically through brick walls	m	16		
	2,5mm Brickwork reinforcement:				
6	75mm Wide reinforcement built in horizontally	m	61		
7	150mm Wide reinforcement built in horizontally	m	233		
	Prestressed fabricated concrete lintels, including necessary temporary supports:				
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	19		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
9	Half brick wall faced on both sides	m2	15		
10	Extra over brickwork for face brickwork	m2	115		
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	6		
12	Fair raking cutting	m	8		
	Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces				
13	150mm Wide sills set sloping and slightly projecting	m	5		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 3
MASONRY

Item No		Quantity	Rate	Amount
	SECTION NO. 5			
	BILL NO.4			
	WATERPROOFING			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	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			
	- -			
	Carried Forward		R	

	Brought Forward			R	
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):				
1	In walls	m2	71		
2	In walls vertically at reveals	m2	4		
	One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:				
3	Under surface beds	m2	22		
	JOINT SEALANTS ETC				
	Two- part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc				
4	6 x 10mm In saw cut joints in floors	m	40		
	White silicone sealing compound including backing cord, bond breaker, primer, etc				
5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [LI]	m	33		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 4
WATERPROOFING

Item No		Quantity	Rate	Amount
	SECTION NO. 5			
	BILL NO.5			
	ROOF COVERINGS			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	SUPPLEMENTARY PREAMBLES			
	Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer			
	All fixing holes shall be drilled and not punched			
	Roof covering accessories shall be manufactured from the same material as used for roof covering			
	- -			
	PROFILED METAL SHEETING AND ACCESSORIES			
	Carried Forward		R	

	Brought Forward			R	
	0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:				
1	Roof coverings with pitch not exceeding 25 degrees	m2	39		
	Accessories:				
2	Apex flashings 462mm girth	m	8		
	ROOF AND WALL INSULATION				
	"Sisalation 405" or similar approved residential grade aluminium foil based insulation:				
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2	39		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 5
ROOF COVERINGS

Item No		Quantity	Rate	Amount

SECTION NO. 5

BILL NO.6

CARPENTRY AND JOINERY

- -

PREAMBLES

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 General 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 General Preambles

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

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

Carried Forward R

	Brought Forward			R	
	Particle board				
	All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312				
	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.				
	- -				
	ROOFS, ETC				
	Sawn softwood grade 5:				
1	38 x 114mm Wall plates bolted	m	13		
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	40		
3	50 x 76mm Purlins	m	36		
	EAVES, VERGES, ETC				
	Carried Forward			R	

	Brought Forward			R	
	Medium density plain fibre-cement fascias and barge boards:				
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	m	18		
	DOORS, ETC				
	Wrought meranti doors hung to steel frames:				
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	No	3		
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	2		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 6
CARPENTRY AND JOINERY

Item No		Quantity	Rate	Amount

SECTION NO. 5

BILL NO.7

IRONMONGERY

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Proprietary items:

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

Locks:

Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock

Carried Forward R

	Brought Forward			R	
	Finishes to ironmongery:				
	Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AN 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 BBS Brushed stainless steel				
	- -				
	CATCHES, CABIN HOOKS, ETC				
1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	3		
	LOCKS				
	"Union Assa Abloy" or similar approved:				
2	50mm Brass padlock	No	2		
3	Four lever lockset	No	2		
4	"Ref. CZ80941SC" Indicator bolt	No	3		
	HANDLES				
	"Union Assa Abloy" or similar approved:				
5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	2.0		
	Carried Forward			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 7
IRONMONGERY

	Brought Forward			R	
	LETTERS, NAMEPLATES, ETC				
	"Dorma" or similar approved:				
6	DSS-130 Engraved "Male" information sign	No	2		
	SUNDRIES				
7	25mm Diameter wall mounted door stop plugged	No	5		
	BATHROOM FITTINGS				
	"Kimberley-Clark"or similar approved:				
8	"Ref. SQ2 code 405607B" white lockable toilet roll holder	No	3		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 7
IRONMONGERY

Item No		Quantity	Rate	Amount
	SECTION NO. 5			
	BILL NO.8			
	METALWORK			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	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			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres			
	Carried Forward		R	

Brought Forward		R	
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			
References:			
References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered			
• 21111/FSPS/S003			
and bound into the back of these bills of quantities			
Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained			
- -			
Carried Forward		R	

	Brought Forward			R	
	STEEL GATES, SCREENS, ETC				
	Welded screens and gates, to brickwalls:				
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	No	2		
	PRESSED STEEL DOOR FRAMES				
	1,6mm Double rebated frames suitable for half brick walls:				
2	Frame for door size 813 x 2032mm high	No	3		
	1,6mm Double rebated frames suitable for one brick walls:				
3	Frame for door size 813 x 2032mm high	No	2		
	STEEL WINDOWS, DOORS, ETC				
	Standard windows:				
4	Window type NE1, 533 x 654mm high (N1)	No	5		
5	Window type NE7, 1022 x 654mm high (N2)	No	2		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 8
METALWORK

Item No		Quantity	Rate	Amount

SECTION NO. 5

BILL NO.9

PLASTERING

- -

PREAMBLES

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 General 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 General Preambles

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 Project Manager 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

Carried Forward R

Brought Forward		R	
Sample Panels A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes			
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			
Carried Forward		R	

Brought Forward		R	
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 throughly compacted and lightly wood floated to the required levels 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			
Carried Forward		R	

	Brought Forward			R	
	TINTED WHITE CEMENT SCREEDS				
	Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations				
	NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)				
	Coarse sand is to be used for these screeds				
	All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accoprdance with the manufacturer's instructions				
	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)				
	- -				
	CEMENT SCREEDS TO CONCRETE				
	Cement screeds steel trowelled, on concrete:				
1	30mm Thick to floors	m2	18		
	SPECIAL FLOOR COATING				
	Minimum two coats approved epoxy coat, on concrete:				
2	On screed	m2	18		
	Carried Forward			R	

	Brought Forward			R	
	Prepare all surfaces as neccessary, prime with "Flowprime" primer and apply 6mm thick anti-slip "Flowcrete Flowfresh HF" or similar approved heavy duty chemical resistant antimicrobial treated polyurethane resin floor screed of approved colour and applied by an approved specialist, on:				
3	On internal plastered pit walls and floors	m2	45		
	INTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork:				
4	On walls	m2	45		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 9
PLASTERING

Item No		Quantity	Rate	Amount

SECTION NO. 5

BILL NO.10

PLUMBING AND DRAINAGE (PROVISIONAL)

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Wire gratings:

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

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

Carried Forward R

Brought Forward		R	
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			
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 sealant and prices must include therefor			
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			
Carried Forward		R	

Brought Forward		R	
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 **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			
Carried Forward		R	

Brought Forward		R	
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 SANS 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			
Carried Forward		R	

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

	Brought Forward			R	
	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 Project Manager for reproducing onto the originals for handing over to the Employer (provision for allowance of as-built drawings elsewhere)				
	Proprietary items:				
	Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items				
	Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.				
	Prices are to be based on the specific products/articles specified.				
	On request, returnable samples are to be provided to the Project Manager for consideration				
	- -				
	RAINWATER DISPOSAL				
	0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:				
1	150 x150mm Box gutters	m	8		
2	100 x 75mm Rainwater pipes	m	3		
3	Extra over gutter for stopped end	No	2		
	Carried Forward			R	

	Brought Forward			R	
4	Extra over gutter for outlet for 100 x 75mm pipe	No	2		
5	Extra over rainwater pipe for bend	No	2		
6	Extra over rainwater pipe for shoe	No	2		
7	Extra over rainwater pipe for eaves or plinth offset	No	2		
	Carried Forward			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

	Brought Forward			R	
	SANITARY FITTINGS				
	Supply and install "Enviroloo systems" or similar approved:				
8	"Enviro Loo System FG-1040 STDCA/A Standard" strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvered inlets (PL.1), drying plate (PL.2), two x air inlets (PL.3), toilet pan, seat and lid (PL.4), 3500mm long outlet vent pipe (PL.5), ventilation extraction unit (PL.6) fixed to wall with vent wall bracket (PL.7), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary interconnector piping between multiple tanks, emergency outlet piping, etc	No	3		
9	"Enviro Loo 2 Pan Urinal Evaporative Tank System code FG-862B " strictly in accordance with manufacturers instructions, unit comprising of urinal evaporative tank (PL.1), urinal bowl (PL.5), 3500mm long outlet vent pipe (PL.3), ventilation extraction unit (PL.3) fixed to wall with vent wall bracket (PL.4), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary piping, traps, etc	No	1		
10	"Enviro Loo 3 Pan Urinal Evaporative Tank System code FG-862B " strictly in accordance with manufacturers instructions, unit comprising of urinal evaporative tank (PL.1), urinal bowl (PL.5), 3500mm long outlet vent pipe (PL.3), ventilation extraction unit (PL.3) fixed to wall with vent wall bracket (PL.4), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary piping, traps, etc	No	1		
	Precast concrete wash trough:				
11	Standard SABS approved Pre-Cast Concrete Double Wash Trough, 1080 x 650 x 850mm high with support legs fitted with standard 3/4 Brass Garden Taps, including all necessary pipework including soak away approximately 10 meters away from the wash trough, sized at 1000 x 1000 x 1000mm covered with "bidim" complete etc	No	2		
	TRAPS, ETC				
	Carried Forward			R	

	Brought Forward			R	
	uPVC:				
12	40 x 40mm Double bowl wash trough or sink reseal "P" or "S" trap combination	No	2		
	TAPS, VALVES, ETC				
	"Cobra Watertech" or similar approved:				
13	19mm chrome plated push button taps to wash troughs	No	4		
14	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	4		
	SANITARY PLUMBING				
	uPVC pipes:				
15	50mm Pipes	m	4		
16	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	4		
	Extra over uPVC pipes for fittings:				
17	50mm Bend	No	2		
18	50mm Junction	No	2		
19	110mm Bend	No	2		
20	110mm Junction	No	2		
	WATER SUPPLIES				
	Class 1 copper pipes with capillary couplings:				
21	15mm Pipe fixed to walls, in chases, etc	m	10		
22	Ditto, but 22mm diameter	m	20		
	Carried Forward			R	

	Brought Forward			R	
	Extra over Class 1 copper pipes for capillary fittings:				
23	15mm Fittings	No	4		
24	22mm Fittings	No	8		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

Item No			Quantity	Rate	Amount
	SECTION NO. 5				
	BILL NO.11				
	GLAZING				
	- -				
	PREAMBLES				
	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 General 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 General 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)				
	- -				
	GLAZING TO STEEL WITH PUTTY				
	6,38mm Obscure safety glass:				
1	Panes not exceeding 0,1m²	m2	3		
	Carried Forward to Summary of Section No. 5			R	
	Section No. 5 M3 + 5UR Male Ablutions Bill No. 11 GLAZING				

Item No		Quantity	Rate	Amount

SECTION NO. 5

BILL NO.12

PAINTWORK

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

PREPARATORY WORK TO EXISTING WORK

Previously painted plastered surfaces:

Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth

Previously painted metal surfaces:

Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal

Carried Forward R

	Brought Forward			R	
	Previously painted wood surfaces:				
	Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth				
	PAINT SPECIFICATIONS				
	All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described				
	COLOURS				
	When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied				
	Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group				
	- -				
	PAINTWORK, ETC TO NEW WORK				
	ON FIBRE-CEMENT BOARD SURFACES				
	One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:				
1	Fascias and barge boards, including priming metal jointing strips	m2	5		
	METAL SURFACES WITH				
	One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:				
2	Door frames	m2	9		
	Carried Forward			R	

	Brought Forward			R	
3	Windows	m2	6		
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7		
5	Extra over for paintwork in the "Deep" colour group	m2	22		
	ON WOOD SURFACES				
	One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:				
6	Doors	m2	18		
7	Roof timbers at eaves and verges	m2	25		
8	Extra over for paintwork in the "Deep" colour group	m2	43		
	Carried Forward to Summary of Section No. 5			R	

Section No. 5
M3 + 5UR Male Ablutions
Bill No. 12
PAINTWORK

SECTION SUMMARY - M3 + 5UR Male Ablutions

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Carried to Final Summary R

Section No. 5
M3 + 5UR Male Ablutions

Item No		Quantity	Rate	Amount

SECTION NO. 6

BILL NO.1

EARTHWORKS (PROVISIONAL)

- -

PREAMBLES

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

SUPPLEMENTARY PREAMBLES

Nature of ground

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

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

The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".

Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.

Carried Forward R

Brought Forward		R	
A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured			
Subterranean water:			
No subterranean water is expected			
Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith			
Excavation for working space in rock:			
Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard 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 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material			
Carried Forward		R	

	Brought Forward			R	
	Testing:				
	Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D				
	- -				
	EXCAVATIONS, FILLING, ETC				
	EXCAVATIONS, ETC				
	Excavation in earth not exceeding 2m deep:				
1	Reduced levels under floors	m3	3		
2	Trenches	m3	12		
3	Trenches and holes for thickening under surface beds, etc	m3	3		
	Extra over trench and hole excavations in earth for excavation in:				
4	Soft rock	m3	1		
5	Hard rock	m3	1		
	Extra over all excavations for carting away:				
6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	14		
	Risk of collapse of excavations:				
7	Sides of trench and hole excavations not exceeding 1,5m deep	m2	35		
	Keeping excavations free of water:				
8	Keeping excavations free of all water other than subterranean water		Item		
	FILLING ETC				
	Carried Forward			R	

	Brought Forward			R	
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:				
9	Backfilling to trenches, holes, etc	m3	4		
	G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:				
10	Under floors, steps, pavings, etc	m3	3		
	Compaction of surfaces:				
11	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	31		
	Prescribed density tests on filling:				
12	"Modified AASHTO Density" test	No	11		
	SOIL POISONING				
	Soil insecticide in accordance with SANS 5859:				
13	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	23		
14	To bottoms and sides of trenches, etc	m2	56		
	Carried Forward to Summary of Section No. 6			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 1
EARTHWORKS

Item No		Quantity	Rate	Amount

SECTION NO. 6

BILL NO.2

CONCRETE, FORMWORK AND REINFORCEMENT

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Cost of tests:

Breeze concrete:

Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated

Lightweight concrete:

Lightweight concrete shall have a density of 600kg/m^3 for the top 50mm and 400kg/m^3 for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm

Carried Forward R

	Brought Forward			R	
	Waterproof concrete:				
	"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight: 1. a cement/water ratio of minimum 1.9 and maximum 2.1 2. minimum OPC content of 300kg/m3 3. Polypropolene micro fibres added to concrete at rate of 182 million per m3				
	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				
	- -				
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	15MPa/19mm concrete:				
1	Surface blinding under footings and bases	m3	2		
	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	Carried Forward			R	

	Brought Forward			R	
	30MPa/19mm concrete:				
	Strip footings	m3	5		
	Surface beds on waterproofing	m3	5		
	TEST BLOCKS				
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	3		
	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete smooth with a steel trowel:				
3	Surface beds, slabs, etc	m2	23		
	ROUGH FORMWORK (DEGREE OF ACCURACY III)				
	Rough formwork to sides:				
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	59		
	MOVEMENT JOINTS, ETC				
	Expansion joints with 10mm softboard between vertical concrete and brick surfaces:				
5	Not exceeding 300mm high to edges of surface beds	m	48		
	Saw-cut joints:				
6	6 x 10mm Saw-cut joints in top of concrete	m	58		
	REINFORCEMENT (PROVISIONAL)				
	Mild steel reinforcement to structural concrete work:				
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.11		
	Carried Forward			R	

	Brought Forward			R	
	High tensile steel reinforcement to structural concrete work:				
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.27		
	Fabric reinforcement:				
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	23		
	Carried Forward to Summary of Section No. 6			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 2
CONCRETE, FORMWORK AND REINFORCEMENT

Item No		Quantity	Rate	Amount

SECTION NO. 6

BILL NO.3

MASONRY

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

BRICKWORK

General:

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

Carried Forward R

	Brought Forward			R	
	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				
	- -				
	FOUNDATIONS (PROVISIONAL)				
	Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:				
1	One brick walls	m2	15		
	2,5mm Brickwork reinforcement:				
2	150mm Wide reinforcement built in horizontally	m	87		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
3	Extra over brickwork for face brickwork	m2	5		
	SUPERSTRUCTURE				
	Carried Forward			R	

	Brought Forward			R	
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:				
4	One brick walls	m2	85		
	BRICKWORK SUNDRIES				
	Joint forming material in movement joints:				
5	12mm Fibre board built in vertically through brick walls	m	74		
	2,5mm Brickwork reinforcement:				
6	75mm Wide reinforcement built in horizontally	m	101		
7	150mm Wide reinforcement built in horizontally	m	271		
	Prestressed fabricated concrete lintels, including necessary temporary supports:				
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	27		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
9	Half brick wall faced on both sides	m2	26		
10	Extra over brickwork for face brickwork	m2	133		
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	7		
12	Fair raking cutting	m	10		
	Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces				
13	150mm Wide sills set sloping and slightly projecting	m	6		
	Carried Forward to Summary of Section No. 6			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 3
MASONRY

Item No		Quantity	Rate	Amount
	SECTION NO. 6			
	BILL NO.4			
	WATERPROOFING			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	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			
	- -			
	Carried Forward		R	

	Brought Forward			R	
	DAMPPROOFING OF WALLS AND FLOORS				
	One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):				
1	In walls	m2	83		
2	In walls vertically at reveals	m2	5		
	One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:				
3	Under surface beds	m2	27		
	JOINT SEALANTS ETC				
	Two- part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc				
4	6 x 10mm In saw cut joints in floors	m	58		
	White silicone sealing compound including backing cord, bond breaker, primer, etc				
5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [LI]	m	48		
	Carried Forward to Summary of Section No. 6			R	

Item No		Quantity	Rate	Amount
	SECTION NO. 6			
	BILL NO.5			
	ROOF COVERINGS			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	SUPPLEMENTARY PREAMBLES			
	Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer			
	All fixing holes shall be drilled and not punched			
	Roof covering accessories shall be manufactured from the same material as used for roof covering			
	- -			
	PROFILED METAL SHEETING AND ACCESSORIES			
	Carried Forward		R	

	Brought Forward			R	
	0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:				
1	Roof coverings with pitch not exceeding 25 degrees	m2	49		
	Accessories:				
2	Apex flashings 462mm girth	m	10		
	ROOF AND WALL INSULATION				
	"Sisalation 405" or similar approved residential grade aluminium foil based insulation:				
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2	49		
	Carried Forward to Summary of Section No. 6			R	

Item No		Quantity	Rate	Amount

SECTION NO. 6

BILL NO.6

CARPENTRY AND JOINERY

- -

PREAMBLES

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 General 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 General Preambles

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

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

Carried Forward R

	Brought Forward			R	
	Particle board				
	All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312				
	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.				
	- -				
	ROOFS, ETC				
	Sawn softwood grade 5:				
1	38 x 114mm Wall plates bolted	m	17		
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	53		
3	50 x 76mm Purlins	m	46		
	EAVES, VERGES, ETC				
	Carried Forward			R	

	Brought Forward			R	
	Medium density plain fibre-cement fascias and barge boards:				
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	m	20		
	DOORS, ETC				
	Wrought meranti doors hung to steel frames:				
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	No	5		
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	No	2		
	Carried Forward to Summary of Section No. 6			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 6
CARPENTRY AND JOINERY

Item No		Quantity	Rate	Amount

SECTION NO. 6

BILL NO.7

IRONMONGERY

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Proprietary items:

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

Locks:

Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock

Carried Forward R

	Brought Forward			R	
	Finishes to ironmongery:				
	Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AN 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 BBS Brushed stainless steel				
	- -				
	CATCHES, CABIN HOOKS, ETC				
1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	5		
	LOCKS				
	"Union Assa Abloy" or similar approved:				
2	50mm Brass padlock	No	2		
3	Four lever lockset	No	2		
4	"Ref. CZ80941SC" Indicator bolt	No	5		
	HANDLES				
	"Union Assa Abloy" or similar approved:				
5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	2.0		
	Carried Forward			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 7
IRONMONGERY

	Brought Forward			R	
	LETTERS, NAMEPLATES, ETC				
	"Dorma" or similar approved:				
6	DSS-130 Engraved "Male" information sign	No	2		
	SUNDRIES				
7	25mm Diameter wall mounted door stop plugged	No	7		
	BATHROOM FITTINGS				
	"Kimberley-Clark"or similar approved:				
8	"Ref. SQ2 code 405607B" white lockable toilet roll holder	No	5		
	Carried Forward to Summary of Section No. 6			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 7
IRONMONGERY

Item No		Quantity	Rate	Amount
	SECTION NO. 6			
	BILL NO.8			
	METALWORK			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	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			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres			
	Carried Forward		R	

Brought Forward		R	
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			
References:			
References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered			
• 21111/FSPS/S001			
and bound into the back of these bills of quantities			
Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained			
- -			
Carried Forward		R	

	Brought Forward			R	
	STEEL GATES, SCREENS, ETC				
	Welded screens and gates, to brickwalls:				
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	No	2		
	PRESSED STEEL DOOR FRAMES				
	1,6mm Double rebated frames suitable for half brick walls:				
2	Frame for door size 813 x 2032mm high	No	5		
	1,6mm Double rebated frames suitable for one brick walls:				
3	Frame for door size 813 x 2032mm high	No	2		
	STEEL WINDOWS, DOORS, ETC				
	Standard windows:				
4	Window type NE1, 533 x 654mm high (N1)	No	7		
5	Window type NE7, 1022 x 654mm high (N2)	No	2		
	Carried Forward to Summary of Section No. 6			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 8
METALWORK

Item No		Quantity	Rate	Amount

SECTION NO. 6

BILL NO.9

PLASTERING

- -

PREAMBLES

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 General 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 General Preambles

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 Project Manager 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

Carried Forward R

Brought Forward		R	
Sample Panels A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes			
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			
Carried Forward		R	

Brought Forward		R	
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 throughly compacted and lightly wood floated to the required levels 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			
Carried Forward		R	

	Brought Forward			R	
	TINTED WHITE CEMENT SCREEDS				
	Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations				
	NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)				
	Coarse sand is to be used for these screeds				
	All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accoprdance with the manufacturer's instructions				
	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)				
	- -				
	CEMENT SCREEDS TO CONCRETE				
	Cement screeds steel trowelled, on concrete:				
1	30mm Thick to floors	m2	23		
	FLOOR AND WALL SEALERS				
	Minimum two coats approved epoxy coat, on concrete:				
2	On screed	m2	23		
	Carried Forward to Summary of Section No. 6			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 9
PLASTERING

Item No		Quantity	Rate	Amount

SECTION NO. 6

BILL NO.10

PLUMBING AND DRAINAGE (PROVISIONAL)

- -

PREAMBLES

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 General 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 General Preambles

SUPPLEMENTARY PREAMBLES

Wire gratings:

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

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

Carried Forward R

Brought Forward		R	
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			
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 sealant and prices must include therefor			
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			
Carried Forward		R	

Brought Forward		R	
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 **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			
Carried Forward		R	

Brought Forward		R	
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 SANS 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			
Carried Forward		R	

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

	Brought Forward			R	
	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 Project Manager for reproducing onto the originals for handing over to the Employer (provision for allowance of as-built drawings elsewhere)				
	Proprietary items:				
	Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items				
	Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.				
	Prices are to be based on the specific products/articles specified.				
	On request, returnable samples are to be provided to the Project Manager for consideration				
	- -				
	RAINWATER DISPOSAL				
	0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:				
1	150 x150mm Box gutters	m	10		
2	100 x 75mm Rainwater pipes	m	3		
3	Extra over gutter for stopped end	No	2		
	Carried Forward			R	

	Brought Forward			R	
4	Extra over gutter for outlet for 100 x 75mm pipe	No	2		
5	Extra over rainwater pipe for bend	No	2		
6	Extra over rainwater pipe for shoe	No	2		
7	Extra over rainwater pipe for eaves or plinth offset	No	2		
	Carried Forward			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

				R	
	Brought Forward				
	SANITARY FITTINGS				
	"Vaal" or similar approved:				
8	455 x 290mm "Hibiscus" 7050 wash hand basin bolted to wall	No	3		
9	"Daisy Elite" 772403 close-coupled WC suite comprising pan with double flap heavy duty thermoset seat (Code: 8531Z0) and matching 9 litre cistern	No	5		
10	Flat back urinal overall size 295 x 315 x 415mm high with 40mm chromium plated domical grating (Code 878720) and top inlet spreader (Code 8543) with two hanger brackets with flushmaster junior (Code 812720) hung to wall	No	3		
	TRAPS, ETC				
	"Cobra Watertech" or similar approved:				
11	50mm Code 365 CP bottle trap	No	3		
	TAPS, VALVES, ETC				
	"Cobra Watertech" or similar approved:				
12	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	8		
13	15mm Code FPT2A1RO-OGP01 "Roma" basin tap with waste union	No	3		
	SANITARY PLUMBING				
	uPVC pipes:				
14	50mm Pipes	m	30		
15	110mm Pipes	m	25		
16	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	90		
	Carried Forward			R	

	Brought Forward			R	
17	Ditto, but 110mm diameter	m	75		
	Extra over uPVC pipes for fittings:				
18	50mm Bend	No	12		
19	50mm Junction	No	12		
20	50mm Junction with cleaning eye and lid	No	12		
21	110mm Straight pan connector	No	5		
22	110mm Bend	No	10		
23	110mm Junction	No	10		
24	110mm Reducing junction	No	15		
25	110mm Access bend	No	5		
26	110mm Double junction	No	15		
27	110mm "GI Two-way" vent valve	No	5		
	Testing:				
28	Testing waste pipe system		Item		
	WATER SUPPLIES				
	Class 1 copper pipes with capillary couplings:				
29	15mm Pipe fixed to walls, in chases, etc	m	33		
30	Ditto, but 22mm diameter	m	55		
	Extra over Class 1 copper pipes for capillary fittings:				
31	15mm Fittings	No	55		
32	22mm Fittings	No	55		
	Carried Forward			R	

	Brought Forward		R	
	Testing:			
33	Testing water pipe system	Item		
	Carried Forward to Summary of Section No. 6		R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 10
PLUMBING AND DRAINAGE

Item No			Quantity	Rate	Amount
	SECTION NO. 6				
	BILL NO.11				
	GLAZING				
	- -				
	PREAMBLES				
	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 General 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 General 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)				
	- -				
	GLAZING TO STEEL WITH PUTTY				
	6,38mm Obscure safety glass:				
1	Panes not exceeding 0,1m²	m2	4		
	Carried Forward to Summary of Section No. 6			R	

Section No. 6
SM5 + 3UR Male Educators Ablutions
Bill No. 11
GLAZING

Item No		Quantity	Rate	Amount
	SECTION NO. 6			
	BILL NO.12			
	PAINTWORK			
	- -			
	PREAMBLES			
	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 General 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 General Preambles			
	SUPPLEMENTARY PREAMBLES			
	PREPARATORY WORK TO EXISTING WORK			
	Previously painted plastered surfaces:			
	Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth			
	Previously painted metal surfaces:			
	Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal			
	Carried Forward		R	

	Brought Forward			R	
	Previously painted wood surfaces:				
	Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth				
	PAINT SPECIFICATIONS				
	All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described				
	COLOURS				
	When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied				
	Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group				
	- -				
	PAINTWORK, ETC TO NEW WORK				
	ON FIBRE-CEMENT BOARD SURFACES				
	One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:				
1	Fascias and barge boards, including priming metal jointing strips	m2	5		
	METAL SURFACES WITH				
	One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:				
2	Door frames	m2	13		
	Carried Forward			R	

	Brought Forward			R	
3	Windows	m2	7		
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7		
5	Extra over for paintwork in the "Deep" colour group	m2	27		
	ON WOOD SURFACES				
	One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:				
6	Doors	m2	25		
7	Roof timbers at eaves and verges	m2	33		
8	Extra over for paintwork in the "Deep" colour group	m2	58		
	Carried Forward to Summary of Section No. 6			R	

SECTION SUMMARY - SM5 + 3UR Male Educators Ablutions

Bill No		Page No	Amount
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Carried to Final Summary R

Section No. 6
SM5 + 3UR Male Educators Ablutions

Item No		Quantity	Rate	Amount

SECTION NO. 7

BILL NO.1

EXTERNAL WORK (PROVISIONAL)

(ALL TRADES)

- -

PREAMBLES

The Model 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 General 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 General Preambles

Labour Intensive Methods:

The contractor will be required to use labour intensive for items which have been marked with the letters [LI] in the Scope of Work.

SUPPLEMENTARY PREAMBLES

Nature of ground:

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

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

Carried Forward R

Brought Forward		R	
The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, all of which will be deemed as "earth", but possibly interspersed with "hard rock"			
Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth"			
A soils investigation has been carried out on the site by the Engineer and the report is annexed to these bills of quantities. The soils report indicates that the ground varies between transported soils at surface comprising gravel layers of varying thickness and interspersed with clay, and weathered shales varying from very soft rock to medium hard rock consistency, all of which will be deemed as "earth". All very hard unweathered shale, ironstone, etc the removal of which necessitates the use of explosives or heavy duty hydraulic percussion hammers (peckers), will be classified as "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			
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			
Carried Forward		R	

Section No. 7
Site Works
Bill No. 1
EXTERNAL WORKS

	Brought Forward			R	
	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 calender months				
	- -				
	SITE CLEARANCE, ETC				
	Site clearance:				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	777		
2	Stripping average 150mm thick layer of top soil and depositing material in prescribed stock piles on site	m2	777		
	REMOVAL OF TREES, ETC				
3	Tree stump exceeding 200mm and not exceeding 500mm girth	No	5		
	PAVINGS, ETC				
	SUPPLEMENTARY PREAMBLES				
	Testing of material and filling:				
	Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series				
	Carried Forward			R	

	Brought Forward			R	
	EARTHWORKS				
	Excavation in earth not exceeding 2m deep:				
4	Over site under paving etc to reduce levels and dispose in prescribed stock piles on site	m3	113		
	Extra over all excavations for carting away:				
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	113		
	Compaction of surfaces:				
6	Rip and re-compact in-situ materials to a depth of 150mm, breaking down over size material and reconsolidate to 93% modified AASHTO density	m2	252		
	Keeping excavations free of water:				
7	Keeping excavations free of all water other than subterranean water		Item		
	C4 filling supplied and carted on by the Contractor, stabilised with 2.5% OPC cement compacted in layers not exceeding 150mm to 97% Mod. AASHTO density				
8	Sub-base under roads	m3	38		
	Earth filling from commercial sources supplied by the Contractor under parking areas, roadways, etc:				
9	Sub-base course of G7 material compacted to 93% Mod AASHTO density	m3	38		
10	Base course stabilised G7 material with CEM II 32.5 BV compacted to 97% Mod AASHTO density	m3	38		
	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:				
11	Under paving, etc	m2	252		
	PRECAST CONCRETE				
	Carried Forward			R	

	Brought Forward			R	
	Paving of 200 x 100 x 60mm "Type S-A" precast concrete paving bricks with butt joints, on 20mm thick river sand bed with sand-and-cement mixture swept into joints and hosed down, including preparation of ground or filling:				
12	Paving in herringbone bond pattern to falls	m2	252		
	Precast concrete finished smooth on exposed surfaces, including bedding, jointing and pointing:				
13	150 x 300mm High kerbs (SANS 927 fig 8) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc	m	168		
	- -				
	RAMPS				
	EARTHWORKS				
	Excavation in earth not exceeding 2m deep:				
14	Reduced levels under floors	m3	2		
	Extra over all excavations for carting away:				
15	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	2		
	G7 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:				
16	Under floors, steps, pavings, etc	m3	2		
	Compaction of surfaces:				
17	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	10		
	Prescribed density tests on filling:				
18	"Modified AASHTO Density" test	No	3		
	Carried Forward			R	

	Brought Forward			R	
	Soil insecticide in accordance with SANS 5859:				
19	Soil insecticide (protection against termites) applied as specified to bottoms and sides of trenches, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	10		
	CONCRETE WORK				
	25MPa/19mm reinforced concrete:				
	Ramps	m3	3		
	Test cubes				
20	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	1		
	Finishing top surfaces of concrete smooth with a steel trowel:				
21	Surface beds, slabs, etc to falls	m2	10		
	FORMWORK				
	Smooth formwork to sides:				
22	Sloping outer edges of ramps approximately 450mm high extreme	m	20		
	REINFORCEMENT				
	Fabric reinforcement:				
23	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	10		
	- -				
	APRONS				
	EARTHWORKS				
	Carried Forward			R	

	Brought Forward			R	
	Excavation in earth not exceeding 2m deep:				
24	Reduced levels under floors	m3	20		
	Extra over all excavations for carting away:				
25	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	20		
	G7 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:				
26	Under floors, steps, pavings, etc	m3	20		
	Compaction of surfaces:				
27	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	131		
	Prescribed density tests on filling:				
28	"Modified AASHTO Density" test	No	44		
	Soil insecticide in accordance with SANS 5859:				
29	Soil insecticide (protection against termites) applied as specified to bottoms and sides of trenches, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	131		
	CONCRETE WORK				
	25MPa/19mm reinforced concrete:				
	Aprons	m3	20		
	Test cubes				
30	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	7		
	Carried Forward			R	

	Brought Forward			R	
	Finishing top surfaces of concrete smooth with a steel trowel:				
31	Surface beds, slabs, etc to falls	m2	131		
	REINFORCEMENT				
	Fabric reinforcement:				
32	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	131		
	- -				
	THE FOLLOWING IN RAINWATER STORAGE TANK STRUCTURES:				
	EXCAVATIONS, ETC				
	Excavation in earth not exceeding 2m deep:				
33	Trenches	m3	11		
	Extra over trench and hole excavations in earth for excavation in:				
34	Soft rock	m3	1		
35	Hard rock	m3	1		
	Extra over all excavations for carting away:				
36	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	7		
	Risk of collapse of excavations:				
37	Sides of trench and hole excavations not exceeding 1,5m deep	m2	5		
	Keeping excavations free of water:				
38	Keeping excavations free of all water other than subterranean water		Item		
	Carried Forward			R	

	Brought Forward			R	
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:				
39	Backfilling to trenches, holes, etc	m3	4		
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
	25MPa/19mm concrete:				
	Strip footings	m3	5		
	Surface beds	m3	3		
	TEST BLOCKS				
40	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	1		
	MASONRY				
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:				
41	One brick walls	m2	41		
	2,5mm Brickwork reinforcement:				
42	150mm Wide reinforcement built in horizontally	m	107		
	FACE BRICKWORK				
	Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints				
43	Extra over brickwork for face brickwork	m2	24		
	Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces				
44	220mm Copings on top of one brick walls	m	36		
	Carried Forward			R	

Section No. 7
Site Works
Bill No. 1
EXTERNAL WORKS

	Brought Forward			R
	- -			
	FENCING			
	PERIMETER FENCING			
	One priming coat and two coats high gloss enamel paint on metal stays, framing, etc			
45	Steel palisade fence	m2	4 680	
	FENCING AROUND WATER TANK			
	Steel palisade fencing, gates, etc including prepare and apply one priming coat and two coats high gloss enamel Traffic Green paint using compressor spay gun on metal stays, gates, framing and etc			
46	1800mm High palisade fencing comprising of 40 x40 x 2mm angle iron welded flash with the back of the post 300mm from top of paling and 300mm from bottom of paling (350mm from ground level), 21 palings per panel consist of 30 x 30 x 2mm x 1 800mm High steel angle iron inserted and firmly welded to the bearers at 133mm centre to centre with "Devil Fork" on top and dove tail at the bottom welded to 76 x 76 x 2mm steel tubing posts 2 400mm long/ high with closing pyramid caps on top and M12 anti vandal nuts and bolts and posts set and cast into and including 300 x 300 x 600mm deep concrete base at 3 000mm centres	m	32	
47	1500mm Wide x 1800mm High Swing gate comprising of 40 x40 x 2mm angle iron palings welded to a 50 x 25 x 1.6mm rectangular tubing bearer frame, palings are to be placed 133mm apart each other centre to centre and 2 No x 75mm x 75mm x 2mm steel square tubing posts at each side of the gate opening with closing pyramid caps on top and planted into concrete footing 450 x 450 x 600mm deep including excavations, backfilling and locking mechanism.	No	1	
	Carried Forward to Summary of Section No. 7			R

Section No. 7
Site Works
Bill No. 1
EXTERNAL WORKS

Item No		Quantity	Rate	Amount

SECTION NO. 7

BILL NO.2

SITE SERVICES (PROVISIONAL)

(ALL TRADES)

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PREAMBLES

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 General 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 General 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

Carried Forward R

Brought Forward		R	
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			
Carried Forward		R	

Brought Forward R

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

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 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

Carried Forward R

Brought Forward		R	
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)			
- -			
STORMWATER MANAGEMENT:			
STORMWATER CHANNELS:			
Carried Forward		R	

	Brought Forward			R	
	EARTHWORKS				
	Excavation in earth not exceeding 2m deep:				
1	Reduced levels stormwater channels	m3	38		
	Extra over all excavations for carting away:				
2	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	38		
	G7 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:				
3	Under stormwater channels, etc	m3	38		
	Compaction of surfaces:				
4	Compaction of ground surface under stormwater channels etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	252		
	Prescribed density tests on filling:				
5	"Modified AASHTO Density" test	No	3		
	Soil insecticide in accordance with SANS 5859:				
6	Soil insecticide (protection against termites) applied as specified to bottoms and sides of trenches, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	252		
	Carried Forward			R	

				R	
	Brought Forward				
	CONCRETE WORK				
7	25Mpa/19mm Mass concrete in V-shaped channel 700mm wide x 75mm thick cast in 2 000mm intervals with rounded salient edges and finished on exposed surfaces with 2:1 cement mortar, with and including one layer of ref.193 mesh reinforcement, laid to falls in panels not exceeding 2,0m long with 12mm bitumen impregnated soft board movement joints with exposed edges raked out for a depth of 10mm and filled with bituminous compound including all necessary excavations, form work, backfilling, clearing, levelling and etc.	m	168		
8	Extra for fair open end	No	56		
9	Extra for fair stopped end	No	56		
10	Extra for angle intersection	No	56		
	Test cubes				
11	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	6		
	Finishing top surfaces of concrete smooth with a steel trowel:				
12	Stormwater channels to falls	m2	252		
	THE FOLLOWING IN SEPTIC TANK:				
	EARTHWORKS				
	Excavation in earth exceeding 2m and not exceeding 4m deep:				
13	Septic tank pit	m3	140		
	Extra over trench and hole excavations in earth for excavation in:				
14	Soft rock	m3	14		
15	Hard rock	m3	7		
	Carried Forward			R	

	Brought Forward			R	
	Extra over all excavations for carting away:				
16	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	125		
	Risk of collapse of excavations:				
17	Sides of trench and hole excavations not exceeding 1,5m deep	m2	80		
	Keeping excavations free of water:				
18	Keeping excavations free of all water other than subterranean water		Item		
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:				
19	Backfilling to trenches, holes, etc	m3	15		
	Compaction of surfaces:				
20	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	80		
	Prescribed density tests on filling:				
21	"Modified AASHTO Density" test	No	5		
	Soil insecticide in accordance with SANS 5859:				
22	Soil insecticide (protection against termites) applied as specified to bottoms and sides of trenches, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	80		
	CONCRETE WORK				
	15MPa/19mm unreinforced concrete:				
23	Surface blinding under footings and bases	m3	15		
	Carried Forward			R	

	Brought Forward			R	
	25MPa/19mm reinforced concrete:				
	Mass concrete to bottoms	m3	20		
	Slabs	m3	15		
	Test cubes				
24	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	4		
	FORMWORK				
	Smooth formwork to sides:				
25	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	25		
	REINFORCEMENT				
	Fabric reinforcement:				
26	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	80		
	High tensile steel reinforcement to structural concrete work:				
27	110mm Diameter drain pipes, fixed raking or vertically in ramps to cleaning eyes, etc (no excavations)	m	20		
28	All Diameter bars	t	3.00		
29	110mm Pipes laid in and including trenches not exceeding 1m deep	m	20		
30	110mm Pipes laid in and including trenches exceeding 1m and not exceeding 2m deep	m	5		
31	Extra over uPVC piping for 110mm bend	No	5		
	Carried Forward			R	

Section No. 7
Site Works
Bill No. 2
SITE SERVICES

	Brought Forward			R	
	BRICKWORK				
	Brickwork of NFP bricks in class II mortar				
32	Half brick walls	m2	17		
33	Extra over uPVC piping for 110mm junction	No	20		
34	One brick walls	m2	70		
35	Extra over uPVC piping for 110mm stop end	No	10		
36	110mm uPVC cleaning eye fixed to 110mm uPVC drain pipe, including 350 x 350 x 75mm thick in-situ 15 MPa/19mm mass concrete surround, the whole finished smooth on all exposed faces with exposed angles rounded, including all necessary excavations, formwork, backfilling, etc.	No	2		
	BRICKWORK SUNDRIES:				
	Bagging of 1:3 cement and sand mixture				
37	Outer face of external brick wall	m2	350		
	2.5mm Brickwork reinforcement:				
38	75mm Wide reinforcement built in horizontally	m	44		
39	150mm Wide reinforcement built in horizontally	m	206		
	One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:				
40	Under surface beds	m2	50		
	Carried Forward			R	

	Brought Forward			R	
	SPECIAL FLOOR COATING				
	Prepare all surfaces as neccessary, prime with "Flowprime" primer and apply 6mm thick anti-slip "Flowcrete Flowfresh HF" or similar approved heavy duty chemical resistant antimicrobial treated polyurethane resin floor screed of approved colour and applied by an approved specialist, on:				
41	On internal plastered walls	m2	88		
	INTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork:				
42	On walls	m2	88		
	- -				
	THE FOLLOWING IN PREFABRICATED 90KL STEEL TANK:				
	EARTHWORKS				
	SITE PREPARATION				
43	Remove topsoil to nominal depth 150mm, stockpile and maintain	m2	25		
	BULK EXCAVATION - TANK BASE				
	b) Extra-over for:				
44	Intermediate excavation	m3	3		
45	Hard rock excavation	m3	5		
	RESTRICTED EXCAVATIONS				
46	Excavate for restricted foundations, footings and trenches in all materials and use for backfill or embankment or dispose.	m3	25		
	Carried Forward			R	

	Brought Forward			R	
	EARTHWORKS (ROADS, SUBGRADE)				
47	Rip and re-compact insitu to 90% MOD AASHTO	m3	1		
48	Geotechnical grid (Traix TX170)	m2	1		
49	Backfill 500mm with course insitu material in 150mm layers.	m3	5		
	PREFABRICATED TANK				
50	Supply, handle, install, erect hot dipped galvanised Prefabricated steel tank suitable for 90KL capacity. Including lockable access manhole with built-in screened vent. Internal and external ladder, a level indicator, as well as all fittings required for installation. And the supply, handling, installation, and erection of hot dipped galvanised steel support structures 6m high, including an access ladder with safety cage. As well as all standard fittings required for installation and walkway around tank base with rails	No	1		
	CONCRETE				
51	Binding layer in 15MPa concrete (50mm thick)	m2	1		
52	Shutter rough	m2	25		
	SCHEDULED REINFORCEMENT				
53	Steel bars	t	3.00		
54	Strength of concrete grade 30/19	m3	23		
	UNFORMED SURFACE FINISHES				
55	Steel float	m2	25		
56	M20 Bolts cast in complete with washer plate and nuts, all galvanised.	No	16		
	PIPES				
	Carried Forward			R	

	Brought Forward			R	
	Supply, lay, bed, test, disinfect flanged pipes complete with couplings for Class 16 mild steel pipes of the following diameter: (All material including fittings to be SABS approved)				
57	1. 65 mm diameter	m	18		
58	3. 80 mm diameter	m	12		
	Supply, handle, lay, disinfect, bed in flexible pipe bedding and test uPVC class 16 pipes complete with spigot and socket joints.(All material including fittings to be SABS approved)				
59	1. 75 mm diamete	m	12		
60	2. 90 mm diameter	m	12		
	SPECIALS AND FITTINGS				
	Extra-over 8.2.1 for supplying, laying, bedding, jointing and testing of the following fittings for use on Steel pipes				
	90 degree bends				
61	1. 75mm	No	4		
62	2. 90mm	No	8		
	Equal Tee				
63	1. 100mm x 100mm	No	2		
	Extra-over 8.2.1 for supplying, laying, bedding, jointing and testing of the following fittings for use on uPVC pipes				
	90 degree bends				
64	1. 75mm	No	1		
65	2. 90mm	No	1		
	Carried Forward			R	

	Brought Forward			R	
	11.25 degree Bends				
66	1. 75mm	No	1		
67	2. 90mm	No	1		
	22.5 degree Bends				
68	1. 75mm	No	1		
69	2. 90mm	No	1		
	45 degree Bends				
70	1. 75mm	No	1		
71	2. 90mm	No	1		
	Flange adaptors				
72	1. 110mm	No	4		
	Extra over Item 8.2.1 for supplying, fixing and bedding of valves; Class 16:				
	Viking Johnson/Klamflex flanged adaptors PN 16				
73	1. 100mm	No	2		
74	ND100 AVK Dismantling joint PN16 or similar approved	No	4		
75	ND100 flanged cosmos Meinecke WPD bulk meter with digital output or similar approved; Class 16	No	1		
76	ND100 flanged Bermad 70F Y-Pattern strainer or similar approved; Class 16	No	2		
77	ND100 flanged ball valve; Class 16	No	1		
78	Steel Plinths	No	4		
	Carried Forward			R	

	Brought Forward			R	
79	DN25 automatic air release valve, Vent O Mat or similar approved brand as per inlet chamber detail; Class 25	No	2		
80	ND25 brass fullway gate valve to sabs 776 Class 10	No	2		
81	ND25 galvanised barrel nipple PN16	No	2		
82	ND100 In line tee with outlet diameter as specified in the nodal descriptions and reduced to 25bsp female end connection PN16	No	2		
83	ND100 mm, 150mm long double flanged pipe, PN 16 to SANS standard	No	2		
84	ND100 mm, 600mm long double flanged pipe, PN 16 to SANS standard	No	2		
85	ND100 flanged Vosa Series 7354 Equilibrium float valve or similar approved; Class 16	No	1		
86	DN100 flanged mild steel flanged sweep tee; flanges drilled according to SANS 1123 table 16	No	1		
87	DN100 Blank flange with 20 mm hole drilled onto it and 25 mm nipple welded onto it; nipple to be male threaded on one end.	No	1		
88	DN25 Female threaded ball valve, PN16	No	1		
89	DN25 Nipple, one end male and one end female threaded	No	1		
90	DN25 automatic air release valve, Vent O Mat or similar approved brand as per tank inlet detail; Class 25	No	1		
91	ND100 mm, 240mm long double flanged pipe, PN 16 to SANS standard	No	1		
	Carried Forward			R	

	Brought Forward				R
92	ND150 mild steel pipe, PN 16,6m long,one end flanged as per detail drawing 14491-D-C-WAT-D05, actual length of pipe to be confirmed on site confirmed on site	No	1		
	Isolating valves				
	Extra-over item 6.13 for the supplying, installing cutting in and testing flanged Class 16 anti-clockwise closing non rising spindle resilient seal gate valves for steel pipes as shown on detailed drawings for pipe diameters				
93	1. 100 mm diameter	No	5		
94	2. 150 mm	No	1		
	CHAMBERS				
95	Construct concrete inlet and outlet chamber Type 1 complete with step irons, and frames as per detailed drawings, up to 2.0m depth.	No	1		
96	Construct scour valve chamber Type 4, complete with stepirons, frames and and scour wing wall structure as per detailed drawings up to 2.5m depth.	No	1		
	SUNDRIES				
97	Thrust blocks and pedestals class 25/19 concrete	m3	5		
	WATER STORAGE TANKS:				
	"Jojo" or similar approved Type SG1 polyethylene drinking water tanks with black lining internally, complete with tank connector at the bottom, inlet and over-flow on top or (side) with a 40mm fitting (female) and 430mm diameter lid with e-clips on top of the tank:				
98	5250 Litre vertical tank (colour green) size 1800mm diameter x 2300mm high overall, the tank securely bolted in position to top of reinforced concrete base (base elsewhere measured)	No	4		
	Carried Forward to Summary of Section No. 7				R

Section No. 7
Site Works
Bill No. 2
SITE SERVICES

SECTION SUMMARY - Site Works

Bill No		Page No		Amount
1	EXTERNAL WORKS	229		
2	SITE SERVICES	244		
	Carried to Final Summary		R	

Section No. 7
Site Works

Item No		Quantity	Rate	Amount
	SECTION NO. 8			
	BILL NO.1			
	BUDGETARY ALLOWANCES			
	- -			
	PREAMBLES			
	General:			
	A Budgetary Allowance is a sum of money included in the contract sum for work intended for execution by the Contractor, the extent of which is identified but not detailed			
	Work for which budgetary allowances are provided 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 or profit on the said allowances			
	Each Budgetary Allowance may comprise more than one element of work			
	- -			
	BOREHOLE REFURBISHMENT			
1	Budgetary Allowance of Fifty Thousand Rand for renovation of existing borehole	Item		50 000.00
	Carried to Final Summary		R	

FINAL SUMMARY

Section No		Page No		Amount
1	Preliminaries	43		
2	Alterations	47		
3	FD5 Female Ablutions	90		
4	SFD6 Female Educators Ablutions	132		
5	M3 + 5UR Male Ablutions	176		
6	SM5 + 3UR Male Educators Ablutions	219		
7	Site Works	245		
8	Provisional Sums	246		
	SUB TOTAL		R	
	CONTRACT CONTINGENCIES			
	Allow the sum of 10% (ten 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		R	
	SUB TOTAL		R	
	VALUE ADDED TAX			
	Value Added Tax [15%]		R	
	Carried to Form of Tender		R	