

Bill of Quantities: Preliminary & General

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11		PRICING OF PRELIMINARIES				
11		Should the contractor select Option A in terms of clause D4.0 of the contract data for the purpose of adjustment of these preliminaries , the amount entered into the amount column in these preliminaries is to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T).				
12		PRICING OF BILLS OF QUANTITIES				
12		The contractor is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes, imposts, establishment charges, overheads, profit and all other obligations arising out of the agreement.				
		Items left unpriced will be deemed to be covered in prices against other items throughout these bills of quantities and no claim for any extras arising out of the contractor's omission to price any item will be entertained.				
		Prices for all plant, temporary works, services and other items shall include for the design, supply, maintenance, operating cost and subsequent removal and making good as necessary.				
12		LEGAL STATUS OF THE CONTRACTOR				
12		If the contractor constitutes a joint venture consortium or other unincorporated grouping of two or more persons then:				
		1. These persons are deemed to be jointly and severally liable to the employer for the performance of this agreement;				
		2. These persons shall notify the employer of their leader who has authority to bind the contractor and each of these persons; and				
		3. The contractor shall not alter its composition or legal status without the prior written consent of the employer.				
12		SECTION A: PRINCIPAL BUILDING AGREEMENT				
12		Interpretation (A1-A7):				
12	1	Clause 1.0 - Definitions and interpretation.	Item	1,00		
12	2	Clause 2.0 - Law, regulations and notices.				
		Clause 2.0 is amended by adding the following sub-clause:				
		2.5 Without limiting the generality of the provisions of clause 2.0, the contractor's attention is drawn to the provisions of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the employer shall ensure that the contractor has made provision for the cost of health and safety measures during the execution of the works . The contractor shall price opposite this item for compliance with the act and the regulations.				
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		The contractor shall:				
		1. Comply with the Occupational Health and Safety Act, 1993. for the works.				
		2. Prepare and agree with the health and safety consultant the health and safety plan for the works.				
		3. Co-operate with the health and safety consultant in all respects.				
		4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification.				
		The contractor warrants that it is, and will remain for the duration of this agreement, registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation or Occupational Injuries and Diseases Act 130 of 1993.				
		5. Preparation of Contractor's Site-Specific Health and Safety Plan in accordance with the client's Health and Safety Specification. This includes the description of an effective Safety Management System with allocated roles and responsibilities.				
		6. Implementation and Maintenance of the Site-Specific Health and Safety Plan.				
		7. Preparation of Contractor's Site-Specific Health and Safety File in accordance with the client's Health and Safety Specification.				
		8. Implementation and Maintenance of the Contractor's Site-Specific Health and Safety file.				
		9. Health and Safety Management and Control of Contractors to the Principal Contractor.				
		10. Provision of staff welfare facilities and Personal Protective Equipment (PPE).				
		11. Provision for an adequate number of full-time Construction Health and Safety Officer.				
		12. Cost of Medical Surveillance (Entry and Exit).				
		13. Provision of Emergency Equipment, including first aid boxes, emergency safety equipment, fire suppression equipment and others covered in the Health and Safety specification.				
		14. Provision of Health and Safety Training, induction and Awareness Programmes to all site staff.				
		15. Provision of all temporary and lifting works equipment, tools, and structures and fall protection/prevention equipment. Maintenance of safe access for staff and public.				
		16. Cost for Health and Safety signage and notices.				
		17. Submission of the Health and Safety File to the client upon completion of the project (hard and soft copies).	Item	1,00		
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13	3	Clause 3 .0 - Offer and acceptance.	Item	1,00		
13	4	Clause 4.0 - Cession and assignment.	Item	1,00		
13	5	Clause 5.0 - Documents.				
		Clause 5.4 is amended by adding the words "or construction programme." at the end of the clause.	Item	1,00		
13	6	Clause 6.0 - Employer's agents.	Item	1,00		
13	7	Clause 7.0 - Design responsibility.				
		Clause 7.0 is amended by adding the following sub-clauses:				
		7.4 Notwithstanding the provisions of sub-clause 7.2, the contractor shall ensure that every such subcontractor shall simultaneously with the signing of the relevant subcontract sign and deliver to the employer a design indemnity, materials warranty and workmanship warranty in favour of the employer.				
		7.5 Any subcontractor whose subcontract involves design work will be required to provide to the employer evidence of "professional indemnity" insurance for such design work.				
		7.6 If the contractor fails to obtain the necessary warranties and/or indemnities from the subcontractors, the design responsibility shall be deemed to devolve upon the contractor.	Item	1,00		
14		Insurance and security (A8-A11)				
14	8	Clause 8.0 - Works risk	Item	1,00		
14	9	Clause 9.0 - Indemnities	Item	1,00		
14	10	Clause 10.0 - Insurances				
		Clause 10.0 is amended by the adding the following sub-clause:				
		10.11 In the event of any occurrence which is likely to give rise to a claim under the insurances arranged by the employer, the contractor shall:				
		1. In addition to any statutory requirement or other requirements contained in the agreement, immediately notify the employer's insurance brokers by telephone, e-mail or telefax giving the circumstances, nature and estimate of the loss, damage or liability.				
		2. Complete a claim advice form in conjunction with both the principal agent and the employer and return to the insurance brokers without delay.				
		3. Assist as required, in negotiations of the settlement of claims with the insurers through the employer's insurance brokers.				
		The employer shall have the right to make all and any enquiry on the site or elsewhere as to the cause and results of any such occurrences and the contractor shall give the employer and his insurers full facilities for carrying out such enquiries.	Item	1,00		
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14	11	Clause 11.0 - Security				
		Clause 11.10 is amended by adding the following at the end of the clause: "and shall ensure that if applicable, a waiver of lien is included in all subcontracts and that the works executed on the site are kept free of all liens and other encumbrances at all times."	Item	1,00		
14		Execution (A12 - A17)				
14	12	Clause 12.0 - Obligations of the parties				
		Clause 12.2.6 is deleted in its entirety and replaced with the following:				
		12.2.6.1 Immediately on award of the contract and prior to the commencement on site, the contractor, shall prepare a working programme covering the first month of the construction period. This working programme shall be prepared in conjunction with the principal agent and shall be subject to his approval.				
		12.2.6.2 During the first month of the construction period the contractor shall prepare a programme of the works together with a schedule of outstanding construction information in sufficient detail to ensure control of the execution of the works and to enable the principal agent to plan for and assess the progress of the works and timeously provide the necessary contract instructions.				
		The principal agent shall have the right to modify such programme to accommodate changes necessary in his opinion for co-ordinating the project as a whole. Any cost implications relating to such modification shall be dealt with in accordance with the provisions of the agreement.				
		12.2.6.3 The programme shall be drawn in accordance with the dates in the agreement for possession, sectional completion and practical completion. The programme and the schedule shall be updated and modified, as appropriate, and submitted to the principal agent whenever actual progress is not in accordance with the current programme and in any event whenever required by the principal agent.				
		12.2.6.4 Each programme shall:				
		12.2.6.4.1 Comply with the agreement and show all information required by the agreement or otherwise required by the principal agent.				
		12.2.6.4.2 Represent the contractor's intentions realistically (and the contractor's intentions so represented shall be practicable).				
		12.2.6.5 Be compiled based on the Critical Path Method of programming with the critical activities to be clearly highlighted.				
		12.2.6.6 Be compiled in such a way that logic is not constrained by resource limitations unless approved otherwise by the principal agent (and the logic of each subsequent programme shall be in accordance with the logic of the prior programme unless otherwise approved by the principal agent), and				
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		12.2.6.7 The programme (including each revision thereof) will be processed on the principal agent's system and the contractor shall provide all the cooperation necessary to achieve this.				
		12.2.6.8 Documentation will not be available in complete detail at the commencement stage, however the contractor, in conjunction with the principal agent, shall progressively plan the works on provisional information, to an agreed level of detail relating to the level of information available and with sufficient scope to include future detail without disrupting the basic logic initially approved by the principal agent.				
		Where assumptions are made in regard to programming aspects, such assumptions shall be agreed by the contractor and the principal agent, and recorded in the programme.				
		12.2.6.9 The programme shall be updated and modified to accommodate a material change in circumstances or whenever reasonably required by the principal agent.				
		Should circumstances change to the extent where the contractor is of the opinion that changes to the programme are required, then the contractor shall have written request to the principal agent for such changes, clearly identifying the reasons for requiring such change. The contractor and principal agent shall thereafter agree such changes, if any.				
		Should the principal agent be of the opinion that the programme requires revisions, and notwithstanding the fact that a request for such revision has not been received from the contractor, the principal agent shall be entitled to instruct the contractor to revise the programme accordingly, unless the contractor can submit reasonable justification for not doing so.				
		Any acceleration and/or special measures sanctioned by the principal agent together with associated effects shall be incorporated in a revision to the programme.				
		12.2.6.10 The programme (including each revision thereof) shall be prepared in conjunction with the principal agent and shall be subject to his approval. The approval of the principal agent shall be deemed to be given on the basis that the contractor represents that the programme complies with the requirements of clause 12.2.6.				
		The contractor shall be responsible at all times for maintaining the accuracy, validity and reasonableness of the programme, and the implementation thereof. That a programme has been prepared in conjunction with the principal agent or approved by him shall not release or relieve the contractor from any of his obligations or responsibilities under this agreement. Without derogating from the foregoing, the contractor shall at all times bear the onus to demonstrate that the programme complies with the requirements of this agreement and, where applicable, constitutes an appropriate baseline programme for any purpose in connection with this agreement.				
		12.2.6.11 In addition to and based on the programme system and the format dictated above, the contractor shall devise detailed working programmes including but not limited to mechanical, electrical, wet services, lifts and other specialist installation's commissioning programmes. These shall be drawn on a regular basis (at least monthly), to the satisfaction of the principal agent.				
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17	15	Clause 15.0 - Selected subcontractors	Item	1,00		
17	16	Clause 16.0 - Direct contractors				
		Clause 16.0 is amended by adding the following sub-clauses:				
		16.4 The contractor shall:				
		1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials.				
		2. Allow the use of personnel welfare facilities, where provided.				
		3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation.				
		4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc. provided by the contractor, in common with others having the like right while it remains erected on the site [16.1].				
		5. Co ordinate the works with that of the direct contractors.	Item	1,00		
17	17	Clause 17.0 - Contract instructions				
		Clause 17.0 is amended by adding the following sub-clauses:				
		Clause 17.1.21 Acceleration (irrespective of whether or not the principal agent rules that the contractor is entitled to a revision of the date of practical completion), but provided that a contract instruction to accelerate may not, unless otherwise agreed by the contractor, be issued at a time when it would not be reasonable for an experienced contractor to achieve the required acceleration given the available remaining period.				
		17.6 Instructions issued on site are to be recorded in a site instruction book which is to be supplied and maintained on site by the contractor.				
		17.7 Upon receipt of construction information, the contractor shall, before proceeding to execute the works, notify the principal agent where (i) any documents are missing or incomplete or insufficient, (ii) the construction information contains any errors which a reasonable contractor would have discovered in reading or analysing the document concerned.				
		17.8 Where the contractor has not notified errors, discrepancies or deficiencies in construction information, the contractor shall not be entitled to any adjustment to the contract value or revision of the date for practical completion.				
		17.9 If the contractor fails to obtain the necessary warranties and/or indemnities from the subcontractors, the design responsibility shall be deemed to devolve upon the contractor."	Item	1,00		
18		Completion (A18 - A24)				
18	18	Clause 18.0 - Interim completion	Item	1,00		
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18	19	Clause 19.0 - Practical completion				
		Clause 19.3 is amended by the addition of the following new clause:				
		Clause 19.3.5 - "Notwithstanding the provisions of clauses 19.3.1 and 19.3.2 any defects occurring after the issue of the list of practical completion requiring remedial work that will in the opinion of the principal agent cause disruption, will cause the issue of the certificate of practical completion to be withheld until such defects have been rectified to the satisfaction of the principal agent".				
		Clause 19.6 shall be omitted and replaced by the following:				
		19.6 If the contractor does not achieve practical completion by the applicable date for practical completion, then the employer shall at his sole discretion, be entitled to take possession of the works and the site and operate the building as if practical completion has been achieved, but practical completion shall not be deemed to have taken place and the applicable certificate of practical completion shall not be issued.				
		Such possession and operation by the employer shall not in any way whatsoever diminish or reduce the contractor's responsibility in terms of this contract which in this event shall continue to be applied as if practical completion had not been achieved save that the penalties as contained in the schedule shall be reduced by 25 percent and the contractor shall complete the works in a manner which will least interfere with the employer's operation of the building, including working after hours, if necessary.				
		The implications on insurances shall be agreed by the employer and contractor prior to occupation by the employer.				
		Clause 19.0 is amended by adding the following sub-clause:				
		19.8 Specific Requirements:				
		Without derogating from the generality of the requirements for practical completion the following specific requirements shall apply:				
		All items on the practical completion list must be completed and attended to in its entirety.				
		All defects noted on the quality control sheets issued by the principal agent of the employer during the currency of the contract are to have been completed and attended to in their entirety.				
		Defects occurring after the issue of the practical completion list requiring remedial work that will, in the opinion of the principal agent, cause disruption, will cause the issue of the certificate of practical completion to be withheld until such defects have been rectified to the satisfaction of the principal agent.				
		The following certificates of compliance shall be required (excluding others that may be required by the local/national authority) from the contractor to achieve practical completion:				
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		a) A certificate from the contractor that all aspects of the Construction Regulations of 2003 have been complied with.				
		b) A certificate from the contractor that the National Building Regulations have been complied with.				
		A complete set of as built drawings, maintenance and operating manuals together with all workmanship and material warranties and guarantees are to be compiled and issued to the principal agent prior to practical completion being granted.	Item	1,00		
19	20	Clause 20.0 - Completion in sections	Item	1,00		
19	21	Clause 21.0 - Defects liability period and final completion	Item	1,00		
19	22	Clause 22.0 - Latent defects liability period	Item	1,00		
19	23	Clause 23.0 - Revision of date for practical completion				
		Clause 23.1.1 is replaced with "Adverse weather conditions in excess of the monthly average recorded for the past 10 (ten) years by the nearest commonly recognised weather bureau in the region of the project".				
		Clause 23.1.2 is amended by adding the following at the end of the clause "The removal or substitution of any materials and goods which do not conform to the specification or the contract drawings shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value				
		Clause 23.2.12 is deleted in it's entirety.				
		Clause 23.0 is amended by adding the following sub-clauses:				
		23.9 Revision to the date for practical completion shall only be considered when work on the critical path of the agreed programme for the works is delayed.				
		23.10 Acceleration				
		23.10.1 Irrespective of whether or not the principal agent rules that the contractor is entitled to a revision of the date for practical completion, the principal agent shall nevertheless at any time, be entitled to issue a contract instruction to accelerate the progress of the remaining works, to ensure that the works are completed by the date for practical completion.				
		23.10.2 Upon receipt of such instruction, the contractor shall take necessary steps to ensure that the works are completed timeously, including the provision by him of additional resources, plant, manpower, etc. and the working of overtime or additional overtime beyond that contemplated at the time of tender (at all times adhering to the regulations and requirements of all authorities) and by all other adequate and proper means and methods. The contractor shall prove that such steps are being taken if called upon to do so.				
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		23.10.3 The contractor's entitlement to compensation arising out of or in respect of any revision to the date for practical completion that may have been granted by the principal agent, or alternatively, where the principal agent has instructed the contractor to accelerate, shall be adjudicated strictly in terms of Clause 26 hereof. The contractor shall not be entitled to any compensation of any nature whatsoever, other than that provided for in terms of Clause 26 hereof and where the principal agent has instructed the contractor to accelerate, the contractor's additional entitlement shall be calculated by adding a further 30% to the value thereof.				
		23.11 Notwithstanding anything to the contrary contained in the contract documents, there shall be no revision of the date for practical completion for the first 15 (fifteen) working days authorised in terms of 23.1 and 23.2 nor shall there be any adjustment to the contract value for the first 15 (fifteen) working days authorised in terms of 23.2.				
		23.12 Notwithstanding anything to the contrary, the contractor shall not be entitled to a revision to the date for practical completion for delays arising from Municipal or other interruptions in municipal services to the site.	Item	1,00		
20	24	Clause 24.0 - Penalty for late or non-completion	Item	1,00		
20		Payment (A25 - A27)				
20	25	Clause 25.0 - Payment				
		Clause 25.0 is amended by adding the following sub-clauses:				
		25.3.4 Fluctuations in Costs				
		All fluctuations in costs, with the exception of the increase in the rate of Value Added Tax, shall be for the account of the contractor.				
		25.5.1 The inclusion of materials and goods stored off site in the amount authorised for payment shall be at the sole discretion of the principal agent and such inclusions shall only be considered upon the provision, by the contractor, of an approved security.				
		Clause 25.10				
		Replace "fourteen (14)" with " twenty one (21)"				
		25.18 Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of the agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing.	Item	1,00		
21	26	Clause 26.0 - Adjustment of the contract value and final account				
		Clause 26.0 is amended by adding the following sub-clause:				
		26.14 All costs incurred by the contractor in the preparation of claims shall be borne by the contractor.				
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		26.15 The contractor shall review, assess and adjudicate any claims received by him from any subcontractor and thereafter submit same to the principal agent with a recommendation to assist the principal agent in adjudicating the claim.	Item	1,00		
21	27	Clause 27.0 - Recovery of expense and/or loss	Item	1,00		
21		Suspension and termination (A28 - A29)				
21	28	Clause 28.0 - Suspension by the contractor.				
		Clause 28.0 is amended by the addition of the following:				
		"28.5 Suspension by the employer				
		28.5.1 The employer may give five (5) working days notice to the contractor of the intention to suspend the works where the contractor has failed to:				
		28.5.1.1 comply with legislation				
		28.5.1.2 provide the construction guarantee				
		28.5.1.3 pay nominated/selected subcontractors by the date stated in the nominated/selected subcontract data.				
		28.5.1.4 effect insurances where applicable				
		28.5.1.5 to obtain the employer's consents".	Item	1,00		
21	29	Clause 29.0 - Termination				
		Clause 29.17.2 is deleted in its entirety and replaced with "The Contractor shall not remove temporary structures, construction equipment without the written consent of the principal agent".	Item	1,00		
21		Dispute resolution (A30)				
21	30	Clause 30.0 - Dispute resolution	Item	1,00		
21		CHANGES MADE TO THE STANDARD JBCC CLAUSES				
21		A. Building Agreement:				
		Clause 2 - addition				
		Clause 5 - ammended				
		Clause 7 - addition				
		Clause 10 - addition				
		Clause 11 - ammended				
		Clause 12 - omitted and substituted				
		Clause 13 - addition				
		Clause 16 - addition				
		Clause 17 - addition				
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		Clause 19 - omitted and substituted				
		Clause 23 - omitted, added and substituted				
		Clause 25 - ammended and addition				
		Clause 26 - addition				
		Clause 28- addition				
		Clause 29 - omitted and substituted				
		B. ASAQS Preliminaries:				
		Clause 2.3 - addition				
		Clause 6.3 - amended				
		Clause 11.6 - Addition				
22	31	Contract data				
		Before submission of his tender the contractor is to complete the tenderer's selection in the contract data.	Item	1,00		
22		SECTION B: PRELIMINARIES				
22		Definitions and interpretation (B1)				
22	32	Clause 1.1 - Definitions	Item	1,00		
22	33	Clause 1.2 - Interpretation	Item	1,00		
22		Documents (B2)				
22	34	Clause 2.1 - Checking of documents	Item	1,00		
22	35	Clause 2.2 - Provisional bills of quantities	Item	1,00		
22	36	Clause 2.3 - Availability of construction information				
		Budgetary allowances and provisional sums				
		The budgetary allowances and/or provisional sums allocated for subsequent trades included in this agreement will be separately procured, based on multiple procurement of subcontractors during the construction period.	Item	1,00		
23		Previous work and adjoining properties (B3)				
23	37	Clause 3.1 - Previous work - dimensional accuracy	Item	1,00		
23	38	Clause 3.2 - Previous work - defects	Item	1,00		
23	39	Clause 3.3 - Inspection of adjoining properties	Item	1,00		
23		The site (B4)				
23	40	Clause 4.1 - Handover of site in stages	Item	1,00		
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23	41	Clause 4.2 - Enclosure of the works				
		The contractor shall erect, maintain and remove at completion hoardings with gantries, fans, safety screens, barriers, access gates, covered gangways and the like as necessary for the enclosure of the works and elements thereof, all for the protection of the public and others.	Item	1,00		
23	42	Clause 4.3 - Geotechnical and other investigations	Item	1,00		
23	43	Clause 4.4 - Encroachments	Item	1,00		
23	44	Clause 4.5 - Existing premises occupied	Item	1,00		
23	45	Clause 4.6 - Services - known	Item	1,00		
23		Management of contract (B5)				
23	46	Clause 5.1 - Management of the works	Item	1,00		
23	47	Clause 5.2 - Progress meetings	Item	1,00		
23	48	Clause 5.3 - Technical meetings	Item	1,00		
23		Samples, shop drawings and manufacturer's instructions (B6)				
23	49	Clause 6.1 - Samples of materials	Item	1,00		
23	50	Clause 6.2 - Workmanship samples	Item	1,00		
23	51	Clause 6.3 - Shop drawings				
		Clause B6.3 is hereby amended by the addition of the following:				
		General responsibilities: The Contractor shall provide a person or persons who shall be available immediately upon commencement of the contract, whose responsibility will be:				
		a) To familiarise himself with all drawings produced by the professional team. This will involve a clear understanding of services and element co-ordination performed by the principal agent, in order that subcontractors can be properly briefed.				
		b) To provide the professional team with comprehensive lists of shop drawings to be prepared by relevant subcontractors.				
		c) To check all shop drawings for sufficiency prior to submission to the relevant consultant in the professional team. It is expected that such checking will include all co-ordination and pro-active resolution of any conflicting services and elements. It is also noted that resolution of co-ordination problems will require attendance at services and element co-ordination meetings, called by the principal agent as and when necessary.				
		The contractor shall, at his own expense, prepare and submit one reproducible print of shop drawings of all fabricated work, working or setting out drawings, shop details and schedules to the principal agent for approval by the relevant consultant/s and/or the employer as is appropriate and such work shall not be performed by the contractor until such approval has been given. The contractor shall take cognisance of and adhere to the Project Document Numbering System, if any, in use on this contract.				
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		Procedures:				
		The contractor shall present a complete schedule showing the sequence of submission of shop drawings, including submission dates, for all trades and the scheduled dates for approval of all drawings. This schedule shall take into account that the relevant consultant/s and the employer reserve a two weeks check period from the date of the receipt of all shop drawings and/or catalogue data.				
		All submissions shall bear the contractor's dated stamp of approval as evidence that they have been so checked and corrected by the contractor. Any drawings, schedule or catalogue submitted without this stamp will not be considered by the principal agent and will be returned.				
		All submissions shall be on dates as indicated in the above schedule and sufficiently in advance to allow the contractor to meet the fabrication deadlines. No claim for extensions to the contract time will be granted to the contractor by reason of his failure in this respect. The contractor shall submit four copies of catalogue and data for approval. The contractor shall check all submissions for conformity with the contract drawings and specifications and correct any errors, omissions or deviations before their transmission to the principal agent.				
		When the principal agent advises the contractor that shop drawings have been approved, he shall immediately submit to the principal agent the original transparencies of such drawings so that the principal agent's stamp of approval may be appended thereto. Thereafter the contractor shall furnish to the principal agent four prints of the approved shop drawings, setting out drawings and schedules. The contractor shall also furnish to the works as many prints of the approved shop drawings and schedules as may be required. No work shall be performed from any shop drawings and/or catalogues not stamped with the principal agent's approval.				
		The contractor shall be responsible for ensuring that all dimensions confirm to the dimensions of built work. The principal agent's approval of any document or drawing shall not in any way vary his contractual or delictual obligations and liabilities to the employer or any other party, nor does it vary the contractual or delictual obligations and liabilities of the party submitting such document or drawing for approval.				
		If the submissions differ from the requirements of the contract, the contractor shall make specific mention of each difference in his letter of transmission with a request for substitution, together with his reasons for same, in order that, if acceptable, suitable action may be taken by the principal agent. Otherwise the contractor will not be relieved of the responsibility for executing the work in accordance with the requirements of the Contract.				
		Corrections of shop drawings by the principal agent shall not change the scope of work. Should any such correction be considered to constitute a change of the scope of work, the contractor shall notify the principal agent in writing within not more than seven calendar days of such change and shall not proceed with the fabrication until so authorised by the principal agent. Claims for change of scope made after performance of the work constituting the claimed change of scope will not be considered.				
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		Unless otherwise agreed with the principal agent, shop drawings shall be prepared to show all details of installation, including reticulation, fixing, etc. of all components and assemblies.	Item	1,00		
25	52	Clause 6.4 - Compliance with manufacturer's instructions	Item	1,00		
25		Deposits and fees (B7)				
25	53	Clause 7.1 - Deposits and fees	Item	1,00		
25		Temporary services (B8)				
25	54	Clause 8.1 - Water	Item	1,00		
25	55	Clause 8.2 - Electricity	Item	1,00		
25	56	Clause 8.3 - Ablution and welfare facilities	Item	1,00		
25	57	Clause 8.4 - Communication facilities	Item	1,00		
25		Prime cost amounts (B9)				
25	58	Clause 9.1 - Responsibility for prime cost amounts	Item	1,00		
25		Attendance on subcontractors (B10)				
25	59	Clause 10.1 - General attendance	Item	1,00		
25	60	Clause 10.2 - Special Attendance	Item	1,00		
25		General (B11)				
25	61	Clause 11.1 - Protection of the works	Item	1,00		
25	62	Clause 11.2 - Protection/isolation of existing/sectionally occupied works	Item	1,00		
26	63	Clause 11.3 - Security of the works	Item	1,00		
26	64	Clause 11.4 - Notice before covering work	Item	1,00		
26	65	Clause 11.5 - Disturbance	Item	1,00		
26	66	Clause 11.6 - Environmental disturbance				
		Controlling all forms of pollution				
		The contractor shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution during the construction period due inter alia to noise, artificial light, wind-blown sand, dust, deposits of mud, etc.				
		The contractor is to ensure that all roads which border the site and are used by the contractor during the execution of the works are kept clean and free of any dirt or debris caused by the execution of the works.	Item	1,00		
26	67	Clause 11.7 - Works cleaning and clearing	Item	1,00		
26	68	Clause 11.8 - Vermin	Item	1,00		
26	69	Clause 11.9 - Overhand work	Item	1,00		
26	70	Clause 11.10 - Tenant installation	Item	1,00		
26	71	Clause 11.11 - Advertising	Item	1,00		
	Amount Carried Forward					

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27	77	Testing of flat roof waterproofing for watertightness				
		Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the principal agent , flooded with water and kept 'ponded' for at least forty (40) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing.	Item	1,00		
27	78	Broad based black economic empowerment (BBBEE)				
		It is the expressed intention of the employer on this contract to ensure that the target as stipulated in the Construction Sector Charter under section 12 of the Broad Based Economic Empowerment Act, 20003 (Act No. 53 of 2003) are met.				
		Tenders submitted will be evaluated taking into account their empowerment rating.				
		The employer will be monitoring the black economic empowerment status of the contractor throughout the execution of the works.				
		The contractor is to submit to the principal agent on an annual basis a schedule of spend, split into vendors engaged as subcontractors and suppliers indicating their BBBEE rating including proof of the said rating.	Item	1,00		
27	79	Advertising rights				
		The employer may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The contractor shall not prevent such an arrangement and will assist in the facilitation of same. Position and type of advertising structure to be agreed with the principal agent so as not to hinder the contractor in the meeting of his obligations under this agreement.	Item	1,00		
28	80	Confidentiality				
		The contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the works.				
		No information regarding this project shall be published or disclosed without the prior written consent of the employer.	Item	1,00		
28	81	Media releases				
		All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the employer.				
		The contractor together with his subcontractors shall not, without the prior written consent of the employer , cause any statement or advertisement to be printed, screened or aired by the media.	Item	1,00		
28	82	Satisfaction of Contractor as to scope of insurances				
		Submission of a tender shall be deemed as acceptance by the contractor that he is satisfied with the scope of the insurances effected by the employer, supplemented by any additional insurances considered necessary by himself.				
Amount Carried Forward						

Bill of Quantities: Preliminary & General

Page	Item	Description	Unit	Quantity	Rate	Amount
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		The employer warrants that the insurances effected by him shall remain in force for the duration stipulated in the agreement.				
		Any clarification of the scope of cover provided by the policies arranged by the employer should be obtained from the employer's representative.				
		The contractor warrants that he shall give all notices and shall observe all the terms and conditions and requirements of all insurances applicable to this contract.				
		Where the contractor is responsible for the appointment of nominated or selected subcontractor then the contractor shall:				
		1. ensure that potential and appointed subcontractors are aware of the whole content of Clauses A8, A9, A10 and A11.				
		2. ensure the compliance of subcontractors with these Clauses where applicable.				
		In the event of any occurrence which is likely to give rise to a claim under the insurances arranged by the employer, the contractor / subcontractor shall:				
		3. In addition to any statutory requirement or other requirements contained in the agreement, immediately notify the employer's Insurance Brokers by telephone or telefax giving the circumstances, nature and an estimate of the loss or damage or liability;				
		4. Complete a claims advice form, in conjunction with both the principal agent and the employer and return to the Insurance Brokers without delay;				
		5. Assist as required, in negotiations of the settlement of claims with the insurers through the employer's Insurance Brokers.				
		The employer shall have the right to make all and any enquiry on the site or elsewhere as to the cause and results of any such occurrence and the contractor shall give the employer and his insurers full facilities for carrying out such enquiries.	Item	1,00		
29	83	Method statement				
		The Tenderer shall produce, when required to do so by the Principal Agent, a Method Statement outlining the methods of construction and labour and plant resources that he proposes to use in the execution of the Works. Any approval given or observation made by the Principal Agent shall not relieve the Contractor of his sole responsibility to adopt the methods of construction and to provide the labour and plant resources necessary for the due and proper timeous execution of the Works.	Item	1,00		
29	84	Mode of procedure				
		Notwithstanding anything to the contrary contained herein the Principal Agent at all times reserves the right to direct the order in which the various parts of the Works are to be executed. The Contractor shall give priority to any individual section or portion of the Works that, in the opinion of the Principal Agent, requires to be expedited.				
		Should the Contractor and/or Principal Agent be of the opinion that such instruction warrants a revision to the Programme, then the provisions of Clause B4.2.6 hereof shall apply.				
Amount Carried Forward						

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		Should it appear, in the Principal Agent's opinion, that work in any area is not being executed in accordance with the requirements of the Programme, the Contractor shall provide additional manpower and resources and shall work additional overtime and do everything else required to bring the work back to programme to the satisfaction of the Principal Agent.	Item	1,00		
29	85	Tests and inspections prior to completion				
		All specialist plant and equipment, subject to the principal agent's sole discretion, is subject to acceptance tests, which shall be arranged in the works of the contractor and/or subcontractors supplier within 10 days of notification that such plant or equipment is available for testing. The contractor and/or subcontractor shall inform the principal agent in writing, indicating the exact dates for these acceptance tests during the course of the last month of manufacture of such plant or equipment.				
		In the event that the principal agent or his representatives cannot witness such tests, the employer may:				
		appoint a specialist inspection organisation to witness such tests at his expense on behalf of the principal agent or his representatives.				
		OR				
		accept the contractor and/or subcontractor's certificate testifying as to the quality and performance of the specialist plant/equipment so supplied.				
		Should no inspection have been made by the date indicated by the contractor and/or subcontractor as set out above, the equipment will be deemed as accepted and packed accordingly for delivery.				
		The final acceptance will take place on site in the presence of the contractor and/or subcontractor responsible for the commissioning of the equipment. The principal agent's representative shall also be present.				
		The contractor and/or subcontractor shall demonstrate to the principal agent the full scope of operation of the installation and shall ensure that he is satisfied that the principal agent is fully aware of all the operational aspects of the installation prior to handover at practical completion stage.				
		The principal agent shall be afforded access at all reasonable times to such part of the works on site or at the contractor and/or subcontractor's premises or the premises of the manufacturer of component parts, as may be necessary for the purpose of inspecting, examining and testing the materials, workmanship and performance of any plant or equipment for the works				
		The contractor and/or subcontractor shall be responsible for the tests required by any local statute, building regulation, etc.				
		Any breakdown or mechanical failure and any damage or consequential losses which may arise from such breakdown, mechanical or structural failure, will be the responsibility of the contractor and/or subcontractor.	Item	1,00		
30	86	Quality control and quality assurance				
		The contractor shall be required to provide suitably qualified and experienced staff capable of executing the work to the required standard and quality.				
	Amount Carried Forward					

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Page	Item	Description	Unit	Quantity	Rate	Amount
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		The acceptance of the quality system by the principal agent does not supersede or negate any other quality control conditions stipulated elsewhere in the contract documentation and in the instance of contradiction of requirements being identified, specific requirements shall override general requirements. Acceptance of the system by the principal agent shall not in any way supersede, negate or alter the intent, content or interpretation of the specification or conditions of contract specified elsewhere in the contract documentation. Acceptance of the system by the principal agent does not in any way relieve the contractor of his responsibility to satisfy the conditions of contract and to achieve and maintain the specified standards. The quality system is an audit procedure and does not necessarily describe the contractors total responsibility in				
		The principal agent may from time to time call for the quality control assurance data sheets for random checking of:				
		- The manner in which the system is being administrated,				
		- The technical acceptability of the contents of the sheets, and				
		- The effectiveness of the system in controlling the attainment of the required end product.				
		If the system is found to be inadequate or ineffective the principal agent will have the right to declare the system or parts thereof as being areas of "non-performance". In the event of the principal agent instructing the contractor by an architect's instruction of an area of "non-performance" the following options may be implemented by the principal agent at no additional costs to the client and without any claim for delays:				
		The structure for approval may be altered necessitating the signature of quality control and assurance data sheets by designated members of the professional team before work of a particular nature and/or in a particular area can proceed through the various check stages of the system.				
		The structure of the system may be altered by extending the detail of checking required by the system and/or the frequency at which check sheets have to be produced.				
		The geographical boundaries of a typical checking operation may be altered thereby requiring the contractors to perform more comprehensive checks on smaller portions of the work.				
		The contractor shall react immediately to an instruction by the principal agent regarding any alteration to the procedure of the system. On receipt of an instruction on any "non-performance" from the principal agent the contractor shall not proceed with any of the affected work until acceptance of the revised procedure has been obtained from the principal agent.				
		Once the principal agent is satisfied that the revised quality control and assurance procedures are effective, the contractor will be informed by means of an official principal agent's instruction of the extent to which the system may revert back to the principle of "management by exception". It is envisaged that the system should generally operate on such a basis and providing the results are satisfactory, the contractor is not expected to attain approval by counter-signature of every quality control data sheet.				
		In instances where up-front inspection is an industry norm (e.g. inspection of reinforcing by the structural engineer) or where the specification demands such inspection, the contractor must take this into account when compiling the quality control system.				
		Amount Carried Forward				

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Page	Item	Description	Unit	Quantity	Rate	Amount
		Brought forward				
		It is envisaged that "samples and mock-ups" shall be extensively used to define the accepted standards of workmanship and materials to be used. A lockable sample room with shelving must be provided by the contractor to accommodate all loose samples for the duration of the project. The contractor shall also prepare and maintain a register of all samples indicating numbers, date, bill of quantities and specification reference, approval and relevant documents.				
		The principal agent will submit a quality report indicating areas of concern with regard to the quality of the project. The contractor is to remedy the works within a two week period or supply the principal agent with a programme indicating the duration of remedial work for specific items. Such programme will be subject to the reasonable approval of the principal agent.	Item	1,00		
33	87	Commisioning and testing				
		The contractor and/or subcontractor shall commission and test the entire installation at his own expense, including provision of all test equipment, fuel and power, and everything necessary for testing. Such testing is to be done in the presence of the principal agent, who shall have been notified of the dates and approximate duration of the tests, sufficiently in advance so as to allow attendance at such tests.	Item	1,00		
33	88	Local Labour Participation				
		Contractors will be required to, as far as reasonably possible and without derogating from the overall efficiency of the contract, employ a target percentage of members of the local community to conduct basic labour activities for the contract works. In order for someone to qualify as local labour they have to reside in the local area or ward in which the project is undertaken. The target percentage for this project has been set at 30% of the contractor's labour force employed on the contract. The contractor will be required to:				
		1. Determine the type and skill level from the labour work force that will be utilised for employment on the contract				
		2. Advertise / put notices up for this inviting potential work force members to submit CV's at the site office.				
		3. Have available a competent representative, that will receive CV's as well as to entertain any queries from potential labourers.				
		4. Compile on a schedule, the list of CV's received, for ease of reference, which can at any time be requested by the principal agent.				
		5. At his own discretion and at random, make selections from this list for employment of local labourers.				
		6. Report against the set target percentage for local labour as part of his fortnightly Progress Reports to the Principal Agent.	Item	1,00		
33	89	Access and security procedures				
		The contractor shall ensure that all personnel, including all subcontractors, comply with the employer's access and security procedures.				
		Amount Carried Forward				

Bill of Quantities: Preliminary & General

Page	Item	Description	Unit	Quantity	Rate	Amount
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		The contractor shall at all times prevent access by all unauthorised persons to the works and the site and set up notice boards to that effect.				
		No workmen or labourers shall be allowed, under any circumstances, to sleep or deposit any belongings on the premises. The contractor must provide an independent shelter or shed required for any labour or watchman left on the site after working hours. The facility required and security arrangement are to be specifically agreed in writing with the principal agent.				
		The contractor shall take all measures necessary to ensure that no workmen are allowed into the operational areas without the permission of the principal agent.	Item	1,00		
34	90	Security at Completion				
		At completion, the Contractor shall leave the Works secure with all accesses locked. The Contractor shall account for and hand over to the Principal Agent all keys, properly labelled with an itemised schedule to be signed by the Principal Agent as receipt.	Item	1,00		
34		SUMMARY OF CATEGORIES				
		Category : Fixed R.....				
		Category : Value R.....				
		Category : Time R.....				
		Bill Total Carried Forward				

Bill of Quantities: General Building

Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.1 : ALTERATIONS				
		The Tenderer is referred to the relevant clauses in the seperate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		SUPPLEMENTARY PREAMBLES				
		The Tenderer should include for all plant, special scaffolding and equipment necessary for placing in position, horizontal carting over roof and hoisting from ground level.				
		View site:				
		Before submitting his/her tender the tenderer 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 salvageable from the alterations. 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.				
		Work and Materials:				
		The work to be done and materials to be used in the works on site are to be similar to those specified in the new work in so far as they apply. All rubble and debris from the pulling down are to be carted away without delay and the site is to be left clean and tidy.				
		Notices:				
		The Contractor shall allow for the disconnection of electric, light, telephone, water and drainage services, etc., and he is to pay all fees and deposits in connection therewith.				
		The Contractor shall, before commencing work, obtain all necessary authorisation for carrying out the work, by whatever means including the use of pneumatic equipment or blasting, give all necessary notices and pay all charges and fees in connection therewith. He shall also comply with all regulations pertaining to Rodent Extermination, and he shall obtain the requisite Clearance Certificates and pay all necessary fees. All receipts and certificates shall be left in the safekeeping of the Principal Agent. All the abovementioned charges and fees shall be paid by the Contractor and included in his prices The Contractor shall give ample notice to the Principal Agent and Local Authorities regarding any disconnections necessary prior to the removal or interruption of electrical or telephone cables, water and sanitary services, etc.				
		Demolitions:				
		All demolition work shall be carried out in accordance with the local By-laws and to the requirements of the Authorities and Building Regulations.				
		Water, etc.:				
		The Contractor shall allow for watering the works with a jet or spray from a hose sufficiently to prevent any nuisance from dust.				

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
		TEMPORARY BARRIERS, SCREENS, ETC.				
		Temporary barriers, screens, etc. including removal:				
		Type A Hoarding This hoarding will be applicable where construction work takes place adjacent to other tenants to minimise noise, dust and visual screening. Galvanised floor track 61mm wide fixed to floor and soffit with suitable fasteners at 600mm centres minimum. 16mm chipboard with melamine finish (Grey Cambrink) on the public side and 12mm chipboard (when shelving is to be hung onto the walls) or 12.7mm Gypsum plasterboard for lighter usage The melamine boards are cut into module width of 900mm or 1200mm and the heights will be those that can be manoeuvred by human labourers without any hindrance to the public where applicable, preferably 3000 high. The melamine board will be held in place by a tophat section on the vertical joint, colour black. The backboard will be screwed directly to the grid. Hoarding is to be filled with approved insulating material for sound proofing:				
		Type A Hoarding +- 5.5m high	m	15,60	R 25,00	R - 390,00
		REMOVAL OF EXISTING WORK				
		Breaking down and removing brickwork, etc.:				
		Half brick wall.	m ²	11,56		
		One brick wall.	m ²	340,68		
		Taking out and removing doors, windows, etc. including thresholds, sills, etc., (building up openings and making good finishes elsewhere):				
		Timber single door and steel frame, size approximately 813 x 2032mm high overall from brick walls.	No	17,00		
		Timber double door and steel frame, size approximately 1600 x 2100mm high overall from brick walls.	No	3,00		
		Glazed steel windows from one brick wall	m ²	56,12		
		Carefully taking down and removing roofs, floors, panelling, ceilings, partitions, etc.:				
		Drywall partitions 2.8m high including doors, windows, borrowed lights, etc., plugged onto concrete floors.	m			
		Taking out and removing sundry joinery work, fittings, etc.:				
		Joinery.	m	117,30		
		Timber cornices, skirtings, etc.	m	208,52		
		Taking up and removing wood block floor coverings, vinyl floor coverings, carpets, etc and preparing screeds for new floor coverings:				
		Vinyl tile floor covering	m ²	578,80		
		Carpet tile floor covering, including scabbling up glue.	m ²			
		Amount Carried Forward				

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Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
		Core drill 50mm diameter opening in slabs 300mm thick.	No	3,00		
		Ditto, but opening size approximately 100mm diameter.	No	3,00		
		Chasing into brickwork, with and including making good to match existing once pipe installed:				
		Chase into brickwork for a 50mm diameter pipe (Pipe measured elsewhere).	m			
	BUDGETARY ALLOWANCE					
		Allow a Budgetary Allowance of R20,000 (Rand) for Alterations to be used as directed by the Principal Agent and to be deducted in whole or in part if not required.	Item	1,00	R 20 000,00	R 20 000,00
						R -
						R -

TOTAL FOR THIS BILL:

Bill of Quantities: General Building

Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.3 : WATERPROOFING				
		The Tenderer is referred to the relevant clauses in the separate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		SUPPLEMENTARY PREAMBLES				
		Waterproofing to roofs shall be laid to even falls to outlets, etc., with necessary				
		Descriptions of sheet or membrane waterproofing shall be deemed to include				
		Guarantee:				
		Waterproofing to roofs, basements, etc. shall be guaranteed watertight for a period of ten years.				
		DAMPPROOFING OF WALLS AND FLOORS				
		Gundle Brickgrip DPC 375 damp proof course (SANS 952-1985) type B laid with minimum 150mm overlaps:				
		DPC to walls, cills, etc.	m ²	46,92		
		DAMP-PROOFING UNDER FLOORS, ETC.				
		Superflex acrylic based liquid waterproofing system, laid in accordance to				
		On floors (showers)	m ²	1,00		
		On brickwalls	m ²	9,52		
		SEALING STRIPS, JOINT SEALANTS, ETC.				
		One part, low modulus polyurethane elastomeric sealant including backing cord, bond breaker, primer, etc., applied in strict accordance with the manufacturer's details and recommendations: (Colour: 114 Anthracite)				
		10mm Wide x 10mm deep in isolation joint between fittings and brickwalls.	m	42,00		

TOTAL FOR THIS BILL:

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Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.4 : CARPENTRY AND JOINERY				
		The Tenderer is referred to the relevant clauses in the seperate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		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 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.				
		The following timber ceiling boards must be thouroughly checked and spot or knot free.				
		DOORS, ETC.				
		Flush panel solid core door with 10mm hardwood edges faced with tempered smoothfaced hardboard, suitable for painting and hung to steel or aluminium frames (frames elsewhere measured):				
		40mm Thick Solid door (Type D2) overall size 813 x 1932mm high - Refer to drawing no. 7.101 Rev 02	No	11,00		
		Polyurethane foam sealant:				
		20mm Wide x 20mm deep in joints between timber frames and brickwalls	m	67,60		
TOTAL FOR THIS BILL:						

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Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.5 : CEILINGS PARTITIONS AND ACCESS FLOORING				
		The Tenderer is referred to the relevant clauses in the separate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder				
		SUPPLEMENTARY PREAMBLES				
		Proprietary suspended ceilings:				
		Hangers, suspension grids, lay-in panels, etc. are to be in accordance with the manufacturers' recommendations.				
		Electrical light fittings, diffusers, panels etc. are generally lay-in units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof).				
		Partitions, etc.:				
		Unless otherwise described rates for partitions shall be deemed to include for standard flat section aluminium skirtings on both sides.				
		Wall paper and/or paint and varnish finishes are given elsewhere.				
		Ceilings:				
		Unless otherwise described ceilings shall be deemed to be horizontal.				
		Bulkheads:				
		GypRoc Standard System steel stud partitions with both sides clad with one layer of 12.5mm Rhinoboard fixed with 25mm Rhinoboard sharp point screws at 220mm centres:				
		Bulkheads are defined as those portions of ceilings which are stepped down from the general ceiling level in a particular room or area and which generally occur along the perimeter. Their purpose is either to conceal services or to create architectural features.				
		Bulkheads have only been described as such where they conform to the above definition and where the horizontal or vertical dimensions do not exceed 900mm. Where these dimensions are more than 900mm such portions of ceilings have been included in the appropriate general items of ceilings.				
		Unless otherwise described bulkheads shall be deemed to be horizontal along the length.				
		Steel components:				
		All steel components for ceilings, partitions, etc. are to be galvanised in accordance with SANS 121.				
		Proprietary suspended ceilings:				
		Hangers, suspension grids, lay-in panels, etc. are to be in accordance with the manufacturers' recommendations.				
		Amount Carried Forward				

Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
		Electrical light fittings, diffusers, panels etc. are generally lay-in units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof).				
		SUSPENDED CEILINGS				
		Daiken Excel-Tone moisture resistant laid onto CKM T38/24W exposed tee grid and tee system, including galvanised main tees and cross tees, necessary hangers, grids, corner beads, etc with rhinotape fixed over joints applied as per manufacturers instructions:				
		600 x 600 x 15mm Venus pin perforated ceiling.	m ²	111,50		
		CAPCO 12mm moistureguard plasterboard tapered edge & T38/35G galvanised covered tee grid system, including galvanised main tees and cross tees, necessary hangers, grids, corner beads, etc with rhinotape fixed over joints and the whole finished with 6mm thick rhinolite gypsum skim plaster applied as per manufacturers instructions:				
		12mm Plasterboard ceiling with joints skimmed.	m ²	107,20		
		Extra over ceiling for forming 1200 x 600mm opening for recessed fluorescent luminaire.	No			
		Cornices, perimeter trims, etc. to suspended ceilings:				
		Donn' or similar approved pre-painted shadow line cornice for flush plastered ceiling, secured to plastered wall, ceiling boarding, including mitres, etc.	m	383,40		
		PARTITIONS, ETC.				
		95mm thick "CAPCO" drywall partition system (Type A) - refer to drawing for specification:				
		Partitions 3,4m high with bottom and top tracks plugged.	m	53,40		
		Extra over partition 3,4m high for vertical abutment.	No	6,00		
		Extra over partition 3,4m high for T-intersection.	No	2,00		
		Extra over partition 3,4m high for corner.	No	6,00		
		Extra over partition 3,4m high for fair end.	No	2,00		
		Extra over for forming opening for windows and shopfronts.	No	22,00		
		Extra over for forming opening for door size 813 x 2032mm.	No	13,00		
		Extra over for forming opening for door size 1600 x 2032mm.	No	4,00		
		95mm thick "CAPCO" drywall partition system (Type B) - refer to drawing for specification:				
		Partitions 3,4m high with bottom and top tracks plugged.	m	17,60		
		Extra over partition 3,4m high for vertical abutment.	No	9,00		
		Extra over partition 3,4m high for T-intersection.	No	4,00		
		Extra over partition 3,4m high for corner.	No	2,00		
	Amount Carried Forward					

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	Brought forward					
		Extra over partition 3,4m high for fair end.	No	1,00		
		120mm thick "CAPCO" drywall partition system (Type B) - refer to drawing for specification:				
		Partitions 6,2m high with bottom and top tracks plugged.	m	33,60		
		Extra over partition 6,2m high for vertical abutment.	No	5,00		
		Extra over partition 6,2m high for T-intersection.	No	2,00		
		Extra over partition 6,2m high for corner.	No	4,00		
		Extra over partition 6,2m high for fair end.	No	2,00		
		Extra over for forming opening for windows and shopfronts.	No	8,00		
		Extra over for forming opening for door size 813 x 2032mm.	No	2,00		
		Extra over for forming opening for door size 1600 x 2032mm.	No	2,00		
TOTAL FOR THIS BILL:						
	BILL NO.6 : FLOOR COVERINGS					
	FLOOR COVERINGS					
		Polyflor Static dissipative vinyl flooring (Pencil Lead 8606)	m ²	115,30		
		Polyflor Electrostatic conductive vinyl flooring (OhMega EC Frosty)	m ²	240,60		
		Epoxy floor system (AB.E cote 400 Hi-build)	m ²	68,60		
	SKIRTINGS, NOSINGS, ETC.					
		Skirtings, nosings, etc.:	m	383,40		
	POLISH, SEALERS, ETC.					
		Two coats wax polish on vinyl flooring	m ²	355,90		
TOTAL FOR THIS BILL:						

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.7 : IRONMONGERY				
		The Tenderer is referred to the relevant Clauses in the separate document 'Model Preambles for Trades' (2017 Edition).				
		IRONMONGERY				
		Allow the Prime Cost Amount of R50 000.00 for the supply and delivery of Ironmongery and Accessories	Item	1,00	R 50 000,00	R 50 000,00
		Allow for profit on above if required.	Item	1,00		
		Labour Only - Fixing Ironmongery:				
		LOCKS, ETC.				
		Two-lever lockset, backplates and handles.	No			
		Cylinder lockset, backplates and handles.	No			
		SUNDRIES				
		Rubber door stop.	No			
		Wall buffer.	No			
		Grab rails, etc.	No			
		Push plates.	No			
		Kick plates.	No			
		Door closers.	No			
		Floor springs.	No			
		Toilet roll holder.	No			
		Towel rail.	No			
		Robe hook.	No			
		Paper towel dispenser.	No			
		Soap dispenser.	No			
		Electric hand drier.	No			
		End of Labour only items.				
		BUDGETARY ALLOWANCE				
		Allow a Budgetary Allowance of R20 000.00 (Twenty Thousand Rand) for Signage to be used as directed by the Principal Agent and to be deducted in whole or in part if not required.	Item	1,00	R 20 000,00	R 20 000,00
TOTAL FOR THIS BILL:						

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.8: METALWORK				
		The Tenderer is referred to the relevant Clauses in theseparate document 'Model Preambles for Trades' (2017 Edition) and to the Supplementary Preambles which are incorporated hereunder.				
		SUPPLEMENTARY PREAMBLES				
		Descriptions:				
		Descriptions of bolts shall be deemed to include nuts and washers.				
		Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.				
		All surfaces of steelwork must be given one coat of approved zinc chromate primer before leaving the works of the manufacturer.				
		Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.				
		ALUMINIUM WINDOWS (Refer to drawing no, 7.101 Rev 2):				
		Powder coated casement window units as per "2" system, complete with subframes, ironmongery, glass, sealing, etc. and fixing to brickwork or concrete (Refer to drawing no, 7.101 Rev 2):				
		1111 x 2100mm High (W01)	No	1,00		
		942 x 2100mm High (W02)	No	3,00		
		1074 x 1050mm High (W03)	No	4,00		
		2000 x 1000mm High (W04)	No	1,00		
		1600 x 900mm High (W05)	No	1,00		
		2540 x 1000mm High (W06)	No	1,00		
		2767 x 1067mm High (W07)	No	1,00		
		2780 x 1067mm High (W08)	No	1,00		
		4670 x 1067mm High (W09)	No	1,00		
		1660 x 2100mm High (W10)	No	1,00		
		ALUMINIUM DOORS (Refer to drawing no, 7.101 Rev 2):				
		900 x 2100mm High (D01)	No	2,00		
		1500 x 2100mm High (D03)	No	2,00		
		1450 x 2100mm High (D04)	No	2,00		
		ALUMINIUM DOOR FRAMES (Refer to drawing no, 7.101 Rev 2):				
		Aluminium single rebate door frames with powder coated finish, including closing cavities, building into brickwork, between brickwork, structural steelwork, concrete, etc., and supplying and building in of temporary templates to suit door sizes:				
		900 x 2100mm High	No	11,00		
		Amount Carried Forward				

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
	ALUMINIUM SHOPFRONTS (Refer to drawing no, 7.101 Rev 2):					
	Powder coated shopfronts as per Nuklip system complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork or concrete:					
	900 x 2100mm High (SD01)		No	2,00		
	1700 x 2100mm High (SD02)		No	1,00		
	2500 x 2100mm High (SD03)		No	2,00		
	2000 x 2100mm High (SD04)		No	1,00		
	4087 x 2100mm High (SD04)		No	1,00		
TOTAL FOR THIS BILL:						

Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.9: PLASTERING				
		SCREEDS				
		3:1 Cement plaster screeds on concrete:				
		30mm Thick on floors.	m ²	9,30		
		Self levelling screed.	m ²	424,50		
		INTERNAL PLASTER				
		Cement plaster rendering coat with gypsum skim plaster finishing coat, on brickwork:				
		On walls.	m ²	752,42		
		On drywalls.	m ²	899,44		
		Bill Total				
		BILL NO.10: PLUMBING AND DRAINAGE				
		The Tenderer is referred to the relevant clauses in the separate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		SUPPLEMENTARY PREAMBLES				
		Supply, delivery to site and installation of SANS 21003 Multi-Layer Pipe. Piping to be chased in walls and secured with a light wire mesh. All Terminal fitting to include an angle valve:				
		SANITARY FITTINGS (Refer to sanitary schedule sheets 1 & 2):				
		Wash Hand Basins:				
		Geberit Selnova square wash hand basin (complete system).	No	2,00		
		WC:				
		Geberit Kombifix toilets (complete system).	No	3,00		
		Urinals:				
		Geberit Selnova urinal (complete system).	No	1,00		
		SINKS				
		Franke Quinline QLX611 stainless steel kitchen sink and Cobra heavy pattern medical elbow action, square-type pillar tap (complete system).	No	1,00		
		Franke Model ET102 Double fabricated economy type washtrough and Cobra heavy pattern medical elbow action, square-type pillar tap (1030 x 430 x 348mm deep) (complete system).	No	1,00		
		Franke wallmounted wash hand basin (535 x 120 x 150mm deep) including brackets and Cobra heavy pattern medical elbow action, square-type pillar tap	No	4,00		
		Franke model CH slop hopper 540 x 540mm stainless steel, 1,2mm thick with a 100mm high integral splash back to the rear and both sides and Cobra heavy pattern medical elbow action, square-type pillar tap (complete system).	No	1,00		
		Amount Carried Forward				

Bill of Quantities: General Building

Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
		Steel full-way gate valve, cast brass. Includes: female to female connection end, non-rising spindle and guided wedge, BSP parallel female threads, tested to 2400kPa, and hydraulic working pressure up to 1600 kPa. SANS 776 CLASS 16, DZR brass:				
		Ø15 mm.	No			
		Ø22 mm.	No			
		Ø28 mm.	No			
		Ø35 mm.	No			
		Ø50 mm.	No			
		Industrial level ball valves, BSP parallel female threads, tested to 2400kPa, and hydraulic working pressure up to 1600 kPa. Kwikot or equally approved:				
		Ø15 mm.	No			
		Ø22 mm.	No			
		Ø28 mm.	No			
		Ø35 mm.	No			
		Ø50 mm.	No			
		Elbows and reducing elbows m/m, m/f or f/f [copper]:				
		Ø15 mm.	No			
		Ø22 mm.	No			
		Ø28 mm.	No			
		Ø35 mm.	No			
		Ø50 mm.	No			
		Tees and reducing tees f/f/f [copper]:				
		Ø50 mm - Ø35 mm.	No			
		Ø35 mm - Ø28 mm.	No			
		Ø50 mm.	No			
		Ø35 mm.	No			
		Ø28 mm.	No			
		Waste Pipes - Sanitary Fittings:				
		110mm PVC Pipe.	m			
		Extra Over PVC fittings:				
		110 mm Reducer.	No			
		50mm bend.	No			
		Amount Carried Forward				

Bill of Quantities: General Building

Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
		40mm bend.	No			
		110mm bend.	No			
		50mm junction.	No			
		40mm junction.	No			
		110mm junction.	No			
		110mm reduction junction.	No			
		110mm pan connector.	No			
		40mm access bend.	No			
		50mm access bend.	No			
		40mm access junction.	No			
		50mm access junction.	No			
		100mm access reducing junction.	No			
		50mm vent pipe.	No			
		110mm stub stack.	No			
TOTAL FOR THIS BILL:						

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.10 : ELECTRICAL				
		The Tenderer is referred to the relevant clauses in the separate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		ELECTRICAL SUPPLY				
		Supply and Installation of complete components for full working order and operation:				
		Modification to existing Distribution Boards or Supply Panels for cable entry and alterations of distribution board metal work. To be determined by contractor prior to tendering.	Item			
		Investigation into which services are being fed by the existing board(s) in order to ensure the distribution board have sufficient capacity to serve the existing and the additional electrical equipment. Also to ascertain if the installation is done in accordance with SANS 10142 and other relevant standards including load balancing.	Item			
		Additional cost, if necessary, and for the supply and install of necessary additional switchgear to serve existing electrical equipment as investigated in item 2.6. and also provide supply to the additional equipment.	Item			
		The supply, installation and commissioning in a pre-fitted distribution board of the following equipment inline with the existing distribution boards:				
		5-25 A SP MCB - 5kA.	No			
		25-60 A DP MCB - 5kA.	No			
		10-60 A TP MCB - 5kA.	No			
		63A SP earth leakage relay - 5kA CB Type.	No			
		20A DP NO/NC Contactor.	No			
		20A 4 Pole NO/NC Contactor.	No			
		20 A DP isolator.	No			
		30 A DP isolator.	No			
		20 A TP isolator.	No			
		30 A TP isolator.	No			
		Digital timer .	No			
		CONDUCTORS, TRAYS, DUCTS				
		Wiring Duct - Lay-in Wiring Reticulation: Galvanised steel trunking complete with all accessories, cover plates, and supports as indicated on drawings, suspended from slab/purlins & trusses, excluding conduit work and wiring, and with pre-punched openings for power outlets to specification:				
		P8000 (76 x 76mm).	m			
		P8000 Splice.	No			
		Amount Carried Forward				

Bill of Quantities: General Building

Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
		P8000 End cap.	No			
		P8000 Horizontal elbow.	No			
		P8000 Internal / external elbow.	No			
		CONDUITS, BOXES, ETC.				
		Galvanised conduit: The supply and installation of Galvanised conduit cast in ceilings and voids on surface to include cutting, bending, terminations, fixing materials etc.:				
		20mm.	m			
		25mm.	m			
		Round Conduit Drawbox: The supply and installation of drawboxes including locknuts, bushes, cover plates, fixing materials when required:				
		Galvanised steel round, deep back or side entry for 20mm dia conduit cast in concrete or roof space, average for 1,2,3 and 4 ways Supply.	No			
		Switch Boxes: switch boxes for 20mm dia conduit built into brickwork, cast into concrete or surface installed (as determined by the Electrical Engineer):				
		100mm x 50mm x 50mm Powder coated Galvanised Steel box.	No			
		100mm x 100mm x 50mm Powder coated Galvanised Steel box.	No			
		LUMINAIRES				
		Supply, take delivery, unpack, store, fix, test fittings, including installation, materials, connections, LED fluorescent lamps. All fluorescent lamps shall have a colour rendering of 4000K:				
		2 x 22W LED Vapour proof surface mounted fluorescent fitting, IP65 rated col. 4000K with emergency battery backup 50% light output.	No			
		POWER				
		Conductors: The supply and installation of PVC insulated single core stranded copper conductors drawn into conduit, wiring channel, trunking or power skirting:				
		2.5mm ² PVC Red, Black wire.	m			
		2,5mm ² PVC green/yellow earth wire.	m			
		4mm ² PVC Red, white, blue, black	m			
		4mm ² PVC green/yellow earth wire.	m			
		Switched Socket Outlets: Approved single phase standard switched socket outlet as specified, including installation and connection of the socket and switch assembly and white steel cover plate including box:				
		16A Normal Single Switched Socket Outlet with White Cover Plate (wall mounted).	No			
		16A Normal Double Switched Socket Outlet with White Cover Plate (wall mounted).	No			
	Amount Carried Forward					

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
		Mark-up: The Contractor shall indicated the percentage mark-up for all materials and equipment for any additional items not included in this schedule of materials. An Items may be classified per single item or per group of items requested and shall be at the Engineer discretion:				
		Item value < R20.	%			
		Item value between R20 - R100.	%			
		Item value between R100 - R1000.	%			
		Item value between R1000 - R5000.	%			
		Item value between R5000 - R10000.	%			
		Item value between R10000 - R25000.	%			
		Item value between R25000 - R50000.	%			
		Item value >R50 000.	%			
TOTAL FOR THIS BILL:						

Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.11 : MECHANICAL				
		The Tenderer is referred to the relevant clauses in the seperate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		SUPPLEMENTARY PREAMBLES				
		The ventilation and extract systems are to be installed by a competent contractor all generally as shown on the drawings and as specified. All electrical connections are to be included. Electrical points to be supplied with 1,5m from the extract fans. Motion sensors are to be utilised as installed by the electrical contractor and connected/switched as indicated on the drawings.				
		EXTRACT FANS				
		HCFB 2-315 Wall Plate Mounted Fan duty 2,4m ³ /s @ 150Pa Static Press 1~220-240V.	No			
		CFP 350/4-1; Wall plate mounted 0,4m ³ /s @150Pa Static Press 1~220-240V.	No			
		COOKER HOODS				
		Defy Slimline Cooker hood DCH 290; 155 x 600 x 500 mm c/w lights and Aluminium filters.	No			
		LOUVRES AND WEATHER COWLS				
		400 H x 400 W Galvanised weather cowl c/w SS insect mesh screen.	No			
		500W x 350H natural anodised AGS non-vision door grilles.	No			
		RECTANGULAR DUCT WORK				
		Unless otherwise specified all sheet metal ductwork shall be supplied and installed complete with all the necessary galvanised iron rods, hangers and angle supports etc.				
		200 x 200.	m			
		150mm dia flexible duct.	m			
		150mm Plastic Air Valves with clips – C.	No			
		Allowance for duct modifications made on site.	Item			
		Allowance for servicing the existing extract fan - 4th Floor ablution.	Item			
		Allowance for connections to the motion sensors.	Item			
		TESTING AND COMMISSIONING				
		Testing and commissioning by the AC contractor.	Item			
		OPERATION AND MAINTENANCE MANUALS				
		Submit Operation & Maintenance Manuals (hard copies) approval and carry out required changes for approval by engineer, complete with testing and commissioning records.	Sets			

TOTAL FOR THIS BILL:

Bill of Quantities: General Building

Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.12 : FIRE PROTECTION				
		The Tenderer is referred to the relevant clauses in the seperate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		PRELIMINARIES AND GENERAL				
		One year SLA (12 months from PC being achieved).	Item			
		Health & Safety File.	Item			
		System Commissioning & Training.	Item			
		Preliminary & General + (Any other item not listed above i.e access equipment etc.).	Item			
		Any additional items required to complete project (please send cover page with list of these items).	Item			
		FIRE PROTECTION, SMOKE DETECTION, ETC.				
		3rd, 4th, 5th and 6th Ablutions:				
		Smoke Detector (equipment to match site existng equipment).	No			
		Sounder / strobe.	No			
		PH30 Cabling.	m			
		PVC Conduit for exposed route where required(all cabling above ceiling don't need conduits).	m			
		Connect into existing loop.	No			
		3rd, 4th, 5th and 6th Kitchens:				
		Heat Detector (equipment to match site existng equipment).	No			
		PH30 Cabling.	m			
		PVC Conduit for exposed route where required (all cabling above ceiling don't need conduits).	m			
		5Kg CO2.	No			
		Fire Blanket.	No			
		Fire Signage F13.	No			
		Fire Signage F34.	No			
		Green break glass units as per Engineers specification.	No			
		BUDGETARY ALLOWANCE				
		Allow a Budgetary Allowance of R85 000.00 (Eighty Five Thousand Rand) for Fire Sealing and Staircase Ventilation to be used as directed by the Principal Agent and to be deducted in whole or in part if not required.	Item			
		Allow a Budgetary Allowance of R25 000.00 (Twenty Five Thousand Rand) for Fire Rationale to be used as directed by the Principal Agent and to be deducted in whole or in part if not required.	Item			

TOTAL FOR THIS BILL:

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.13 : GLAZING				
		The Tenderer is referred to the relevant clauses in the seperate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		TOPS, SHELVES, DOORS, MIRRORS, ETC.				
		6mm Thick silvered float glass copper backed mirrors with polished edges, 4x drilled for fixing with cp dome capped mirror screws above and centred on whb in brickwork or concrete:				
		Mirror 500x800mm high.	No			
TOTAL FOR THIS BILL:						

Bill of Quantities: General Building

Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.14 : PLASTERING				
		The Tenderer is referred to the relevant clauses in the seperate document 'Model Preambles for Trades' (2017 Edition) and the Supplementary Preambles hereunder.				
		SCREEDS				
		Cement plaster screeds wood floated for tiles, on concrete:				
		35mm Thick on floors and landings.	m ²			
		INTERNAL PLASTER				
		One coat cement plaster (5:1) with woodfloated finish on brickwork or concrete to receive wall tiles fixed with adhesive (tiles and adhesive elsewhere) on:				
		On walls.	m ²			
		On drywalls.	m ²			
		On narrow widths.	m ²			

TOTAL FOR THIS BILL:

Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.11 : PAINTWORK				
		The Tenderer is referred to the relevant Clauses in the separate document 'Model Preambles for Trades' (2017 Edition) and to the Supplementary Preambles hereunder.				
		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 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.				
		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 finishes specifications unless otherwise described.				
		Colours:				
		In the event of the colour scheme for the project not being available when required for the preparation of quantities, it is recommended that either all paintwork be described as being in the White colour group or that ceilings be described as being in the White colour group and the balance being in the Pastel colour group and that provision be made for other colour groups by way of extra over items marked Provisional as provided for in the measuring system (See measurement rule No. 5 under item 2: Colours). The following items are examples of such extra over items:				
		Extra over for paintwork on components (ceilings?) in the White colour group for paintwork in the Pastel colour group (Provisional)				
		Extra over for paintwork on components in the Pastel colour group for paintwork in the Deep colour group (Provisional)				
		Unless otherwise described paintwork on ceilings shall be deemed to be in the White colour group and paintwork on all other components shall be deemed to be in the Pastel colour group in accordance with the Natural Colour System (NCS) adopted by the SA National Standards.				
		ON INTERNAL PLASTERED SURFACES				
		Prepare surfaces and remove all loose material. Fill defects with Polycell mendall 90 or Polyfilla Exterior and apply one coat Plascon Plaster Primer and two coats Plascon Teflon based Wall & All (Colour: Papyrus), all in accordance with the manufacturers specifications:				
		Drywalls.	m ²		R 95,00	
		Prepare surfaces and remove all loose material. Fill defects with Polycell Mendall or Polyfilla Exterior Prepare, apply one coat Plascon Plaster Primer (UC56) and 2 coats Plascon Kitchens and Bathrooms Paint Matt TKM1000 (Colour - White), all in accordance with the manufacturers specifications:				
		On plastered walls.	m ²		R 95,00	
		Amount Carried Forward				

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
	Brought forward					
		On plastered walls.	m ²		R 95,00	
		Prepare surfaces and remove all loose material. Fill defects with Polycell Mendall or Polyfilla Exterior and apply one coat Plascon Plaster Primer and two coats Plascon White PVA, all in accordance with the manufacturers specifications:				
		On soffits of slabs.	m ²			
		PAINTWORK TO NEW WORK				
		ON FLOATED PLASTER				
		Prepare, apply PVA Plascon Paint, all in accordance with the manufacturers specifications:				
		On drywalls.	m ²	899,44		
		On narrow widths.	m ²	89,94		
		Prepare, apply PVA Plascon Paint, all in accordance with the manufacturers specifications:				
		On plastered walls.	m ²	485,72		
		On narrow widths.	m ²	48,57		
		Prepare, apply Epoxy abe cote 337, all in accordance with the manufacturers specifications:				
		On drywalls.	m ²	119,68		
		On plastered walls.	m ²	266,70		
		On narrow widths.	m ²	38,64		
		ON WOOD SURFACES				
		Stop, sand down, clean and prepare wood surfaces and apply one coat pink wood primer and two coats Plascon Velvaglo Polyurethane Velvet Enamel. Colour - Battleship Grey G13, all in accordance with the manufacturers specifications:				
		On doors.	m ²	52,46		
TOTAL FOR THIS BILL:						

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bill of Quantities: General Building						
Page	Item	Description	Unit	Quantity	Rate	Amount
		BILL NO.12 : PROVISIONAL SUMS				
		The Tenderer is referred to the relevant Clauses in the separate document 'Model Preambles for Trades' (2017 Edition).				
		All provisional sums are nett and make provision for material, fittings and installation by specialist firms. Provisional sums do not include builder's discount but tenderers may allow for profit opposite the appropriate item.				
		In cases of the tenderer allowing for profit, then the amount will be adjusted in direct proportion to the final value executed by the specialist firms.				
		As part of Attendance, the Tenderer is to co-ordinate and take delivery of goods / materials to ensure necessary placement and installation.				
		LOOSE FURNITURE AND FITTINGS.				
		Allow the sum of R350 000,00 (Three Hundred and Fifty Thousand Rand) for Loose Furniture and Fittings.	Item	1,00	R 350 000,00	R 350 000,00
		Profit on above item.	Item	1,00		
		Attendance on ditto.	Item	1,00		
TOTAL FOR THIS BILL:						
TOTAL (SUM OF GENERAL BUILDING BILLS) CARRIED FORWARD TO SUMMARY						

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
DUCT WORK					
Rectangular galvanized low pressure ducting supported from structural steel via hangars and 8mm threaded bar					
Note: Rate to include for support mechanisms					
1	Category 1 ducting	m ²	175		
2	Category 3 ducting	m ²	7		
Extra over for low pressure ducting - Category ducting					
3	Category 1 - Radius bends, Square bends, 45° bends, 15° bends, 90° bends, transformations, tees, stop ends or branches	no.	110		
4	Category 3 - Radius bends, Square bends, 45° bends, 15° bends, 90° bends, transformations, tees, stop ends or branches	no.	2		
Round un-insulated galvanized low pressure ducting not exceeding 1m below steel trusses or concrete soffits including support mechanisms and spigots					
5	500 mm Ø	m	2		
6	250 mm Ø	m	4		
7	200 mm Ø	m	32		
FLEXIBLE UNINSULATED DUCTING					
Uninsulated flexible ductwork not exceeding 1.5m girth, externally insulated with 25mm foil faced fibreglass, including jubilee duct clamps and vapour barrier tape					
8	250 mm Ø	m	4		
9	200 mm Ø	m	50		
DIFFUSION AND GRILLES					
10	(600 x 600)mm supply air grille c/w OBD, plenum box and associated spigot connection - by Brian Rickard or Equal	no.	2		
11	(300 x 200)mm fresh air grille c/w OBD and associated connection	no.	3		
12	(400 x 200)mm fresh air grille c/w OBD and associated connection	no.	1		
13	(500 x 200)mm extract air grille c/w OBD and associated connection	no.	2		
14	(300 x 250)mm opposed blade dampers	no.	1		
15	(350 x 250)mm opposed blade dampers	no.	3		
16	(200 x 250)mm opposed blade dampers	no.	1		
17	(500 x 300)mm opposed blade dampers	no.	1		
18	(400 x 300)mm opposed blade dampers	no.	1		
19	(250 x 250)mm opposed blade dampers	no.	1		
20	200mm dia. Butterfly damper	no.	20		
21	Door grille (600 x 400)mm	no.	14		
22	Aluminium disc valves 200 diameter	no.	20		
23	(600 x 600) Standard adjustable square 200 dia. CAV Swirl Diffuser complete with mounting frame - by Brian Rickard or Equal	no.	6		
24	(250 x 250)mm storm resistant weather louvre c/w WMS	no.	2		
25	(400 x 400)mm storm resistant weather louvre c/w WMS	no.	1		
26	(1000 x 500)mm storm resistant weather louvre c/w WMS	no.	1		
27	200 mm Ø wire mesh screen	no.	1		
28	500 mm Ø wire mesh screen	no.	1		
Amount Carried Forward					

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE					
Bills of Quantities: HVAC Installation					Jan-26
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
Brought forward					
	EQUIPMENT AND FANS				
29	Mid-Wall inverter type heat pump unit complete with drain pump, brackets and wall mounted controller as specified. Cooling capacity 2.6Kw	no.	5		
	Matching condenser unit	no.	5		
30	Mid-Wall inverter type heat pump unit complete with drain pump, brackets and wall mounted controller as specified. Cooling capacity 3.5Kw	no.	3		
	Matching condenser unit	no.	3		
31	Mid-Wall inverter type heat pump unit complete with drain pump, brackets and wall mounted controller as specified. Cooling capacity 7Kw	no.	6		
	Matching condenser unit	no.	6		
32	Refrigerant copper piping and approved insulation similar or equal to Armourflex, to units, etc., including all fitments and suspending below suspension level (single way)	m	140		
33	PVC conduit installed in ceiling void and chased in wall /partitions, wall box, wall controllers with vibration pads to suite. (Allow 15m PVC conduit per unit)	Sum	1		
34	Condesate drain piping for each unit complete with supports, reduceres, tees, bends as shown 20mm diameter uPVC drain piping	m	115		
35	Inline tube fan 200 mm Ø, 60l/s, 200Pa complete with round duct pieces, flexible connections, flanges, supports, AV mounts and associated accessories	no.	2		
36	200 mm Ø matching sound attenuator	no.	4		
37	Inline tube fan 315 mm Ø, 340l/s, 250Pa complete with round duct pieces, flexible connections, flanges, supports, AV mounts and associated accessories	no.	1		
38	315 mm Ø matching sound attenuator	no.	2		
39	Inline tube fan 200 mm Ø, 110l/s, 200Pa complete with round duct pieces, flexible connections, flanges, supports, AV mounts and associated accessories	no.	1		
40	200 mm Ø matching sound attenuator	no.	2		
41	Axial flow fan 500 dia. (400l/s, 180Pa, 1440rpm) c/w canvas collars matching flanges, av mounting feet, mounting feet and brackets	no.	1		
42	Axial flow fan 800 dia. (125l/s, 450Pa, 1440rpm) c/w canvas collars matching flanges, av mounting feet, mounting feet and brackets	no.	1		
43	500 mm Ø sound attenuator, selected for NC 35	no.	2		
44	800 mm Ø sound attenuator, selected for NC 35	no.	2		
45	Filter box (1000 x 500 x 300)mm	no.	1		
46	Filter (1000 x 500 x 50)mm	no.	1		
47	Galvanized light duty cable trays including hangar supports for running refrigerant piping and condensate piping	Sum	1		
Amount Carried Forward					

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE					Jan-26
Bills of Quantities: HVAC Installation					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
Brought forward					
	ELECTRICS AND CONTROLS				
48	All electrics, wiring and controls associated with the Dx air conditioning units and fans	Sum	1		
49	Galvanized light duty cable trays including hangar supports for running cables	Sum	1		
	EXISTING EQUIPMENT				
50	Decommissioning of the existing installation including all controls and electrics associated with the HVAC equipment. Dismantling of existing HVAC equipment.	Sum	1		
51	Lifting, rigging and transportation of stripped equipment for disposal	Sum	1		
TOTAL FOR THIS BILL					
TOTAL (SUM OF HVAC BILLS) CARRIED FORWARD TO SUMMARY					

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE					
Bills of Quantities: Wet Services					Jan-26
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
	In accordance with the Conditions of Contract, provide for all expenses, obligations and general items pertaining to such conditions and all items not specifically specified or mentioned to enable the works to be completed in a safe satisfactory manner. In accordance with the drawings and the specification.				
	WATER SUPPLIES				
	Copper piping completely installed on supports and including running joints as per specification				
1	15mm Pipes	m	40		R0,00
2	22mm Pipes	m	175		R0,00
3	32mm Pipes	m	180		R0,00
	copper piping chased in walls				
4	15mm Pipes	m	25		R0,00
5	22mm Pipes	m	20		R0,00
	Extra over copper pipes for capillary fittings				
6	15mm Elbow	No.	60		R0,00
7	15mm Tee	No.	75		R0,00
8	22mm Elbow	No.	120		R0,00
9	22mm Tee	No.	100		R0,00
10	22-15mm Reducer	No.	60		R0,00
11	32mm Elbow	No.	80		R0,00
12	32mm Tee	No.	50		R0,00
13	32-22mm Reducer	No.	30		R0,00
14	22-15mm Reducer	No.	20		R0,00
	Flexible connection				
15	15mm female to female hydraulic flexible connector	No.	18		R0,00
16	22mm female to female hydraulic flexible connector	No.	18		R0,00
	LAGGING TO PIPES				
	Thermal cross-linked polyethylene foam pipe insulation minimum 16mm thick lagging to hot water pipes and hot water return				
17	Insulation to 15mm, 22mm and 32mm pipe, couplings and fittings	m	150		R0,00
	TAPS, VALVES, ETC., INCLUDING COUPLING TO PIPES AND/OR FITTINGS				
21	15mm Angle Valve	No.	8		R0,00
22	22mm Isolating Valve	No.	8		R0,00
23	32mm Isolating valve	No.	1		R0,00
24	Plumbing_Joints_Aquatechnik_Safety-Ball-valve-with-butterfly-handle	No.	1		R0,00
25	M_Globe Valve - 10-50 mm - Threaded	No.	1		R0,00
26	Vacuum Breaker Backflow Valve - 15-50 mm	No.	1		R0,00
	Equipment				
27	Hydroboil	No.	1		R0,00
28	150l evacuated tube solar geysers complete with solar controller and backup 3kw electrical element	No.	2		R0,00
29	water softening plant for removal of calcium and magnesium max flow 1l per second at 350kpa	No	1		R0,00
TOTAL FOR THIS BILL					
TOTAL (SUM OF HOT AND COLD WATER BILLS) CARRIED FORWARD TO SUMMARY					

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE

Bills of Quantities: Wet Services

Jan-26

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	TOTAL
	Supply, delivery, installation, commissioning and testing of the Fire Protection Systems as per SANS & SABS regulations				
	Fire singage as per SANS 1186-1, SANS 1186-3, SANS 1186-5 and SANS 1464-22				
1	Photoluminescent type c/w fittings	No.	20	R 20,00	R 400,00
	Fire piping as per SANS 10400-W				
2	Diam. 110 mm Class 16 mPVC pipe c/w fittings	m	10		R -
3	Diam. 100 mm black medium steel pipe c/w fittings & painting as per spec	m	30		R -
	Fire hose reel as per SANS 543				
4	30 m fire hose reel c/w fittings	No.	2		R -
	Fire extinguisher as per SANS 1910				
5	4.5 kg dry chemical powder fire extinguisher c/w fittings	No.	8		R -
6	Fire blankets	No.	4		R -
7	medical emergency kit	No.	4		R -
TOTAL FOR THIS BILL					R -
TOTAL (SUM OF FIRE BILLS) CARRIED FORWARD TO SUMMARY					

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bills of Quantities: Electrical						
ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
2	Preliminary & General					
2,1	Conditions of Contract and Technical Specifications					
2.1.1	Amount required to comply with the Conditions of Contract					
2.1.2	Amount required to comply with the Technical Specifications					
2.1.3	Amount required to comply with the Health & Safety Specifications					
2,2	Site Establishment					
2.2.1	Amount required as a Fixed Cost					
2.2.2	Amount required as a Time Variable Cost					
2.2.3	Amount required as a Value Variable Cost					
TOTAL FOR THIS BILL						

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE

Bills of Quantities: Electrical

Jan-26

ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
3	LIGHTING & POWER BOQ					
3.1	Distribution Boards					
	To comply with SANS 10142-1					
	Supply, delivery and install DB's constructed in sections					
	with barriers between and separate doors to each section.					
	sub-frames, chassis, fixtures, internal wiring, switchgear					
	and equipments as detailed in Standard Specification					
3.1.1	DB Board with equipment DB-LAB , as specified (Refer	No	1			
3.1.2	DB-SANBS, Exist.Compliance	No	1			
3.1.3	DB-Separation, Exist.Compliance	No	1			
3.2	Conduit					
	PVC fixed in chase or Ceiling void					
3.2.1	20mmØ	m	1 514			
3.2.2	25mmØ	m	508			
3.2.3	25mmØ Bosal Conduit	m	322			
3.3	PVC Conduit Boxes					
3.3.1	60mm Round Boxes	No	110			
3.3.2	100 x 100 x 50 (Steel)	No	75			
3.3.3	100 x 50 x 50 (Steel)	No	8			
3.3.4	100x100 Cover plate	No	12			
3.4	P9000 trunking					
3.4.1	Tee's	No	4			
3.4.2	90° bends	No	2			
3.5	400mm wire mesh tray					
3.5.1	Tee's	No	3			
3.5.2	90° bends	No	2			
3.6	300mm cable tray					
3.6.1	4-way	No	1			
3.6.2	Tee's	No	1			
3.6.3	90° bends	No	1			
3.7	Wiring					
	PVC insulated copper conductors drawn into conduit, wiring trunking or powerskirting					
3.7.1	2.5mm ² PVC wire	m	4 539			
3.7.2	4mm ² PVC wire	m	350			
3.7.3	Draw Wire	m	1 000			
3.8	Switches - Socket Outlets - Isolators					
	Surface or flush mounted complete with covers					
3.8.1	5A unswitched socket outlet	No	95			
3.8.2	16A ZA/Euro combined socket outlet	No	47			
3.8.3	16A ZA/Euro double socket outlet	No	1			
3.8.4	Waterproof Surface 16A ZA/Euro double socket outlet IP66 rated	No				
3.8.5	16A single dedicated socket outlet - chamfered earth pin red body	No	44			
3.8.6	16A double dedicated socket outlet - chamfered earth pin red body	No	4			
3.8.7	Data outlet with cover plate	No	8			
	Amount Carried Forward					

ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
	Brought forward					
3.8.8	Ceiling mount motion sensors 16A rated	No	14			
3.8.9	Relay & Controlled Module, for lighting & HVAC	No	2			
3.8.10	TV outlet with cover plate	No	0			
3.8.11	Telephone outlet with cover plate	No	8			
3.8.12	Complete 16A 1-lever/1-way light switch	No	3			
3.8.13	Complete 16A 1-lever/2-way light switch	No	2			
3.8.14	Complete 16A 2-lever/1-way light switch	No	2			
3.8.18	20A DP isolator	No	25			
3.8.22	32A DP isolator	No	16			
3.8.23	20A TP isolator	No	4			
3,9	Power Skirting					
	Supply, Delivery and Installation of steel 2 compartment power skirting					
3.9.1	2 compartment power skirting straight length	m	120			
3.9.2	Power skirting ends	No	42			
3.9.3	Power skirting elbows	No	4			
3.9.4	Power skirting risers	No	16			
3.9.5	16A ZA/Euro combined normal socket outlet on power skirting	No	25			
3.9.6	16A dedicated socket outlet on power skirting - chamfered earth pin red body	No	25			
3.9.7	Complete Data infrastructure on power skirting	No	10			
3.9.8	Complete Telephone infrastructure on power skirting	No	10			
3,10	Luminaires					
	Supply and installation of luminaires complete with lamps, low brightness louvers, control gear, and mounting accessories, with 5A plug top(3m). Refer to schedule of light fittings					
3.10.1	Type : 70W, 4000K recessed 1705mm luminaire. regent lighting r-line.	No	28			
3.10.2	Type : 24W LED, 4000K recessed 580mm luminaire. Regent Lighting NASA.	No	9			
3.10.3	Type P1: 36W LED, 4000K recessed 600x600mm panel light fitting. Regent Lighting Luxon Opal.	No	48			
3.10.4	Type B1: 20W LED, 4000K recessed 1200x600mm panel light fitting.	No	9			
3,11	Supply and Install Earthing and Bonding for the installation					
	Earthing of all buildings to comply with the latest SANS 10142 1&2:2009, as revised Code of Practice, as revised for The Wiring of Premises as amended and as specified. Bonding of all hot, cold and waste pipes complete with 12,5mm x 1mm thick solid or perforated copper tape including terminations.					
3.11.1	Earth and Bond Distribution Board	No	1			
3.11.2	Earth and Bond Water Pipes per building	sum	1			
3.11.3	Earth and Bond Gutters and Roof per building	Sum	1			
3.11.4	Testing of the Earth installation by a Specialist Contractor	Sum	1			
	Amount Carried Forward					

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						
Bills of Quantities: Electrical						Jan-26
ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
	Brought forward					
3,12	<u>Lightning Protection Installation</u>					
	Supply, install and test a complete lightning protection installation, including aluminium and copper conductors, test joints, PVC conduit, earth electrodes for the following building but not limited to: -					
3.12.1	Manapo NHLS Laboratory as specified	sum	1			
3,13	<u>Testing and Commissioning</u>					
	Inspections, testing and handing over of the complete installation in the presence of the Engineer and certify the results on the Certificate of compliance by an accredited person.: including issuing of the CoC	sum	4			
	Rates shall be deemed to include all obligations under the Contract Documents, including Technical Submittals, Workshop Drawings, Delivery of the equipment to site, Site storage, Asset Tagging of equipment, Testing & Commissioning, and AS-Built drawings, Occupational Health and safety adherence. No separate payment will be made for these.					
4	<u>Electrical Distribution Boards</u>					
	Distribution panels prewired, complete with consumer circuit breakers and locks to Municipality specification. Equipment as per schematic diagrams.					
4,1	<u>Feeder Cables</u>					
	Supply, delivery and installation of 600 / 1000V PVCSWAPVC copper or aluminium cables installed on suspended cable rack or drawn through sleeves. Cable rack & sleeves measured elsewhere.					
4.1.1	70mm ² x 4 core Copper cable	m	72			
4.1.2	Complete 70mm ² x 4 core electrical cable ends	No	2			
4.1.3	6mm ² x 4 core Copper cable	No	41			
4.1.4	Complete 6mm ² x 4 core electrical cable ends	m	4			
4.1.5	4mm ² x 4 core Copper cable	No	53			
4.1.6	Complete 4mm ² x 4 core electrical cable ends	m	4			
4.1.7	2.5mm ² x 4 core Copper cable	No	20			
4.1.8	Complete 2.5mm ² x 4 core electrical cable ends	m	6			
4.1.9	4mm ² x 2 core Copper cable	m	185			
4.1.10	Complete 4mm ² x 2 core electrical cable ends	No	16			
4.1.11	2.5mm ² x 2 core Copper cable	m	350			
4.1.12	Complete 2.5mm ² x 2 core electrical cable ends	No	32			
4.1.13	50mm ² Bare Copper Earth run in parallel with above cables including terminations	m	70			
4.1.14	4mm ² Bare Copper Earth run in parallel with above cables including terminations	m	41			
4.1.15	2.5mm ² Bare Copper Earth run in parallel with above cables including terminations	m	610			
	Rates shall be deemed to include all obligations under the Contract Documents, including Technical Submittals, Workshop Drawings, Delivery of the equipment to site, Site storage, Asset Tagging of equipment, Testing & Commissioning), and AS-Built drawings, Occupational Health and safety adherence. No separate payment will be made for these.					
TOTAL FOR THIS BILL						

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bills of Quantities: Electrical						
ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
5	Intercom System & PA Installation					
5.1	Complete New 2 way Intercom system					
5.1.1	Intercom master station	No	1			
5.1.2	2way Robust Metal substations (speakers)	No	3			
5.1.3	External Intercom speakers	No	2			
5.1.4	Emergency panic button	No	4			
5.1.5	Desk /Wall mount Microphone(Robust)	No	1			
5.1.6	Round Ceiling Mount 6W Speaker	No	5			
5.1.7	Complete Management Zone Amplifier system with	No	1			
5.1.8	Twisted pair audio cable	m	640			
5.1.9	Multi core communication cable	m	200			
5.1.10	25mm dia PVC conduit	m	200			
5.1.11	20mm dia PVC conduit	m	250			
5.1.12	Intercom Terminal Box	No	1			
5.1.13	Rack and equipment assembly	Sum	1			
5.1.14	Equipment manual & Training	Sum	1			
5.1.15	Test, commissioning, labeling and handing over fully operational system to client and consulting engineer's	Sum	1			
5.1.16	Sundry equipment to make sytem to be fully functional	Sum	1			
	Rates shall be deemed to include all obligations under the Contract Documents, including Technical Submittals, Workshop Drawings, Delivery of the equipment to site, Site storage, Asset Tagging of equipment, Testing & Commissioning, and AS-Built drawings, Occupational Health and safety adherence. No separate payment will be made for these.					
TOTAL FOR THIS BILL						

ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
6	ACCESS CONTROL INSTALLATION					
6,1	ACCESS CONTROL INSTALLATION					
6.1.1	Access Control Viewing Workstation, including 24" monitor, keyboard, mouse, etc.	No.	1			
6.1.2	Access Control - Enrolment Device.	No.	1			
	Access Control Head End (Installed in Network Equipment Room).					
6.1.2	24 Port POE Switch for Access Control, Layer 3 Capable for Snooping and Multicasting, 2 Gb SFP Ports.	No.	1			
6.1.3	Network Access Control Server for 1U Rack, Keyboard, Mouse etc as specified.	No.	1			
	Software.					
6.1.5	Access Control Software including Integration to CCTV System on offer.	No.	1			
6.1.6	Access Control Card Reader Controller as specified.	No.	16			
6.1.7	Access Control Door Controller as specified.	No.	9			
6.1.8	12V DC 7Ah Battery Backup Unit as specified.	No.	9			
6.1.9	Access Control Card Reade as specified.	No.	16			
6.1.10	Magnetic Lock as specified.	No.	9			
6.1.11	Electric Strike Unit as specified.	No.	9			
6.1.12	Medium Duty flush mounted door closer and accessories as specified.	No.	9			
6.1.12	Release Push button as specified.	No.	9			
6.1.13						
	Cabling.					
6.1.14	Mylar 0,5mm2 2core communication cable.	m	550			
6.1.15	1,5mm2 2core PVC Cu Cable.	m	200			
6.1.16	2,5mm2 2core PVC Cu Cable.	m	350			
6.1.17	Low Loss Multi-mode Fibre Optic 4 Core Cable.	m	660			
6.1.18	CAT-6 UTP cable.	m	650			
6.1.19	RJ45 CAT-6 UTP cable terminations.	No.	32			
6.1.20	15U Floor standing Enviro-Cabinets with fans	No.	1			
	Amount Carried Forward					

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bills of Quantities: Electrical						
ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
	Brought forward					
	Training of Staff.					
6.1.21	Training of control room and supervisor staff (3 sessions).	No.	1			
6.1.22	Programming of the Complete Access Control Installation.	No.	1			
6.1.23	Testing and Commissioning of the Entire Access Control System installation, as witnessed by the Engineer and Project Manager.	No.	1			
6.1.24	Final Completion Certificate.	No.	1			
6.1.25	Sundry equipment to make sytem to be fully functional	Sum	1			
	Rates shall be deemed to include all obligations under the Contract Documents, including Technical Submittals, Workshop Drawings, Delivery of the equipment to site, Site storage, Asset Tagging of equipment, Testing & Commissioning, and AS-Built drawings, Occupational Health and safety adherence. No separate payment will be made for these.					
TOTAL FOR THIS BILL						

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bills of Quantities: Electrical						
ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
7	Closed-Circuit Television(CCTV Installation)					
7.1	Supply and install new CCTV equipment					
7.1.1	High definition IP Mini Dome Camera 3MP IR30 WDR 3.5mm IP67 POE in Housing	No.	8			
7.1.2	High definition IP Bullet Camera POE in Housing - External	No.	2			
7.1.3	32 Channel NVR(forty days of data storage) complete with Hard Drives & Software	No.	1			
7.1.4	8 Port Switch PoE	No.	2			
7.1.5	Monitors (Smart 55"LCD (liquid crystal display) HD,properly secured against theft	No.	2			
7.1.6	Desktop Remote Viewing PC , USB Keyboard & Mouse	No.	1			
7.1.8	Blue Cat6a Cabling	m	1 100			
7.1.9	25mmØ Bosal Conduit	m	350			
7.1.10	25mmØ PVC Conduit	m	811			
7.1.11	Complete Data & Telephone Structured Cabling For Electronics Systems	Sum	1			
7.1.12	System Comissioning	Sum	1			
7.1.13	functional. Provide breakdown of these items below:	Sum	1			
TOTAL FOR THIS BILL						

NATIONAL HEALTH LABORATORY SERVICE (NHLS) LABORATORY AT MANAPO HOSPITAL CENTRE						Jan-26
Bills of Quantities: Electrical						
ITEM NO.	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	TOTAL
8	ALARM SYSTEM					
	Supply and install Intruder Alarm System. The Intruder Alarm System must comply with SANS 60839-2-6:2010					
8.1.1	Intrusion alarm Main control panel with 72 hours back-up battery, PSU, radio link, as specified:	No	1			
8.1.3	Complete display/mimic panel with an LED for each localised alarm	No	1			
8.1.4	Complete LCD keypad panel with multiple programmable functions , as specified	No	1			
8.1.5	Complete Passive Infra red motion sensors, as specified	No	11			
8.1.6	Complete burglar alarm sounder and LED cluster lamp indicator, as specified	No	2			
8.1.7	Complete panic button, as specified	No	4			
8.1.8	Complete new Burglar localised alarm system, as specified	Sum	1			
8.1.9	Complete Intrusion alarm cabling with labeling, as specified.	m	1100			
8.1.10	Test, commissioning, labeling and handing over fully operational system to client and consulting engineer's	Sum	1			
8.1.11	Sundry equipment to make sytem to be fully functional	Sum	1			
TOTAL FOR THIS BILL						

TOTAL (SUM OF ELECTRICAL BILLS) CARRIED FORWARD TO SUMMARY	
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**REFURBISHMENT OF MANAPO HOSPITAL NHLS LABORATORY
SUMMARY**

DESCRIPTION	AMOUNT	
PRELIMINARIES AND GENERALS	R	-
GENERAL BUILDING WORKS	R	-
HVAC	R	-
HOT & COLD WATER	R	-
FIRE	R	-
ELECTRICAL	R	-
SUB TOTAL	R	-
ADD:		
Construction Contingencies @ 10%	R	-
SUB TOTAL	R	-
ADD VALUE ADDED TAX @ 15%	R	-
TOTAL	R	-