

**PROPOSED GROUND LEVELLING
AND CONSTRUCTION OF SWIMMING POOL
AT KESRA, MOMBASA**

Tender Ref No. KRA/HQS/NCB/063/2020-2021

ANNEX 1

SECTION VI - SPECIFICATIONS

PREAMBLES AND PRICING NOTES

PREAMBLES

The specifications to be used for these works are the Standard Specifications for Building and Civil Works in Kenya published by the Ministry of Roads and Public Works 1976 Edition. The works shall be carried out in accordance with these General Specifications except as supplemented hereinafter or in the Bills of Quantities.

The following apply to all sections hereafter.

GENERAL

A. ALTERATIONS, ADDITIONS AND EXTENSIONS

In alterations or extensions to existing buildings and/or external works, new work is to match up in all respects to the existing work unless otherwise specified, shown on the Drawings or approved before-hand by the Architect.

QUALITY, SAMPLES. TESTING AND APPROVAL

B. MATERIALS

Materials, commodities, components and equipment are to be new and unused unless otherwise specified. Handle, store, fix and protect all commodities with care to ensure that they are in perfect condition when incorporated into the work and handed over on completion.

C. MANUFACTURER'S RECOMMENDATIONS

Handle, store and fix every commodity strictly in accordance with the printed or written recommendations of the manufacturer and/or supplier. Supply the Architect with copies of manufacturers' recommendations. Inform the Architect if the manufacturers' recommendations conflict with any other specified requirements, and obtain his instructions before proceeding.

D. STANDARDS

Where commodities or workmanship are specified by reference to British Standards (B.S.) or Codes of Practice (C.P.) or International (I.S.O.) or other Standards, such standards are deemed to be the latest published at the time of tendering. The Contractor will be deemed to have read and understood the standards specified, and no claim for want of knowledge will be allowed. The substitution of commodities or standards of workmanship complying with other standards may be allowed at the discretion of the Architect, but application for permission for such substitution must be made in writing in sufficient time to allow adequate investigation. Obtain Certificates of Compliance with standards and supply to the Architect on request.

E. LOCAL CONDITIONS

All materials, commodities, components and equipment must be suitable for use in tropical climates.

F. SAMPLES

Where samples of commodities or specimens of finished work are specified, submit samples or specimens to the Architect and obtain his approval before confirming orders or carrying out the work. Retain approved samples and specimens on Site for comparison with the finished work. Finished work must conform in all respects with the samples or specimens approved. Remove samples and specimens when no longer required.

The cost of supplying samples and specimens must be borne by the Contractor, but specimens may form part of the finished work where approved by the Architect.

The following apply to all sections hereinafter

PREAMBLES AND PRICING NOTES

DEMOLITIONS AND ALTERATIONS

A. GENERALLY

The Contractor is required to visit the existing buildings and ascertain for himself the nature of the Works and no claim arising from lack of knowledge in this respect will be entertained. The dimensions and quantities given in this section are approximate and the Contractor is referred to the Site to ascertain the exact nature and extent of the Works.

The items of pulling down and alterations are to include for both labour and materials and for any shoring, needling and strutting and temporary works in connection therewith. The Contractor must allow in his pricing for making good all works disturbed in all trades and for carting away all rubbish.

The Contractor must give all the necessary notices and must exercise due care in the demolitions. He must not collapse large sections of walls, floors, etc., and must provide all necessary shoring and supports during the demolitions.

During demolition works the Contractor shall keep the debris constantly watered to minimize the dust arising and this shall be included in his prices.

All materials arising from the demolitions, unless specifically stated otherwise, are to become the property of the Contractor and any credit allowed for the value of such materials shall be shown in the space provided.

All materials, including rubbish, shall be removed from the Site as soon as possible.

The Contractor is to erect dust-proof screens to the approval of the Architect where deemed necessary and to remove them on completion of the work, all to the Architect's satisfaction.

B. INTERPRETATION OF TERMS

"Demolish" shall be deemed to mean cutting away, breaking up, demolishing, pulling down, taking down, removing, etc., as the context requires and shall include in all cases temporarily strutting and supporting and making good remaining work as necessary, and clearing away and removing from Site all debris, etc.

"Remove" shall mean taking down, hacking up, breaking down, removing etc., and clearing away from Site and all other expenses thereby entailed.

"Make good" shall be deemed to mean all making good, fitting, facing up, plastering, paving, repairing and painting to match and jointing to remaining existing work.

To "match" shall mean to be equal to relevant existing work in design, workmanship and all other respects.

"Re-fix" shall apply to existing materials arising from the Works and shall mean take from store and fix in new position, including making good, repairing and adjusting as necessary.

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 1 - PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS
A	<p><u>NOTES ON PRICING OF ITEMS OF PRELIMINARIES</u></p> <p>Items described in this section cover the minimum requirements and conditions necessary for the full and proper execution of the contract. The tenderer is required to read and fully understand his obligations under each item and thus assess his costs for complying with the same for the duration of the contract. Should no price be inserted against any item, it shall be assumed that the tenderer has covered any costs associated with that item elsewhere in the Bills of quantities and shall nevertheless be required to comply with such and all items of preliminaries.</p> <p>B DEFINITION OF TERMS</p> <p>(i)Employer: The term 'Employer' wherever used hereinafter and in all Contract Documents shall mean Commissioner General, Kenya Revenue Authority P.O Box 48240 - 00100. Nairobi</p> <p>(ii) Project Managers: The term 'Project Manager' wherever used hereinafter and in all contract documents shall mean Kenya Revenue Authority P.O Box 48240 - 00100. Nairobi</p> <p>(iii)Architect: The term 'Architect' whenever used hereinafter and in all contract documents shall mean Kenya Revenue Authority and its Agents P.O Box 48240 - 00100. Nairobi</p> <p>(iv)Quantity Surveyor: The term 'Quantity Surveyor' wherever used hereinafter and in all contract documents shall mean Kenya Revenue Authority and its Agents P.O Box 48240 - 00100. Nairobi</p> <p>(v)Engineer (Structural): The term 'Engineer (Structural)' wherever used hereinafter and in all contract documents shall mean Kenya Revenue Authority and its Agents P.O Box 48240 - 00100. Nairobi</p> <p>(vi)Electrical Engineer -The term 'Electrical Engineer' wherever used hereinafter and in all contract documents shall mean Kenya Revenue Authority and its Agents P.O Box 48240 - 00100. Nairobi</p> <p>(vii)Mechanical Engineer: The term 'Mechanical Engineer' wherever used hereinafter and in all contract documents shall mean Kenya Revenue Authority and its Agents P.O Box 48240 - 00100. Nairobi</p> <p>(viii)Contractor - Means the person or firm named in the articles of agreement with whom the Employer has entered into contract and includes the legal successors in title and permitted assigns</p>	
	Total carried forward to collection	

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BILL NO. 1 - PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS
	<p>Definition of terms (ctd)</p> <p>(ix)Works - Means the permanent works designed for the Employer by the Architect or other agents for execution by the Contractor and as described in the contract documents. It shall include work of all sub-contractors and suppliers as well as materials and goods supplied for incorporation in the Works.</p> <p>(x)Contract. The term "Contract" wherever used hereinafter and in all contract documents shall mean the letter of award of Contract, Agreement and Conditions of Contract for Building Works, Drawings, priced and signed Bills of Quantities, the schedules and other documents forming part of the contract.</p> <p>(xi)Contract Drawing. The term "Contract Drawings" wherever used hereinafter and in all contract documents shall be deemed to imply the drawing referred to in these Bills of Quantities.</p> <p>(xii)Site Means the place or places where the permanent Works are to be carried out and to which materials and goods are to be delivered and includes workshops or other places where materials, goods or work are being prepared for incorporation in the Works either by the Contractor, sub-contractors or by others.</p> <p>(xiii)Approved, Directed and Selected. The terms "Approved", "Directed" and "Selected" wherever used hereinafter and in all contract documents shall mean the approval, direction and selection of or by the Architect.</p> <p>(xiv)Singular and Plural. Words importing the singular only wherever used hereinafter and in all contract documents shall also include the plural and vice versa where the context requires. Persons shall include bodies corporate.</p>	
	<p>Total carried forward to collection</p>	

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BILL NO. 1 - PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS
A	FIRM PRICE CONTRACT Unless otherwise specifically stated, this is a firm contract and the Contractor must allow in his tender rates for any increase in the cost of labour and/or materials during the currency of contract	
B	SCOPE OF CONTRACT The Work to be carried out under this contract comprise construction and completion of the proposed rehabilitation of storm water and sewer system at Langata Housing Estate complete with associated earthworks. All as per drawings, technical specifications and bills of quantities. The proposed works are located at Langata Estate.	
C	FLOOR AREA Total construction floor area is 772 square metres and this is given for guidance only and without any warranty.	
D	BID SECURITY The bid security shall be (Kshs /=) from a reputable financial institution approved by the Central Bank of Kenya (CBK) or from an insurance Company approved by Insurance Regulatory Authority (IRA)	
E	VALUE ADDED TAX (VAT) All rates quoted shall be deemed to be inclusive of 16% VAT.	
F	CONTINGENCY SUM The miscellaneous items will be expensed by the Employer upon proof that their cost has been fully executed.	
Total carried forward to collection		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

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BILL NO. 1 - PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS
A	<p>A LOCATION OF SITE</p> <p>The site for the proposed Works is at Langata Estate, Nairobi.</p> <p>The contractor MUST visit the site and acquaint himself with the conditions and if unable to do so apply to the Project Manager for directions to enable him to do so.</p> <p>The Contractor is recommended to visit the site and he shall be deemed to have acquainted himself therewith as to its nature and position means of access, etc, and no claim in this connection will be allowed.</p> <p>No claim will be allowed for travelling or other expenses which may be incurred by the contractor in visiting the site preparing for the tender for the works.</p>	
B	<p>MEASUREMENTS</p> <p>In the event of any discrepancies between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract document shall immediately be referred to the Project Manager.</p>	
C	<p>CLAIMS</p> <p>It shall be a condition of this Contract that upon it becoming reasonably apparent by the Contractor that he has incurred losses and/or expenses due to any of the Contract Conditions, or by any other reason whatsoever, he shall present such claim or intent notice to the PROJECT MANAGER within the Contract Period. No claims shall be entertained upon the expiry of the said contract period</p>	
D	<p>MATERIALS FROM DEMOLITION</p> <p>All materials arising from demolition shall NOT be re-used except with express approval of the Project Manager. Materials arising out of Demolitions shall remain the property of the Employer.</p>	
E	<p>CONTRACT COMPLETION PERIOD</p> <p>The contract completion period in accordance with condition 31 of the the conditions of contract must be strictly adhered to. The "PROJECT MANAGER" shall strictly monitor the Contractor's progress in relation to the progress chart. and should it be found necessary, the "PROJECT MANAGER" shall inform the Contractor in writing that his actual performance on site is not satisfactory.</p> <p>In all such cases, the Contractor shall accelerate his rate of performance, production and progress by all means such as additional labour, plant e.t.C., and working overtime all at his cost.</p>	
	<p>Total carried forward to collection</p>	

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FOR KENYA REVENUE AUTHORITY

BILL NO. 1 - PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS
A	<p>PARTICULAR INSERTIONS TO BE MADE IN THE APPENDIX TO CONTRACT AGREEMENT</p> <p>The following are insertions to be made in the appendix to the Contract Agreement</p> <p>i) Period of Final Measurement Condition 32 12 Months from practical completion date</p> <p>ii) Defects Liability Period Condition 20 12 Months from practical completion date</p> <p>iii) Date for possession of site Condition 14 To be agreed with the Project Manager</p> <p>iv) Date for Completion Condition 31</p> <p>v) Liquidated & Ascertained damages Condition 27 At the rate of Kshs 50,000.00 per calender week or part thereof</p> <p>vi) Period of Interim Certificates Condition 23 Monthly</p> <p>vii) Period of honoring certificates Condition 23 Thirty (30) days</p> <p>viii) Percentage of certified value retained Condition 26 10%</p> <p>ix) Limit of retention fund Condition 26 5%</p> <p>x) Performance Bond Condition 28 The bond shall be from a Central Bank of Kenya approved Bank</p>	
B	<p>LABOUR CAMPS</p> <p>The Contractor may erect camps on site. He shall apply to the Project Manager to be shown the most appropriate location of such labour camps.</p>	
C	<p>TELEPHONE</p> <p>The Contractor shall arrange for, provide and maintain a telephone on site from the date of commencement to the date of completion of the contract and shall pay charges in connection therewith.</p>	
D	<p>OFFICE FOR THE "PROJECT MANAGER"</p> <p>The site office mentioned in item 'B' page 15 of the general preliminaries shall be type B as shown on the Directorate of Public Works standard details. The same shall be erected and maintained for the duration of the contract.</p>	
Total carried forward to collection		

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BILL NO. 1 - PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS
A	<p>A TENDER DOCUMENTS</p> <p>Tender documents are as listed in Clause 12.0 of the Instruction to Tenderer's.</p>	
B	<p>SIGNBOARD</p> <p>Provide and erect where directed and maintain during the whole period of building operations and remove at completion an approved temporary 1 No. signboards at site to the Architect's standard design and giving the title of the Works and showing the names of the Employer, Architect, Quantity Surveyor, Engineers and the Contractor with sufficient space to add the names of the Nominated Sub-Contractors and suppliers. The lettering concerning the Architect, Quantity Surveyor and the Engineer is not to be more than 50 mm high.</p>	
C	<p>HOARDING</p> <p>The contractor shall be required to erect and maintain hoarding around the site for the duration of the contract. Thereafter he shall be required to demolish and clear away arisings and make good any disturbances.</p>	
D	<p>PROGRAMME PROGRESS CHARTS</p> <p>The Contractor shall upon possession of the site and in agreement with the "PROJECT MANAGER" prepare a progress chart for the whole of the works. One copy shall be forwarded to the "PROJECT MANAGER" and another copy shall be retained on site on which progress shall be recorded by the Contractor. Should any circumstance arise affecting the programme or progress, the chart shall be modified as necessary in consultation with the "PROJECT MANAGER".</p>	
E	<p>PERFORMANCE SECURITY (BOND)</p> <p>The Contractor should note that the Performance Security to be provided must be in form of a bank guarantee in the amount of 10% of the Contract Sum.</p>	
F	<p>APPENDICES</p> <p>The Appendices to the Bills of Quantities shall be regarded for contract purposes as part of the Bill and shall be read and construed with the appropriate sections of the Bills if contained therein.</p>	
Total carried forward to collection		

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BILL NO. 1 - PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS
A	<p>SUFFICIENCY OF TENDER</p> <p>The main Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in the Bills of Quantities which rates and prices shall cover all his obligations under the contract and all matters and things necessary for the proper completion of the works.</p>	
B	<p>GENERAL SPECIFICATIONS</p> <p>For the full description of materials, workmanship and method of execution of the works, the Contractor is referred to the Ministry of Works General specifications for building works dated 1976 or any subsequent revision thereof which is issued as a separate document and which shall be followed in all respects unless it conflicts with the General and Particular Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p> <p>In the event of such conflict , then the provisions of the General and Particular Preliminaries, Trade Preambles and these Bills of Quantities take precedence.</p>	
C	<p>TRAINING LEVY</p> <p>The Contractor's attention is drawn to Legal Notice No. 237 of October 1971 which requires payment by the Contractor of a Training levy at the rate of 1/4 % of the Contract Sum on all Contracts of more than Kshs. 50,000.00 in value.</p>	
D	<p>ADVANCE PAYMENT</p> <p>Pursuant to the relevant clause of the Conditions of Contract, the tenderer will NOT be granted ADVANCE PAYMENT (See Appendix to Conditions of Contract)</p>	
E	<p>NUISANCE</p> <p>The Contractor shall not directly or indirectly or otherwise by himself or through his agents cause nuisance to the activities taking place inside. Should he do so he shall be directly responsible for such acts.</p>	
F	<p>MOBILIZATION FEE</p> <p>The Contractor shall allow in his Tender a sum of Kenya Shillings One Million Three Hundred and Fifty Thousand Only (Kshs 1,350,000.00) as allowance for the Employer's Agents to cater for 1,350,000.00 transport, reimbursable expenses and the clerk of works fee.</p>	
Total carried forward to collection		

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BILL NO. 1 - PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION		KSHS
	COLLECTION PAGE	From Page	
1	Total From Page	3	
2	Total From Page	4	
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Bill No. 1 - Particular Preliminaries		Carried Forward To Grand Summary	-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
A	<p>PRICING ITEMS OF PRELIMINARIES AND PREAMBLES</p> <p>Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification.</p> <p>The Contractor shall be deemed to have included in his prices or rates for the various items in the Bills of Quantities or Specification for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.</p>	
B	<p>PLANT TOOLS AND VEHICLES</p> <p>Allow for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.</p>	
C	<p>TRANSPORT</p> <p>Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.</p>	
D	<p>MATERIALS AND WORKMANSHIP</p> <p>All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purpose of ordering materials.</p>	
Total carried forward to collection		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

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BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
A	STORAGE FOR MATERIALS SUPPLIED	
	The Contractor shall provide space for storage of materials and security for the materials meant for the Works.	
B	SAMPLES	
	The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the PROJECT MANAGER for his approval until such samples are approved by the PROJECT MANAGER and the PROJECT ARCHITECT, may reject any materials or workmanship not in his opinion to be up to approved samples. The PROJECT MANAGER shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the PROJECT MANAGER. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the Directorate of Public Works. The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the PROJECT MANAGER.	
C	GOVERNMENT ACTS REGARDING WORK PEOPLE, E.T.0	
	Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople. The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps , passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the information regarding all such regulations and/or restrictions which may affect the organization of the works, supply and control of labour, etc., and allow accordingly in his tender. No claim in respect of want of knowledge in this connection will be entertained.	
Total carried forward to collection		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
A	SECURITY OF WORKS, E.T.C	
	<p>The Contractor shall be entirely responsible for the security of all the works stores, materials, plant, personnel, etc., both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p>	
B	PUBLIC AND PRIVATE ROADS	
	<p>Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the PROJECT MANAGER</p>	
C	EXISTING PROPERTY	
	<p>The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the PROJECT MANAGER</p>	
D	VISIT TO SITE AND EXAMINE DRAWINGS	
	<p>The Contractor is recommended to examine the drawings and visit the site, the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect his tender.</p>	
	<p>No claim arising from his failure to comply with this recommendation. will be considered.</p>	
E	ACCESS TO SITE AND TEMPORARY ROADS	
	<p>Means of access to the Site shall be agreed with the PROJECT MANAGER prior to commencement of the work and Contractor must allow for building any necessary temporary access roads for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the Contractor shall remove such temporary access roads; temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the PROJECT MANAGER.</p>	
Total carried forward to collection		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

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BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
A	AREAS TO BE OCCUPIED BY CONTRACTOR	
	The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the PROJECT MANAGER.	
B	OFFICE, E.T.C. FOR THE PROJECT MANAGER	
	The Contractor shall construct a temporary site office of type described and to the satisfaction of the Project Manager. He shall also provide a strong metal trunk complete with strong hasp and staple fastening and two 'keys'. He shall maintain a lock-up type water or bucket closet for the sole use of the PROJECT MANAGER and shall provide services of cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The Contractor shall make available on the Site as and when required by the "PROJECT MANAGER" a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic or linen tape.	
C	WATER AND ELECTRICITY SUPPLY FOR THE WORKS	
	The Contractor shall make arrangements to provide all necessary water, electric light and power required for use in the works. No guarantee is given or implied that sufficient water will be available from mains and the Contractor must make his own arrangements for augmenting this supply at his own cost.	
D	SANITATION OF WORKS	
	The Contractor will provide toilet facilities for use of the Contractor and his agents.	
E	SUPERVISION AND WORKING HOURS	
	The works shall be executed under the direction and to the entire satisfaction in all respects of the PROJECT MANAGER who shall at all times during normal working hours have access to the works and to the yards and workshops of the Contractor and sub-Contractors or other places where work is being prepared for the contract.	
Total carried forward to collection		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

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BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
A	<p>PROGRESS CHART</p> <p>The Contractor shall provide within one week of Possession of Site and in agreement with the PROJECT MANAGER a Progress Chart for the whole of the works including the works of Nominated Sub-Contractors; one copy to be handed to the PROJECT MANAGER and a further copy to be retained on Site. Progress to be recorded and chart to be amended as necessary as the work proceeds.</p>	
B	<p>DIRECT CONTRACTS</p> <p>Notwithstanding the foregoing conditions, the Employer reserves the right to place a "Direct Contract" for any goods or services required in the works.</p>	
C	<p>ATTENDANCE UPON OTHER TRADESMEN, E.T.C.</p> <p>The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent executed at rates provided in these Bills.</p>	
Total carried forward to collection		

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BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
A	<p>INSURANCE</p> <p>The Contractor shall insure as required in Conditions No. 30 of the Conditions of Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the PROJECT MANAGER either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the PROJECT MANAGER's inspection.</p>	
B	<p>PROVISIONAL WORK</p> <p>All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract shall left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT MANAGER Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he shall if the PROJECT MANAGER so directs uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.</p>	
C	<p>ALTERATION OF BILLS OF QUANTITIES, PRICING, E.T.C.</p> <p>Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.</p>	
Total carried forward to collection		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
A	MATERIALS ARISING FROM EXCAVATION	
	Materials of any kind obtained from the excavations shall be the property of the Employer . Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract.	
B	PROTECTION OF THE WORKS	
	Provide protection of the whole of the works contained in the Bills of Quantities, including easing, casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the PROJECT MANAGER and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Government.	
C	REMOVAL OF RUBBISH, E.T.C.	
	Removal of rubbish and debris from the Buildings and site as it accumulates and at the completion of the works and remove all plant, scaffolding and unused materials at completion.	
D	WORKS TO BE DELIVERED UP CLEAN	
	Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER.	
Total carried forward to collection		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
A	GENERAL SPECIFICATIONS	
	<p>For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads and Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p>	
B	MATERIALS ON SITE	
	<p>All materials for incorporation in the works will be stored in the space provided by the Employer within the building on site before payment is effected unless specifically exempted by the PROJECT MANAGER. The Main Contractor shall make arrangements with the Employer to secure the place for the safety of the Materials. This includes the materials of the Main Contractor and his domestic Sub-Contractors & Suppliers.</p>	
C	CONTRACTORS SUPERINTENDENCE/SITE AGENT	
	<p>The Contractor shall constantly keep on the works a literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Project Manager and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.</p>	
Total carried forward to collection		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 2 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	KSHS
	COLLECTION PAGE	From Page
1	Total From Page	11
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3	Total From Page	13
4	Total From Page	14
5	Total From Page	15
6	Total From Page	16
7	Total From Page	17
8	Total From Page	18
Bill No. 2 - General Preliminaries		Carried Forward To Grand Summary

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 3 - SWIMMING POOL

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>EARTHWORKS (ALL PROVISIONAL)</u>					
<u>Works in this section excludes:</u>					
i.	Site clearance				
ii	Excavations to reduce levels exceeding 2.75m deep				
<i><u>Excavations including maintaining and supporting sides and keeping free from water, mud and fallen material</u></i>					
A	Mass excavation to reduce levels not exceeding 1.5m deep starting from the existing ground level [excavating in soil, very soft rock or hard, soil like material, soft rock, moderately soft rock and moderately hard rock - with a compressive strength of not more than 50MPa)	CM	369		
B	Ditto exceeding 1.5 but n.e 3.0 metres deep	CM	308		
C	Extra over excavations for excavating in hard rock (with a compressive strength range of 50Mpa to 100 MPa)	CM	62		
D	Extra over excavations for excavating in very hard rock and extremely hard rock (with a compressive strength range of above 100MPa)	CM	62		
<u>Disposal</u>					
E	Return, fill and ram selected excavated material around foundations.	CM	62		
F	Load, wheel & cart away surplus excavated material from site	CM	677		
<u>Hardcore or other approved filling, as described</u>					
G	300mm thick well rammed and compacted bed under floors blinded with 50mm thick murrum or quarry dust	CM			Rate Only
<u>Anti-termite treatment</u>					
H	Chemical anti-termite treatment, executed complete by an approved specialist under a ten-year guarantee, to surfaces of hard-core	SM	333		

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 3 - SWIMMING POOL

ItemDescription	Unit	Quantity	Rate	Amount (Ksh)
<u>Damp-proof membrane</u>				
A "Gauge 1000 polythene" or other equal and approved damp-proof membrane, laid over blinded hardcore or hard murrum surface (measured separately) with 300mm side & end laps (measured nett-allow for laps)	SM	333		
<u>Plain concrete class 15 in:</u>				
B 100mm blinding under pool base slab	SM	281		
<u>Vibrated reinforced concrete class 30; including plastocrete integral waterproofing concrete admixture at 0.5% of weight of cement in mix (SIKA Admixture or other equal and approved) as described, in:-</u>				
C 250mm thick pool base slab	SM	246		
D 200mm thick pool channel base slab	SM	35		
E 150mm thick pool sorround to receive washed terrazzo (m.s)	SM	52		
<u>Vibrated reinforced concrete class 25; including plastocrete integral waterproofing concrete admixture at 0.5% of weight of cement in concrete mix (SIKA Admixture or other equal and approved) as described, in:-</u>				
F 200mm thick pool wall and overflow channel	SM	150		
<u>Reinforcement, as described (provisional)</u>				
<u>Supply and fix steel reinforcement including cutting, bending, hooking, tying and supporting as required</u>				
<u>High yield ribbed bars reinforcement to BS 4449:</u>				
G Assorted reinforcement bars (8mm to 25mm bars)	Kg	9,850		
<u>Mesh fabric reinforcement to B.S 4483 set in concrete with 300mm side and end laps (measured nett-allow for laps).</u>				
H Fabric ref. A142 weighing 2.22kg/sm.metre in concrete bed	SM	52		

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 3 - SWIMMING POOL

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Steel or timber formwork, as described, to:-</u>				
A	Sides of Base Slab	SM	26		
B	Sides of Pool Wall & Channel	SM	300		
	<u>Vandex or Xypex or other equal and approved waterproofing treatment to concrete surfaces applied strictly to manufacturer's instructions</u>				
C	Waterproofing to concrete base slab	SM	281		
D	Waterproofing to concrete walls	SM	300		
	<u>Water bars</u>				
E	400x1.5mm galvanised steel plate or other approved upvc water bar, set vertically in concrete wall at construction or expansion joint	LM	65		
	<u>Walling in natural coursed stone obtained from an approved quarry, bedded and jointed in gauged mortar (1:3); reinforced at every alternate course with 25mm wide x 20 gauge hoop irons</u>				
F	100mm thick protective skin walling	SM	-		Rate Only
	<u>FINISHES</u>				
	<u>Waterproofed cement and sand (1:4) backings etc</u>				
F	42mm thick cement sand screed 1:3 to receive swimming pool tiles complete with waterproofing additive	SM	281		
G	25mm thick render to sides of walls complete with waterproofing additive	SM	163		
	<u>Pool tiling</u>				
H	Supply & fix approved mosaic pool tiles on prepared backing (measured separately) of walls and sides of overflow channel, complete with proprietary adhesive, white cement and grouting to detail. Contractor to provide sample tile for approval prior to procurement	SM	281		

Carried to Collection

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PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 3 - SWIMMING POOL

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
A	Supply & fix approved mosaic pool tiles to prepared base slab backing (measured separately) complete with proprietary adhesive, white cement and grouting to detail. Contractor to provide sample tile for approval prior to procurement	SM	163		
	<u>Washed terrazzo paving as described to:-</u>				
B	40mm thick finish to floor including backing screed	SM	52		
	<u>Plastic dividing strips (provisional)</u>				
C	25x3mm strip set vertically in paving to form panels	LM	208		
	<u>ACCESSORIES</u>				
D	900mm high stainless steel protective railing around pool sides complete with fixing accessories	LM	65		
E	Stainless steel cat ladder for pools complete with fixing to detail; each ladder to have 4 steps	Nr	3		
F	300mm wide heavy duty pvc grating to swimming pool drain complete with fixing accessories	LM	64		
G	Making holes through 200mm thick concrete wall for sleeves	Nr	10		
H	Builders works in connection with plumbing & drainage installations	Item			
I	Builders works in connection with electrical installations	Item			
J	Builders works in connection with Swimming Pool Equipment Installation	Item			
	Carried to Collection				
	COLLECTION				
	From Page			Page	
	From Page			3:1	
	From Page			3:2	
	From Page			3:3	
	From Page			3:4	
	Bill No. 3 - Swimming Pool			Total Carried To Main Summary	

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 1 - SUBSTRUCTURES</u>					
<u>(ALL PROVISIONAL)</u>					
<u>Notes:</u>					
i.	Excavations to reduce levels upto a maximum of 1000mm deep below the natural ground except for strip footing and column pits				
<i><u>Excavations including maintaining and supporting sides and keeping free from water, mud and fallen material</u></i>					
A	Excavate to reduce levels not exceeding 1.0 metres, deep starting from existing ground level	CM	125		
B	Excavate for strip footing n.e 1.50 metres deep starting from reduced level	CM	21		
C	Extra over excavations for excavating in soft rock	CM	21		
D	Extra over excavations for excavating in hard rock	CM	21		
<i><u>Disposal</u></i>					
E	Return, fill and ram selected excavated material around foundations.	CM	41		
F	Load, wheel and cart away from site surplus excavated materials including dumping at MCG approved site.	CM	125		
<i><u>Hardcore or other approved filling, as described</u></i>					
G	Approved imported fill to make up levels	CM	125		
H	300mm thick well rammed and compacted bed under floors blinded with 50mm thick murrum or quarry dust	SM	125		
<i><u>Anti-termite treatment</u></i>					
I	Chemical anti-termite treatment, executed complete by an approved specialist under a ten-year guarantee, to surfaces of hard-core	SM	125		
<i><u>Damp-proof membrane</u></i>					
J	1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	SM	125		
<i><u>Plain concrete class 15 in:</u></i>					
K	50mm blinding under foundations.	SM	78		

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Reinforced concrete class (25) as described, in:-</u>				
A	Strip footing and column base + columns	CM	13		
B	150mm thick surface bed, laid in bays including all necessary formwork	SM	114		
	<u>Vibrated reinforced concrete class 25; including plastocrete integral waterproofing concrete admixture at 0.5% of weight of cement in concrete mix (SIKA Admixture or other equal and approved) as described, in:-</u>				
C	Retaining wall footing	CM	5		
D	200mm thick wall	SM	17		
E	150mm thick machine room base slab	SM	11		
F	150mm thick suspended machine room cover slab	SM	11		
	<u>Reinforcement, as described (provisional)</u>				
	<u>High yield square twisted reinforcement to BS 4461</u>				
G	Assorted reinforcement bars (8mm to 25mm bars)	Kg	2,244		
	<u>Mesh fabric reinforcement to B.S 4483 set in concrete with 300mm side and end laps (measured nett-allow for laps).</u>				
H	Fabric mesh reinforcement ref. A142 in concrete bed	SM	125		
	<u>Steel or Sawn formwork, as described, to:-</u>				
I	Sides of strip footing and bases and sides of columns	SM	55		
J	Sides of wall	SM	34		
K	Soffit of suspended slab	SM	11		
L	Edge slab over 150mm but not exceeding 225mm girth	LM	60		
	<u>Walling in natural coursed stone obtained from an approved quarry, bedded and jointed in gauged mortar (1:3). Reinforced at every alternate course with hoop irons</u>				
M	200mm thick walling in foundations	SM	126		
	<u>Damp-proof courses, as described, to walls</u>				
N	200mm wide	LM	101		

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 3</u>					
<u>WALLING</u>					
<i>Walling in machine cut masonry stone obtained from an approved quarry, bedded and jointed in gauged mortar (1:3) Reinforced at every alternate course with hoop irons to approval</i>					
A	200mm thick walling externally	SM	83		
B	200mm thick walling internally	SM	83		
C	150mm thick walling internally	SM	4		
D	100mm thick walling internally	SM	69		
<i>Prepare and Apply 3 coats of "Crown" Ruff and Tuff paint or other equal and approved textured paint to surfaces of external walls and surfaces of ring beam</i>					
E	To rendered concrete and masonry surfaces externally	SM	110		
Walling					Total Carried To Summary
					-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 4</u>					
<u>ROOF CONSTRUCTION AND FINISHES</u>					
<u>WOOD WORK AND METAL WORK</u>					
<i><u>The following in sawn treated cypress grade 2 kiln dried to specification, all bolted and jointed, including all overlaps, cutting, moulding, chamfer, scribed end, rounded cornices, raking cutting, grooves, circular cutting, rebates, mitres, intersections, splay, shaping at ends where required, wrot unless otherwise stated, fixed to concrete / masonry / timber elements, with and including Engineer's designed connections, all to the Engineer's details and approval.</u></i>					
Roof trusses / common timbers with nailed or bolted connections including hoisting and fixing in position not exceeding 4.5 metres above ground floor level					
<i><u>Trusses & common timbers</u></i>					
A	150x50mm truss members	M	248		
B	100x50mm rafter members	M	290		
C	150x50mm underpurlins	M	32		
D	150x50mm ridge/valley members	M	45		
<i><u>Wall plate</u></i>					
E	100x50mm wall plate fixed with and including 200mm long 12mm diameter rag bolts cast into beam at 750mm centres	M	60		
<i><u>In wrot cypress</u></i>					
F	250x32mm fascia or verge board	M	65		
<i><u>Heavy duty PVC boarding to eaves</u></i>					
G	Tongued and grooved PVC boarding in 100mm wide strips secret nailed to and including 50x50 softwood brandering at 600mm centres complete with quarter round beading	SM	39		
Carried to Collection					-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

ItemDescription	Unit	Quantity	Rate	Amount (Ksh)
<i><u>Fired clay roofing tiles covering or equal and approved as supplied by an approved manufacturer or supplier, laid on and including 50x50mm pressure impregnated sawn cypress purlins at 300mm centres, all in accordance with the manufacturer's instructions</u></i>				
A	SM	187		
B	M	54		
C	M	90		
<i><u>Roof underlays</u></i>				
<i><u>Flat sheet underlays, gauge 32, as specified</u></i>				
D	SM	187		
<i><u>uPVC pipes and fittings to B.S. 4576, Part 1</u></i>				
E	M	65		
F	M	12		
G	No	4		
H	No	4		
<i><u>Knot, prime and stop, prepare and apply two undercoats and one gloss finishing coat enamel paint on wood surfaces</u></i>				
I	M	65		
COLLECTION		Page		
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Roof Construction and Finishes				Total Carried To Summary
				-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 5</u>					
<u>FINISHES</u>					
<i><u>External wall finishes</u></i>					
<i><u>Cement and sand (1:4) backings etc</u></i>					
A	12mm thick render to concrete and masonry surfaces	SM	110		
<i><u>Internal wall finishes</u></i>					
<i><u>12mm (minimum) two coat lime plaster as described to</u></i>					
B	Concrete and masonry surfaces	SM	178		
<i><u>Waterproofed cement and sand (1:4) backings etc</u></i>					
C	12mm render finished to receive ceramic wall tiles (measured separately)	SM	276		
<i><u>Glazed wall tiling</u></i>					
D	Supply & fix approved glazed wall tiles on prepared backing (measured separately) including supply of white cement or tile adhesive and grouting to detail. Contractro to provide sample for approval prior to procurement.	SM	276		
<i><u>Cement and sand (1:3) screeds, backings, beds e.t.c</u></i>					
E	32mm water proofed bed finished ceramic floor tiling	SM	125		-
F	32mm bed finished to receive ceramic floor tiling	SM			Rate Only
<i><u>Ceramic floor tiling</u></i>					
G	Supply & approved floor tiles on prepared backing (measured separately) including supply of white cement or tile adhesive and grouting to detail. Contractor to provide sample for approval prior to procurement.	SM	125		-
H	100mm high ditto tile skirting (provisional)	LM	198		-
Carried to Collection					-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Dropped gypsum ceiling: in 12mm gypsum boards fixed on metal runners to Architect's approval: allow for brandering using aluminium 'C' channels, cutting for recessed light fittings; allow for skimming, taped joints as per Architect's detail</u>				
A	Dropped flat ceiling	SM	125		
B	Extra over gypsum ceiling for bulkheads (provisional)	SM	13		
C	100x25mm moulded gypsum cornice with three labours	LM	198		
	<u>Painting and decorating</u>				
	<u>Prepare and apply three coats first quality emulsion paint internally on:-</u>				
D	Plastered concrete and masonry wall surfaces internally	SM	178		
E	Gypsum board ceilings	SM	167		
	<u>Prepare and apply three coats first quality sadolin or other equal and approved weatherguard emulsive paints on:-</u>				
F	To rendered concrete and masonry surfaces externally	SM			Rate Only
	<u>Prepare and apply one coat of pinotex stain and two coats of matt polyurethane varnish to wood surfaces</u>				
G	Surfaces over 100mm but not exceeding 200mm girth	LM			Rate Only
					-
	COLLECTION		Page		
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	From Page		4:9		-
	Finishes		Total Carried To Summary		-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 6</u>					
<u>WINDOWS</u>					
<i><u>Machine cut stone window cill with drip bedded and jointed in cement and sand (1:3) mortar</u></i>					
A	275 x 50mm thick window cill once rebated and throated laid and jointed in cement and sand 1:3 mortar	LM	22		
<i><u>In wrot Mahogany</u></i>					
B	100x25mm window board plugged, screwed and pelleted	LM	22		
C	Custom made fixed triple hardwood louvred timber window type W-01 overall size 1800x1500mm high as per the Architect's details. Window to be made out of 100x45mm side, middle, top and bottom frames infilled with 12mm hardwood louvres fixed at 45 degrees complete with 15x10mm hardwood beading all round	Nr	7		
					
D	Custom made fixed single hardwood louvred timber windows type W-02 overall size 900x1350mm high as per the Architect's details. Window to be made out of 100x45mm side, middle, top and bottom frames infilled with 12mm hardwood louvres fixed at 45 degrees complete with 15x10mm hardwood beading all round	Nr	10		
					
<i><u>Touch up primer, prepare and apply two undercoats and 2 finishing coats of matt polyurethane varnish to surfaces of timber members</u></i>					
E	Surfaces of hardwood window boards	SM	65		
<i><u>Aluminium Casement Windows</u></i>					
<i><u>Supply, assemble and fix the following purposed-made powder coated aluminium framed windows infilled with 6mm thick clear float glass and 6mm thick obscure glass to washrooms, obtained from an approved manufacturer, complete with hinges, handles, catches and fixing frames to window openings. All windows comprise 25mm high permanent vents with 2 layers of 1 & 5mm mosquito gauze, machined hinges and fixing brackets for catches and stays. Window ironmongery to be heavy duty by an approved manufacturer.</u></i>					
F	Aluminium windows in various sizes	SM			Rate Only

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Finishing to reveals</u>				
	<u>15 mm cement and sand (1:3) render, finished with woodfloat to:-</u>				
A	Concrete or masonry surfaces	SM	11		
	<u>12mm (minimum) two coat lime plaster as described to</u>				
B	Concrete or masonry surfaces internally	SM	11		
	<u>Prepare and apply three coats first quality silk vinyl emulsion paint on:-</u>				
C	Plastered walls internally	SM	11		
	<u>Prepare and apply three coats first quality sadolin or other equal and approved weatheguard emulsive paints on:-</u>				
D	Rendered surfaces externally	SM	11		
					-
	COLLECTION		Page		
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	From Page		4:11		-
	Windows			Total Carried To Summary	-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 7</u>					
<u>DOORS</u>					
<i><u>Wrot Mvuli Frames and Architraves</u></i>					
A	25mm quadrant beading (Provisional)	LM	65		
B	45 x 15mm architrave, two labours	LM	65		
C	150 x 50mm frame with three labours	LM	71		
<i><u>Supply and Fix 45mm thick hardwood louvered timber door as per the Architect's Schedule</u></i>					
D	Door type D-01 overall size 900 x 2700mm high	No.	9		
<i><u>50mm thick aluminium framed solid core flush doors, faced both sides with hardwood veneer as per the Architect's details</u></i>					
E	Door type D-02 overall size 800 x 2100mm high	No	4		
<i><u>Ironmongery</u></i>					
<i><u>Supply and fix only the following ironmongery with matching screws</u></i>					
F	150mm butt hinges	Pr.	20		
G	3 - lever mortice lock complete with lever furniture	No.	9		
H	2 -lever mortice lock complete with lever furniture	No.	4		
I	Rubber door stop rawl bolted to concrete floor	No.	13		
<i><u>Glazing</u></i>					
J	4mm Ordinary quality clear sheet glass and glazing to metal with metal sprigs and putty, in panes over 0.1 but not exceeding 0.50 square meters.	SM			Rate Only
<i><u>Mild steel doors complete with all necessary frames and ironmongery (Refer to architect's schedule)</u></i>					
K	Mild steel grille to later details	SM			Rate Only
Carried to Collection					-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Painting and decorating</u>				
	<u>Touch up primer, prepare and apply two undercoats and one gloss finishing coat enamel paint to metalwork</u>				
A	General surfaces of steel casement doors or grilles (measured flat)	SM			Rate Only
	<u>Prepare and apply three coat clear varnish internally on:-</u>				
B	General surfaces of timber doors	SM	68		
C	Ditto but not exceeding 100mm girth	LM	129		
D	Ditto over 100 but not exceeding 200mm girth	LM	71		
E	Ditto over 200 but not exceeding 300mm girth	LM			
	COLLECTION		Page		
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	From Page		4:13		
Doors			Total Carried To Summary		-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>ELEMENT NO. 8</u>				
	<u>JOINERY FITTINGS</u>				
A	Provide a Provisional Sum of Kshs 300,000.00 Only for Joinery Fittings to be expended on site as directed by the Architect	Item			300,000.00
Joinery Fittings					300,000.00
Total Carried To Summary					300,000.00

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 4 - CHANGING ROOMS

ItemDescription	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 9</u>				
<u>SERVICES INSTALLATIONS</u>				
<i><u>Work incidental to air conditioning, ventilation, plumbing, drainage, fire fighting, electrical, music, TV, PABX, data and telephone installations, concealed fixings</u></i>				
A				
Co-ordination with other engineering installations and marking and setting out the positions of all work	Item			
B				
Cutting or forming all holes, mortices, chases, building in or cutting and pinning brackets or the like including all associated builder's work and making good finishings	Item			
C				
Building in or cutting and pinning brackets or the like and making good finishings	Item			
D				
Protective and decorative painting	Item			
Services Installations				
Total Carried To Summary				-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 1 - SUBSTRUCTURES</u>					
<u>(ALL PROVISIONAL)</u>					
<u>Notes:</u>					
i.	Excavations to reduce levels upto a maximum of 1000mm deep below the natural ground except for strip footing and column pits				
<i><u>Excavations including maintaining and supporting sides and keeping free from water, mud and fallen material</u></i>					
A	Excavate to reduce levels not exceeding 1.5 metres, deep starting from existing ground level	CM	47		
B	Excavate for strip footing n.e 1.50 metres deep starting from reduced level	CM	6		
C	Extra over excavations for excavating in soft rock	CM	6		
D	Extra over excavations for excavating in hard rock	CM	6		
<i><u>Disposal</u></i>					
E	Return, fill and ram selected excavated material around foundations.	CM	12		
F	Load, wheel and cart away from site surplus excavated materials including dumping at NCCG approved site.	CM	47		
<i><u>Hardcore or other approved filling, as described</u></i>					
G	Approved imported fill to make up levels	CM	47		
H	300mm thick well rammed and compacted bed under floors blinded with 50mm thick murrum or quarry dust	SM	47		
<i><u>Anti-termite treatment</u></i>					
I	Chemical anti-termite treatment, executed complete by an approved specialist under a ten-year guarantee, to surfaces of hard-core	SM	47		
<i><u>Damp-proof membrane</u></i>					
J	1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	SM	47		
<i><u>Plain concrete class 15 in:</u></i>					
K	50mm blinding under foundations.	SM	25		

Carried to Collection

-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Reinforced concrete class (25) as described, in:-</u>				
A	Strip footing and column base + columns	CM	5		
B	150mm thick surface bed, laid in bays including all necessary formwork	SM	47		
	<u>Reinforcement, as described (provisional)</u>				
	<u>High yield square twisted reinforcement to BS 4461</u>				
C	Assorted reinforcement bars (8mm to 25mm bars)	Kg	390		
	<u>Mesh fabric reinforcement to B.S 4483 set in concrete with 300mm side and end laps (measured nett-allow for laps).</u>				
D	Fabric mesh reinforcement ref. A142 in concrete bed	SM	47		
	<u>Steel or Sawn formwork, as described, to:-</u>				
E	Sides of strip footing and bases and sides of columns	SM	20		
F	Edge slab over 150mm but not exceeding 225mm girth	LM	28		
	<u>Walling in natural coursed stone obtained from an approved quarry, bedded and jointed in gauged mortar (1:3). Reinforced at every alternate course with hoop irons</u>				
G	200mm thick walling in foundations	SM	51		
	<u>Damp-proof courses, as described, to walls</u>				
H	200mm wide	LM	41		
Carried to Collection					-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

ItemDescription	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 3</u>				
<u>WALLING</u>				
<i>Walling in machine cut masonry stone obtained from an approved quarry, bedded and jointed in gauged mortar (1:3) Reinforced at every alternate course with hoop irons to approval</i>				
A	200mm thick walling externally	SM	62	
B	150mm thick walling externally	SM	8	
C	200mm thick walling internally	SM	5	
D	150mm thick walling internally	SM	9	
<i>Prepare and Apply 3 coats of "Crown" Ruff and Tuff paint or other equal and approved textured paint to surfaces of external walls and surfaces of ring beam</i>				
E	To rendered concrete and masonry surfaces externally	SM	70	
Walling				
Total Carried To Summary				-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 4</u>					
<u>ROOF CONSTRUCTION AND FINISHES</u>					
<u>WOOD WORK AND METAL WORK</u>					
<i>The following in sawn treated cypress grade 2 kiln dried to specification, all bolted and jointed, including all overlaps, cutting, moulding, chamfer, scribed end, rounded cornices, raking cutting, grooves, circular cutting, rebates, mitres, intersections, splay, shaping at ends where required, wrot unless otherwise stated, fixed to concrete / masonry / timber elements, with and including Engineer's designed connections, all to the Engineer's details and approval.</i>					
Roof trusses / common timbers with nailed or bolted connections including hoisting and fixing in position not exceeding 4.5 metres above ground floor level					
<i>Trusses & common timbers</i>					
A	150x50mm truss members	M	108		
B	100x50mm rafter members	M	100		
C	150x50mm underpurlins	M	11		
D	150x50mm ridge/hip members	M	25		
<i>Wall plate</i>					
E	100x50mm wall plate fixed with and including 200mm long 12mm diameter rag bolts cast into beam at 750mm centres	M	41		
<i>In wrot cypress</i>					
F	250x32mm fascia or verge board	M	33		
<i>Heavy duty PVC boarding to eaves</i>					
G	Tongued and grooved PVC boarding in 100mm wide strips secret nailed to and including 50x50 softwood brandering at 600mm centres complete with quarter round beading	SM	20		
Carried to Collection					-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

ItemDescription	Unit	Quantity	Rate	Amount (Ksh)
<i><u>Fired clay roofing tiles covering or equal and approved as supplied by an approved manufacturer or supplier, laid on and including 50x50mm pressure impregnated sawn cypress purlins at 300mm centres, all in accordance with the manufacturer's instructions</u></i>				
A Roof covering not exceeding 45 degrees from the horizontal including all necessary fixtures	SM	74		
B Ridge or hip covering to match	M	25		
C Raking cutting clay sheets along the valleys and hips (provisional)	M	50		
<i><u>Roof underlays</u></i>				
<i><u>Flat sheet underlays, gauge 32, as specified</u></i>				
D Roof sheeting laid with 150mm (minimum) end and side laps and nailed to timber rafters (measured separately)	SM	74		
<i><u>uPVC pipes and fittings to B.S. 4576, Part 1</u></i>				
E 150 diameter half round gutter including joints in running length fixed to fascia board with and including brackets at rafter centres	M	33		
F 150mm diameter downpipe fixed with and including mild steel holderbats plugged and screwed to walls	M	6		
G Extra over down pipe for 150mm swan neck bend	No	2		
H Ditto for 150mm shoe	No	2		
<i><u>Knot, prime and stop, prepare and apply two undercoats and one gloss finishing coat enamel paint on wood surfaces</u></i>				
I Surfaces over 200mm but not exceeding 300mm girth	M	33		
				-
COLLECTION		Page		
From Page		5:6		-
From Page		5:7		-
Roof Construction and Finishes		Total Carried To Summary		-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

ItemDescription	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 5</u>				
<u>FINISHES</u>				
<i><u>External wall finishes</u></i>				
<i><u>Cement and sand (1:4) backings etc</u></i>				
A	SM	111		
12mm thick render to concrete and masonry surfaces				
<i><u>Internal wall finishes</u></i>				
<i><u>12mm (minimum) two coat lime plaster as described to</u></i>				
B	SM	50		
Concrete and masonry surfaces				
<i><u>Waterproofed cement and sand (1:4) backings etc</u></i>				
C	SM	48		
12mm render finished to receive ceramic wall tiles (measured separately)				
<i><u>Glazed wall tiling</u></i>				
D	SM	48		
Supply & fix approved glazed wall tiles on prepared backing (measured separately) including supply of white cement or tile adhesive and grouting to detail. Contractro to provide sample for approval prior to procurement.				
<i><u>Cement and sand (1:3) screeds, backings, beds e.t.c</u></i>				
E	SM	47		
32mm water proofed bed finished ceramic floor tiling				
F	SM			Rate Only
32mm bed finished to receive ceramic floor tiling				
<i><u>Ceramic floor tiling</u></i>				
G	SM	47		
Supply & approved floor tiles on prepared backing (measured separately) including supply of white cement or tile adhesive and grouting to detail. Contractor to provide sample for approval prior to procurement.				
H	LM	39		
100mm high ditto tile skirting (provisional)				
Carried to Collection				-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Dropped gypsum ceiling: in 12mm gypsum boards fixed on metal runners to Architect's approval: allow for brandering using aluminium 'C' channels, cutting for recessed light fittings; allow for skimming, taped joints as per Architect's detail</u>				
A	Dropped flat ceiling	SM	47		
B	Extra over gypsum ceiling for bulkheads (provisional)	SM	5		
C	100x25mm moulded gypsum cornice with three labours	LM	39		
	<u>Painting and decorating</u>				
	<u>Prepare and apply three coats first quality emulsion paint internally on:-</u>				
D	Plastered concrete and masonry wall surfaces internally	SM	50		
E	Gypsum board ceilings	SM	58		
	<u>Prepare and apply three coats first quality sadolin or other equal and approved weatherguard emulsive paints on:-</u>				
F	To rendered concrete and masonry surfaces externally	SM			Rate Only
	<u>Prepare and apply one coat of pinotex stain and two coats of matt polyurethane varnish to wood surfaces</u>				
G	Surfaces over 100mm but not exceeding 200mm girth	LM			Rate Only
COLLECTION			Page		
From Page			4:8		
From Page			4:9		
Finishes		Total Carried To Summary			-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

ItemDescription	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 6</u>				
<u>WINDOWS</u>				
<i><u>Machine cut stone window cill with drip bedded and jointed in cement and sand (1:3) mortar</u></i>				
A	LM	5		
<i><u>275 x 50mm thick window cill once rebated and throated laid and jointed in cement and sand 1:3 mortar</u></i>				
<i><u>In wrot Mahogany</u></i>				
B	LM	5		
<i><u>100x25mm window board plugged, screwed and pelleted</u></i>				
<i><u>Aluminium Casement Windows</u></i>				
<i><u>Supply, assemble and fix the following purposed-made powder coated aluminium framed windows infilled with 6mm thick clear float glass and 6mm thick obscure glass to washrooms, obtained from an approved manufacturer, complete with hinges, handles, catches and fixing frames to window openings. All windows comprise 25mm high permanent vents with 2 layers of 1 & 5mm mosquito gauze, machined hinges and fixing brackets for catches and stays. Window ironmongery to be heavy duty by an approved manufacturer.</u></i>				
C	SM	4		
<i><u>Fixed Aluminium Louvred windows in various sizes</u></i>				
<i><u>Touch up primer, prepare and apply two undercoats and 2 finishing coats of matt polyurethane varnish to surfaces of timber members</u></i>				
D	SM	3		
<i><u>Surfaces of hardwood window boards</u></i>				
<i><u>Finishing to reveals</u></i>				
<i><u>15 mm cement and sand (1:3) render, finished with woodfloat to:-</u></i>				
E	SM	2		
<i><u>Concrete or masonry surfaces</u></i>				
<i><u>12mm (minimum) two coat lime plaster as described to</u></i>				
F	SM	2		
<i><u>Concrete or masonry surfaces internally</u></i>				

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Prepare and apply three coats first quality silk vinyl emulsion paint on:-</u>				
A	Plastered walls internally	SM	2		
	<u>Prepare and apply three coats first quality sadolin or other equal and approved weatheguard emulsive paints on:-</u>				
B	Rendered surfaces externally	SM	2		
					-
	COLLECTION		Page		
	From Page		5:10		-
	From Page		5:11		-
	Windows			Total Carried To Summary	-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 7</u>					
<u>DOORS</u>					
<u>Wrot Mvuli Frames and Architraves</u>					
A	25mm quadrant beading (Provisional)	LM	44		
B	45 x 15mm architrave, two labours	LM	44		
C	150 x 50mm frame with three labours	LM	29		
<u>Supply and Fix 45mm thick hardwood louvred timber door as per the Architect's Schedule</u>					
D	Door type D-01 overall size 900 x 2700mm high	No.	4		
<u>45mm thick solid core flush doors to BS 459: part 2, faced both sides with mahogany veneer and lipped on all edges in hardwood, including all planted mouldings, if any.</u>					
E	Door size 800 x 2050mm high	No			Rate Only
<u>Ironmongery</u>					
<u>Supply and fix only the following ironmongery with matching screws</u>					
F	150mm butt hinges	Pr.	6		
G	3 - lever mortice lock complete with lever furniture	No.	4		
H	2 -lever mortice lock complete with lever furniture	No.			
I	Rubber door stop rawl bolted to concrete floor	No.	4		
<u>Glazing</u>					
J	4mm Ordinary quality clear sheet glass and glazing to metal with metal sprigs and putty, in panes over 0.1 but not exceeding 0.50 square meters.	SM			Rate Only
<u>Mild steel doors complete with all necessary frames and ironmongery (Refer to architect's schedule)</u>					
K	Mild steel grille to later details	SM			Rate Only
Carried to Collection					-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 8</u>					
<u>JOINERY FITTINGS</u>					
A	Provide a Provisional Sum of Kshs 75,000 Only for Joinery Fittings to be expended on site as directed by the Architect	Item			75,000.00
Joinery Fittings					Total Carried To Summary

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 5 - POOL BAR

ItemDescription	UnitQuantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 9</u>			
<u>SERVICES INSTALLATIONS</u>			
<i><u>Work incidental to air conditioning, ventilation, plumbing, drainage, fire fighting, electrical, music, TV, PABX, data and telephone installations, concealed fixings</u></i>			
A	Co-ordination with other engineering installations and marking and setting out the positions of all work	Item	
B	Cutting or forming all holes, mortices, chases, building in or cutting and pinning brackets or the like including all associated builder's work and making good finishings	Item	
C	Building in or cutting and pinning brackets or the like and making good finishings	Item	
D	Protective and decorative painting	Item	
Services Installations			Total Carried To Summary
			-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 6 - GAZEBOS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>(ALL PROVISIONAL)</u>				
	<u>Notes:</u>				
i.	Excavations to reduce levels upto a maximum of 350mm deep below the slab except for strip footing and column pits				
	<i><u>Excavations including maintaining and supporting sides and keeping free from water, mud and fallen material</u></i>				
A	Excavate to reduce levels not exceeding 1.5 metres, deep starting from existing ground level	CM	9		
B	Ditto for strip footing and column bases ditto	CM	3		
	<i><u>Disposal</u></i>				
C	Return, fill and ram selected excavated material around foundations.	CM	3		
D	Load, wheel & cart away surplus excavated material from site	CM	9		
	<i><u>Hardcore or other approved filling, as described</u></i>				
E	300mm thick well rammed and compacted bed under floors blinded with 50mm thick murrum or quarry dust	SM	25		
	<i><u>Anti-termite treatment</u></i>				
F	Chemical anti-termite treatment, executed complete by an approved specialist under a ten-year guarantee, to surfaces of hard-core	SM	25		
	<i><u>Damp-proof membrane</u></i>				
G	1000 gauge polythene or other equal and approved damp-proof membrane, laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	SM	25		
	<i><u>Plain concrete class 15 in:</u></i>				
H	50mm blinding under foundations.	SM	3		

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 6 - GAZEBOS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>Reinforced concrete class (25) as described, in:-</u>					
A	Strip footing	CM	-		Rate Only
B	Column base and stub column	CM	1		-
C	100mm thick surface bed, laid in bays including all necessary formwork	SM	25		-
<u>Reinforcement, as described (provisional)</u>					
<u>High yield square twisted reinforcement to BS 4461</u>					
D	Assorted reinforcement bars (8mm to 25mm bars)	Kg	63		-
<u>Sawn formwork, as described, to:-</u>					
E	Sides of strip footing	SM	-		Rate Only
F	Sides of column base	SM	2		-
G	Sides of column	SM	4		-
H	Edge slab over 75mm but not exceeding 150mm girth	LM	20		-
<u>Walling in natural coursed stone obtained from an approved quarry, bedded and jointed in gauged mortar (1:3)</u>					
I	200mm thick walling in foundations	SM	-		Rate Only
<u>Precast concrete class 25/12 including all necessary formwork, finishing fair on all exposed surfaces and jointing and pointing in cement and sand (1:3) mortar</u>					
J	100x125mm flush channel block laid on and including 325x100mm concrete (1:3:6) bed	LM	20		-
COLLECTION				Page	
From Page			6:1		-
From Page			6:2		-
Substructure		Total Carried To Summary			-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 6 - GAZEBOS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 2</u>					
<u>SUPERSTRUCTURE WORKS</u>					
<u>ROOF CONSTRUCTION & FINISHES</u>					
A	Provisional sum for fabrication and installation of Gazebo Timber Structure Complete with Associated Connections	Item			250,000.00
<u>FINISHES</u>					
<i>Cement and sand (1:3) screeds, backings, beds e.t.c</i>					
B	32mm bed finished to receive ceramic floor tiling	SM	25		
<i>Ceramic floor tiling</i>					
C	Supply & approved floor tiles on prepared backing (measured separately) including supply of white cement or tile adhesive and grouting to detail. Contractor to provide sample for approval prior to procurement.	SM	25		
Finishes					Total Carried To Summary
					250,000.00

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 6 - GAZEBOS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>MAIN SUMMARY</u>					
	Element		Page		
1	SUBSTRUCTURES		6:2		
2	SUPERSTRUCTURE WORKS		6:3		
Total for 1 No. Gazebo					
	No. of Units				4.00
Total for Gazebos					-
Bill No. 6 - Gazebos					
Total Carried To Main Summary					-

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 7 - EXTERNAL WORKS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO. 1</u>					
<u>GROUNDS LEVELLING & PAVED AREAS</u>					
<u>(ALL PROVISIONAL)</u>					
<i><u>Excavations including maintaining and supporting sides and keeping free from water, mud and fallen material</u></i>					
A	Mass excavation to reduce levels not exceeding 1.5m deep starting from the existing ground level [excavating in soil, very soft rock or hard, soil like material, soft rock, moderately soft rock and moderately hard rock - with a compressive strength of not more than 50MPa]	CM	1,034		
B	Extra over excavations for excavating in hard rock (with a compressive strength range of 50Mpa to 100 MPa)	CM	50		
C	Extra over excavations for excavating in very hard rock and extremely hard rock (with a compressive strength range of above 100MPa)	CM	50		
<i><u>Disposal</u></i>					
D	Load, wheel and deposit on site as directed to make up levels	CM	1,034		
<i><u>Filling to field areas</u></i>					
E	Imported hardcore or approved quarry waste fill to make up levels under roads and compacted in layers	CM	250		
F	Roll and compact subgrade to achieve 98% compaction to BS standards including grading to falls and crossfalls	SM	3,410		
<i><u>Filling to Walkways [All Provisional]</u></i>					
G	Roll and compact subgrade to achieve 98% compaction to BS standards including grading to falls and crossfalls	SM	1,636		
H	150mm well compacted murrum or other equal and approved fill blinded with 25mm thick quarry dust to receive ant-termite treatment. Including all the necessary excavations and levelling therein.	SM	1,636		
I	200mm thick handpacked stone base, including levelling as necessary to road areas	SM	1,636		
J	Prepare and apply total persistent herbicide to surfaces of sub-base	SM	1,636		

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 7 - EXTERNAL WORKS

ItemDescription	Unit	Quantity	Rate	Amount (Ksh)
<i><u>Precast concrete paving slabs laid and jointed in cement and sand (1:3) mortar</u></i>				
A 600x600x50mm paving laid on and including 50mm bed of sand	SM	1,468		
<i><u>Cement and sand (1:3) screeds, backings, beds etc</u></i>				
B 20mm bed finished to receive Mazeras Stone tile laid on prepared bed (measured separately)	SM	168		
<i><u>Mazeras stone paving bonded in appropriate grout mortar including applying silicon colourless waterproofing compound to surfaces</u></i>				
C 300x300x35 mm thick mazeras stone paving or other approved sizes fixed on prepared bed (measured separately)	SM	168		
<i><u>Soil & manure fill</u></i>				
D Supply and spread over excavated areas 200mm thick red soil mixed with cowdung manure (2:1)	SM	2,523		
<i><u>Grass planting</u></i>				
<i><u>Supply, store in approved conditions, plant and grass and other approved ground cover at 50 mm centers both ways including digging soil 300 mm deep removing all roots and weeds and mixing cow dung manure and red soil (1:2)raking to fine tilth, fertilizing and all necessary preparations including tilling until well established.</u></i>				
E <i>Mardi river</i> grass or other approved with ground cover to Architect's specifications	SM	2,523		
Carried to Collection				
COLLECTION		Page		
From Page		7:1		
From Page		7:2		
Grounds Levelling and Paved Areas		Total Carried To Summary		

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 7 - EXTERNAL WORKS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO 2</u>					
<u>FOUL DRAINAGE (ALL PROVISIONAL)</u>					
<u>Excavate trench for drain pipe not exceeding 1.50 metres deep part return fill and ram and remainder cart away</u>					
A	Trench, average 500 mm deep for 100 mm diameter pipe	LM	10		
B	Trench, average 750 mm deep for 100 mm diameter pipe	LM	10		
C	Trench, average 1000 mm deep for 100 mm diameter pipe	LM	10		
<u>Key terrain or other equal and approved buried waste and soil UPVC pipes and fittings</u>					
D	100 mm diameter soil pipe laid in trench	LM	20		
E	150 mm diameter soil pipe laid in trench	LM	10		
<u>Plain concrete 1:3:6 (25 mm aggregate) as described in</u>					
F	425x100mm thick bed to receive 150mm diameter pipe	LM	10		
G	375x100mm thick bed to receive 100mm diameter pipe	LM	20		
H	150mm thick surround to 150mm diameter pipe	LM	10		
I	100mm thick surround to 100mm diameter pipe	LM	20		
<u>Gulley traps</u>					
J	Gulley trap overall size 200x200mm to depth not exceeding 0.5m deep, comprising of plain concrete (1:3:6) in 100mm thick slabs, 100mm thick solid concrete block walling, including key terrain UPVC trapped gulley cast in, complete with cast iron grating lid including all necessary excavations, formwork and reinforcement	No.	6		
<u>The following in Inspection chambers</u>					
K	Manhole overall size 800x800mm to depth not exceeding 1.50m deep, comprising of plain concrete (1:3:6) in 150mm thick slab, 250mm thick benching, reinforced concrete class 20 in 100mm thick cover slab, 150mm thick solid concrete block walling, water-proof screeds to sides and bottoms, with recessed top to receive mild steel cover (m.s) including all necessary excavations, formwork and reinforcement	No.	5		

Carried to Collection

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 7 - EXTERNAL WORKS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>Cast iron manhole cover and frame to B.S EN 124 and BS497 REF. B4-20 respectively and casting frame in concrete including greasing</u>				
A	Medium duty cover size 600x450mm	No.	5		
B	Allow for testing the whole of foul water drainage	Item			
	Carried to Collection				
	COLLECTION		Page		
	From Page		7:3		0.00
	From Page		7:4		0.00
	Foul Drainage		Total Carried To Summary		0.00

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 7 - EXTERNAL WORKS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
<u>ELEMENT NO 3</u>					
<u>PROVISIONAL SUMS (ALL PROVISIONAL)</u>					
A	Provisional sum for Storm Water Drainage	Item			Excluded
B	Chainlink Fence	Item			Excluded
C	Provisional sum for Builders Works in connection with Services Installation	Item			100,000.00
D	Provisional sum for Precast Concrete Panels Screen	Item			100,000.00
Provisional Sums					200,000.00
Total Carried To Summary					200,000.00

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

BILL NO. 7 - EXTERNAL WORKS

Item	Description	Unit	Quantity	Rate	Amount (Ksh)
	<u>MAIN SUMMARY</u>				
	Element		Page		
1	GROUNDS LEVELLING AND PAVED AREAS		7:2		0.00
2	FOUL DRAINAGE		7:4		0.00
3	PROVISIONALSUMS		7:5		200,000.00
Bill No. 7 - External Works					Total Carried To Main Summary

ITEM	DESCRIPTION	UNIT.	QTY.	RATE.	AMOUNT in KES.
<u>BILL NO. 1 ELECTRICAL SERVICES</u> <u>PRELIMINARIES AND GENERAL ITEMS</u>					
A	Allow for insurance of the works in accordance with the Conditions of the Contract	Sum	1		
B	Allow for the cost of performance bond in accordance with Conditions of the Contract	Sum	1		
C	Allow for the preparation of working drawings for approval by the Engineer and for use on site. The working drawings shall be submitted in both hard and soft copy, and an A1 size print shall displayed on site during the project period.	Sum	1		
D	Allow for the preparation of all "As Built" Drawings and handover documentation including test results compilation, training and manufacturer manuals, warranties and guarantess in 3 No. Hard Copies + 1 CD ROM (To a scale of 1:50).	Sum	1		
TOTAL CARRIED TO SUMMARY PAGE.					-

ITEM	DESCRIPTION	UNIT.	QTY.	RATE.	AMOUNT in KES.
	<p><u>BILL NO. 2 ELECTRICAL SERVICES</u></p> <p><u>MAIN ELECTRICAL DISTRIBUTION SYSTEM INSTALLATIONS</u></p> <p>E1.01.00 <i>Supply and deliver to site fittings, equipment and materials for Distribution System. Allow for storage on site all materials, fittings and equipment as stated below. Install, connect up-up complete including all conduits, supports, fixings, sleeves and accessories required for distribution system. Include for earthing requirements and connections and other item not detailed but required for the satisfactory completion and operation of the installation. The reference standard shall be the latest edition of the IET Wiring Regulations BS 7671</i></p> <p>NOTE: <i>The proposed equipment, fittings and cable manufacturers MUST be brands with more than 10 Years in the Kenyan market. The brand(s) specified for any fitting in this document should be understood to serve only as a quality reference guide.</i></p> <p><i>Datasheets for all power distribution boards and cables shall be submitted with the bid and shall also be subject to inspection and approval by the Engineer before installation.</i></p> <p><i>Circuit breaker coordination and selectivity requirements shall be determined on site.</i></p> <p>Supply and Install the following:</p> <p><u>Swimming Pool Area Sub-Distribution Board, Sub-Mains Cable and Sub-Mains Cable Management</u></p> <p><i>The contractor shall reference the provided electrical schematic during installation.</i></p>				
E1.01.01	IP65 rated, 100A 415V/50Hz (25kA Ics rating), 4 Pole Busbar Tap Off Unit/Box c/w operation handles, shunt release, and a leakage protection module to be mounted on the current switchboard for tapping power to the Swimming Pool DB. (Provisional at LV Switchboard)	No.	1		
E1.01.02	63A Rated 25kA 4 Pole MCCB (Mounted in LV Switchboard)	No.	1		
E1.01.03	4 Core 16 mm ² XLPE insulated copper cable + 16 sq.mm Earth, laid in ground, inclusive of all terminals, cable lugs, glands and shrouds (Sub-Board Incomer from LV Switchboard)	Lm	100		
E1.01.04	2 Core 6 mm ² XLPE insulated copper cable + 6 sq.mm Earth, inclusive of 32mm duct laid in ground, all terminals, cable lugs, glands and shrouds (From Swimming Pool DB to Pool Bar CU)	Lm	25		
E1.01.05	200mm (Width) X 50mm (Depth) perforated GI cable tray complete with all cable retainers and mounting accessories as required (Provisional for Cable Management within Pump Room)	Lm	40		
	<p><u>Distribution Boards and Accessories</u></p> <p>NOTE: <i>Earthing of the Distribution Boards to IET BS7671 Guidance Notes on Earthing & Bonding requirements. Allow in the rates for all circuit labelling. The DB and feeder designations must be implemented with a uniform labelling system.</i></p>				
E1.01.06	Surface mount, 16 Way TPN electrical distribution board with 125A rated copper busbar and with 63A rated 4 Pole MCCB as Main Breaker (Main DB) .	No.	1		
E1.01.07	Recess mount, 6 Way SPN electrical consumer unit with 100A rated copper busbar and with 45A rated 2 Pole MCB as Main Breaker (UPS Distribution Board) .	No.	1		
	TOTAL CARRIED FORWARD.				-

ITEM	DESCRIPTION	UNIT.	QTY.	RATE.	AMOUNT in KES.
	<u>ELECTRICAL DISTRIBUTION continued...</u>				
	TOTAL BROUGHT FORWARD				
E1.01.08	Note: All MCBs specified herein shall be Type C - 6kA MCBs except where stated otherwise. <u>MCBs</u>				
a	10A SP	No.	11		
b	20A SP	No.	20		
c	32A SP	No	6		
d	45A SP	No	1		
e	32A TP	No	2		
f	63A TP	No.	1		
g	Blanking plates for all spare ways.	No	5		
	<u>Meter and Surge Protective Devices</u>				
E1.01.09	Type 1+2 240/415V, 50Hz, 3 Phase - 4 Pole (3P + N) AC Power Surge Protective Device rated for 20kA Nominal Discharge Current (I _n), 12.5kA Impulse Current (I _{Imp}) and 100kA Short Circuit Current (SCCR), complete with temporary overvoltage withstand capability. The SPD shall be in built within the Main DB.	No.	1		
E1.01.10	DITTO but Type 3 240V, 50Hz, 1 Phase - 2 Pole (1P + N) AC Power Surge Protective Device (To be fitted inside the Pool Bar CU)	No.	1		
E1.01.11	100/5A CT, 415V, 50HZ Calibrated Energy Meter as Siemens, ABB or a variant of similar quality and approved. (Provisional)	No	1		
	<u>Uninterruptible Power Supply (UPS) System c/w all accessories</u>				
E1.01.12	3kVA 1 Phase (230V) True - Online Double Conversion Rack Mount UPS c/w automatic bypass and power factor correction, and with LED Display. The UPS shall be rated for 10 minutes back-up time (Mounted in Data Rack provided elsewhere)	No.	1		
E1.01.13	2 Way Splitter Unit for UPS (To Server Clean Power Sockets)	No.	1		
E1.01.14	3 x 2.5 sq.mm PVC insulated copper cable laid in 25 dia. conduits in wall from UPS Unit to Splitter Unit.	Lm	5		
	<u>Earthing and Bonding</u>				
E1.01.15	Allow for earthing and for equipotential earth bonding of ALL exposed metal structures and equipment within the swimming pool area including but not limited to sheet metal ducts, sinks, and any other metal structure not necessarily mentioned. Include in the rates for all earth cables, earth lugs, fixings and all accessories required for the satisfactory execution of the earth bonding installations. Note: All bonding shall be done using 16 sq.mm CPC.	Item	1		
	TOTAL CARRIED TO SUMMARY PAGE.				-

ITEM	DESCRIPTION	UNIT.	QTY.	RATE.	AMOUNT in KES.
	<p><u>BILL NO. 3 ELECTRICAL SERVICES</u></p> <p><u>POWER POINTS WIRING AND INSTALLATIONS</u></p> <p>E1.02.00 <i>Supply and deliver to site materials, fittings and accessories, install, connect-up complete and commission the installation. Include in the rates for supply, installation and connecting up all cables including all required conduits, supports, fixings, sleeves and accessories for power point, install complete all conduits, supports, fixings, sleeves and accessories for voice and data points. Accessories manufacturers shall be of an approved quality, with the brands expected to have been in the Kenyan market for a period of at least 10 Years The reference standard for all small power installations shall be as the latest edition of the IET Wiring Regulations BS 7671</i></p> <p>Note! <i>All fittings shall be subject to inspection and approval before installation.</i></p> <p>Supply and Install the following:</p> <p><u>Sockets, Switches and Plugs</u></p> <p>E1.02.01 13 Amp twin socket outlet plates in <u>white</u> surface finish</p> <p>E1.02.02 13 Amp twin socket outlet plates in <u>red</u> surface finish</p> <p>E1.02.03 15 Amp single socket outlet plates in <u>white</u> surface finish</p> <p>E1.02.04 20A DP switch outlet plate labelled 'Isolator for Fire Alarm' fully compliant with BS 60669-2-4:2005 provisions in <u>white</u> surface finish c/w isolation keyswitch as MK Code No. K4780WHI (For Fire Alarm Panel)</p> <p>E1.02.05 20A DP switch outlet plate with neon indicator in <u>white</u> surface finish</p> <p>E1.02.06 32 Amps (1P+N) IP66 SPN Lockable Rotary Isolator Switch and Face Plate c/w 3 Pin Industrial Plug & Socket for Pool Equipment Plugging.</p> <p>E1.02.07 32 Amps (3P+N+E) IP66 TPN Lockable Rotary Isolator Switch and Face Plate c/w 5 Pin Industrial Plug & Socket.</p> <p><u>Conduits and Wiring</u></p> <p>E1.02.08 13 Amps <i>RING socket outlet points</i> , wired at an average distance of 5 metres point to point, in 3 x 2.5mm² PVC insulated and sheathed single core copper cables drawn in 20mm diameter heavy gauge PVC conduits concealed in walls and surface conduit installations within the ceiling void with all PVC conduit boxes and accessories but excluding the socket outlet face plates .</p> <p>E1.02.09 <i>RADIAL Three Phase Isolator points</i> wired, at an average approximate distance of 40 metres , in 5 x 4 mm² PVC insulated and sheathed single core copper cables , drawn in 32mm diameter heavy gauge PVC conduits concealed in walls/floor/ceiling void with all PVC conduit boxes and accessories but excluding the Isolator.</p> <p>E1.02.10 <i>DP Switch RADIAL outlet points</i> , wired at an average approximate distance of 25 metres in 3 x 2.5 mm² PVC insulated and sheathed single core copper cables drawn in 25mm diameter heavy gauge PVC conduits, concealed in walls/floor/ceiling void with all PVC conduit boxes and accessories but excluding the DP Switch.</p>				
	TOTAL CARRIED FORWARD.				-

ITEM DESCRIPTION	UNIT.QTY.RATE.	AMOUNT in KES.
POWER POINTS WIRING AND INSTALLATIONS continued...		
TOTAL BROUGHT FORWARD		
Conduits and Wiring continued...		
E1.02.11	Single Phase RADIAL Isolator points, wired at an average approximate distance of 30 metres in 3 x 2.5 mm ² PVC insulated and sheathed single core copper cables drawn in 25mm diameter heavy gauge PVC conduits, concealed in walls/floor/ceiling void with all PVC conduit boxes and accessories but excluding the Isolator.	No. 12
E1.02.12	Speaker and Fire Alarm System Points in 25mm diameter heavy gauge PVC conduits concealed in walls and ceiling void, with all PVC conduit boxes and accessories, linking back to designated control/panel stations, but excluding all speakers, controllers and fittings.	No. 20
E1.02.13	Data and Security System points in 25mm diameter heavy gauge PVC conduits concealed in walls and ceiling void, with all PVC conduit boxes and accessories, linking back to designated data cabinet positions, and inclusive of draw wires and blanking plates but excluding all Data and CCTV fittings/equipment.	No. 20
<u>Trunking</u>		
E1.02.14	2 compartment powder coated metal surface trunking, 200mm x 50mm, complete with lids/covers, base unit/main carrier including all manufacturers preformed internal and external angles, couplers and end caps and all cable retainers (Provisional)	Lm 20
E1.02.15	Single module knock outs	No. 6
E1.02.16	Twin Module knock-outs	No. 6
E1.02.17	Flush floor mount Adaptor Box, 200mm x 200mm x 50mm, complete with cable entry knock outs and half thread bushes for interfacing floor cable connections (Provisional).	No. 5
TOTAL CARRIED TO SUMMARY PAGE.		

ITEM DESCRIPTION	UNIT.QTY.RATE.	AMOUNT in KES.
<p><u>BILL NO. 4 ELECTRICAL SERVICES</u> <u>LIGHTING SYSTEM INSTALLATIONS</u></p> <p>E1.03.00 <i>Supply and deliver to site all materials, fittings and accessories. Install, connect-up complete to IEE Regulatory requirements and Electrical Codes of Practice, test and commission the installations. Include in the rates for Supply, installation and connecting complete all cables including all required conduits, supports, fixings, sleeves and accessories.</i></p> <p><i>The recommended light fittings and accessories manufacturers shall be brands that have been in the market for more than 10 Years. Any brands indicated here shall serve only as a quality reference.</i></p> <p><i>The final decision and approval of color temperatures shall be done on site.</i></p> <p><i>All light fittings shall be subject to approval by the Architect and Engineer.</i></p> <p>Special note shall be taken to ensure that:-</p> <p>i) Earth conductors are drawn and terminated to all lighting switch boxes</p> <p>ii) Lighting fittings to be supplied complete with lamps, fixings brackets and accessories.</p> <p>Supply and Install the following:</p> <p><u>Conduits and Wiring</u></p> <p>E1.03.01 Lighting system points wired in 3 x 1.5mm² PVC insulated and sheathed single core copper cables, drawn in cable trays (already provided for) and in 20mm diameter heavy gauge PVC conduits concealed in walls/within the ceiling voids, with links to the raw power distribution board inclusive of all PVC conduit boxes and accessories but excluding switch and light fittings.</p> <p>E1.03.02 ditto but for Emergency Lighting System Points.</p> <p><u>Light Fittings and Accessories</u></p> <p>E1.03.03 600mm x 600mm, 240V, 4000K, 32W Recess mount LED Panel light fittings</p> <p>E1.03.04 IP20 rated 145mm - 160mm dia. 12-14W 4000K LED Downlighter c/w all accessories.</p> <p>E1.03.05 Ditto but IP54 rated LED Downlighter</p> <p>E1.03.06 85mm diameter, 8W LED dimmable downlight in "white" finish. See LEDVANCE Spotlight PRO Ref. SPOT LED AD PRO 8W/3000K FL WT.</p> <p>E1.03.07 1200mm IP65 rated 6500K 2 x 24W LED Bulkhead</p> <p>E1.03.08 Ceiling Suspended Decorative Pendant in metal finish to Architect's specification fitted complete with 7W LED Filament bulb. (Mounted in Gazebo Truss over the Pool Table)</p> <p>E1.03.09 IP65 rated 4000K 70W Floodlight Fitting</p> <p>E1.03.10 Ceiling mounted LED Non-Maintained emergency exit sign with 3 hour emergency back-up duration, self-test function, integrated emergency pack and laser etched acrylic for superior light distribution and appropriate legend (Down, Left or Right) as "OMS" or similar and approved.</p> <p>E1.03.11 3 Watts non-maintained recessed ceiling mount LED emergency lighting fittings as PIERLITE, LED FIREFLY Code No. FFRLED.</p>	<p>No. 52</p> <p>No. 12</p> <p>No. 15</p> <p>No. 18</p> <p>No. 8</p> <p>No. 4</p> <p>No. 1</p> <p>No. 2</p> <p>No. 4</p> <p>No. 5</p> <p>No. 7</p>	<p>-</p>
TOTAL CARRIED FORWARD.		-

ITEM	DESCRIPTION	UNIT.	QTY.	RATE.	AMOUNT in KES.
TOTAL BROUGHT FORWARD					-
Lighting System Continued...					
<u>Switches and Controls</u>					
E1.03.11	2 Gang 1 Way Switch in <i>white surface finish</i> .	No.	5		
E1.03.12	1 Gang 1 Way Switch in <i>white surface finish</i> .	No.	12		
E1.03.13	20A Astronomical Timer Switch for Floodlights	No.	1		
E1.03.14	20A Contactor for above timer switch c/w powder coated surface mount cover to fit both Timer Switch and Contactor (Mounted Inside Pump Room)	No.	1		
E1.03.15	360 Degrees Ceiling Mount Occupancy Sensor (For Stores)	No.	2		
TOTAL CARRIED TO SUMMARY PAGE.					-

ITEM	DESCRIPTION	UNIT.	QTY.	RATE.	AMOUNT in KES.
	<u>BILL NO. 5 ELECTRICAL SERVICES</u>				
	<u>FIRE ALARM SYSTEM INSTALLATIONS</u>				
E1.04.00	<i>Supply and Install all materials, equipment and accessories complete. Install, connect-up complete and commission the installation. Include in the rates for supply of all materials, cables and wiring accessories and connecting-up complete with Fire Tuff FP 200 cables including all conduits surface and concealed in the structure, raceways, supports, fixings, sleeves and necessary materials for the Addressable analog Fire detection and alarm System. The fire alarm system shall comply fully with requirements of NFPA standard 72 for protected premises signaling systems. Allow for any other item not specifically detailed but required for the satisfactory installation and operation of the system. Accessories/equipment MANUFACTURER shall be a reputable brand with more than 10 years in the Kenyan market.</i>				
	<u>Supply and Install the following:</u>				
	<u>Main Fire Alarm Panel</u>				
E1.04.01	Conventional 2 Zone Fire Alarm Control Panel complete with 72 Hour standby battery with integral charger and mains input of 240V A/C and 24V DC operating voltage as MENVIER MF9302 inclusive of testing and commissioning the entire fire alarm system. Allow in the rate for a module to connect it to the Main Campus' Addressable Fire Alarm System.	No.	1		
	<u>Fire Tuff 200 Wiring</u>				
E1.04.02	Smoke detector points wired in 1.5mm ² FIRE TUFF single core copper cables drawn in 25mm diameter heavy gauge conduits concealed in walls and surface conduits installations within the ceiling void with PVC conduits boxes and accessories with links to the ground floor fire alarm panel and excluding break glass - wiring to be done in accordance with zoning requirements.	No.	7		
E1.04.03	Ditto but for Manual Call Points.	No.	3		
E1.04.04	Fire alarm Sounder points wired in 2.5 mm ² FIRE TUFF single core copper cables ditto.	No.	3		
	<u>Fittings and Accessories</u>				
E1.04.05	Conventional fire alarm manual call point as MENVIER MBG914 accessorized with mounting Bezels for MBG Call points as MBGBEZ and MBGHinged Cover as MBGHCC.	No.	3		
E1.04.06	Conventional fire alarm Sounder/Beacon with shallow base-Red as MENVIER MCD524/SB.	No.	3		
E1.04.08	Conventional Photo-thermal Smoke detector complete with base as MENVIER MPT951.	No.	7		
	TOTAL CARRIED TO SUMMARY PAGE.				-

ITEM DESCRIPTION	UNIT.QTY.RATE.	AMOUNT in KES.
<p>BILL NO. 6 ELECTRICAL SERVICES <u>DATA & SECURITY SYSTEM INSTALLATIONS</u></p>		
E1.05.00	<p><i>Supply, install, test and commission complete the security system horizontal structured cabling as detailed in the bills specifications and to the particular requirements of the site. The contractor shall include in his rates for delivery of all materials to the project site, storage, general and specialized labour, test equipment, supports and fixings and all terminations, connectors, fittings and all accessories complete as necessary and required for the satisfactory completion and operation of the data/telephone installations. All cabling work shall be fully compliant to the relevant local and international standards including EIA/TIA and IEC 61156-5 (ISO/IEC 11801) standards for generic cabling in buildings.</i></p> <p>NOTE:- <i>The brands to be supplied MUST be internationally recognized and MUST have been in the market for NOT LESS than TEN (10) years. All equipment supplied/systems installed MUST have a warranty period of not less than 24 months (2 Years). Where applicable, Manufacturers Authorizations Forms/Letters (MAF) MUST be provided for all the Equipment. On licenses, any licenses must be fully owned by the client (one-off Licenses), NO RENEWAL CHARGES. The system softwares provided by the contractor MUST be able to integrate with third party softwares.</i></p> <p>Supply and Install the following:</p>	
E1.05.01	CAT6A STP outlet modules, Single and angled at 45 degrees, c/w face plate with shutter.	No. 4
E1.05.02	CAT6A STP outlet modules, Double and angled at 45 degrees, c/w face plate with shutter.	No. 2
E1.05.03	<p>S/FTP Cat6A cables in 305 meter Roll (<i>Color Codes shall be as Blue for Data & Purple for Security</i>)</p> <p><i>(NOTE: An independent laboratory certification of the cables shall be required prior to any installations of the same on site. The cable provision here shall cater for all Data & CCTV Points)</i></p>	No. 2
E1.05.04	<p>1 Meter Cat6A patch cord for the cabinet end.</p> <p><i>(NOTE: The preferred sheath colors shall be "Blue" for Data & "Purple" for Security/Others)</i></p>	No. 20
E1.05.06	3 Meter Cat6A patch user/workstation.	No. 8
E1.05.07	<p>Allow for all accessories including but not limited to cable bands, joiners, connectors and all accessories including cable labelling materials and all consumables as required for the satisfactory commissioning and operation of the complete data and security Installations.</p>	Item 1
E1.05.08	<p>Allow a rate for labor per point for the installation of <u>data & security points</u> inclusive of cable pulling in conduits and in cable trays (provided elsewhere). Include in the rates for termination to outlet plates and to the patch panel and to the switch equipment.</p>	No. 20
<p>TOTAL CARRIED FORWARD</p>		

ITEM	DESCRIPTION	UNIT.	QTY.	RATE.	AMOUNT in KES.
TOTAL BROUGHT FORWARD					
E1.05.09	Cat6A - 24 Port Rack Mount Patch Panel	No.	2		
E1.05.10	2U 5-Ring Cable Manager	No.	3		
E1.05.11	Wall mounted 18U 600mm x 600mm Data Cabinet as TOTEN or APC. The cabinet shall be complete with 4 No. Fans, 6 Way PDU and Lockable glass panel door.	Item	1		
E1.05.12	16 Port PoE Managed Switch c/w 2 No. SFP Modules fitted complete. <i>See Ubiquiti Edgeswitch as reference.</i>	No.	1		
E1.05.13	Outdoor Dual Band PoE Wireless Access Point with support for 3x3 MIMO and up to 100 Clients. <i>See Ubiquiti UniFi UAP-AC Outdoor as reference.</i>	No.	2		
E1.05.14	Outdoor OM3/4 6 Core Multimode 50/125 Fiber Cable	Lm	200		
E1.05.15	Rack Mount 8 Core Fiber Optic 8 Port Optical Fiber Termination/Distribution Box complete with all necessary LC pigtails, Adapters, Splitters etc. as required for the proper functioning of the data system, and whether included in this specification or not. <i>(Provided for Data Switch and linking to the Main Campus' Data Network)</i>	No.	1		
<u>CCTV System</u>					
E1.05.16	16 Channel IP Network Video Recorder complete with all features including HDMI and VGA Interface, 16 PoE 10/100 Ports, 1920 × 1080, 1280 × 1024, 1280 × 720, 1024 × 768 Resolution, 5Mp (2048 × 1536) / 1080p (1920 × 1080) / 720p (1280 × 720) / D1 (704 × 480) / VGA (640 × 480) / CIF (352 × 240) Resolution, Time/Date, Alarm, VMD & Exact search (accurate to second), Smart search mode, Play, Pause, Stop, Rewind, Fast play, Slow play, Next -le, Previous -le, Next camera, Previous camera, Full screen, Repeat Playback function, 2 SATA ports, 6TB Internal HDD Storage. The NVR MUST be ONVIF compliant.	No.	1		
E1.05.17	4MP IP Indoor Dome Network Camera c/w 4 Megapixel progressive scan CMOS Sensor, Auto (IR) / Color / B/W Day/Night, H.264 / MJPEG Compression, 3 M / 720p (1 ~ 30fps) frame rate, H.264: 32K ~ 8192 Kbps bit rate, Protocol:- IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, Bonjour, Onvif compatible.	No.	2		
E1.05.18	Ditto but Outdoor IP67 rated and complete with wall mounting brackets.	No.	4		
E1.05.19	Outdoor 2MP PTZ Camera complete with wall mounting brackets. <i>See Uniview IPC6222ER-X20(P)-B as reference.</i>	No.	1		
E1.05.20	32 Inch Smart LED Screen for CCTV Monitoring (Mounted in Pool Attendant's Office)	Item	1		
TOTAL CARRIED TO SUMMARY PAGE.					

ITEM	DESCRIPTION	UNIT.	QTY.	RATE.	AMOUNT in KES.
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ELECTRICAL AND IT SERVICES INSTALLATIONS BILL OF QUANTITIES

ITEM	PROJECT COLLECTION PAGE	AMOUNT (IN KES)
BILL NO. 1	PRELIMINARIES AND GENERAL ITEMS	-
BILL NO. 2	ELECTRICAL DISTRIBUTION SYSTEM INSTALLATIONS (Incl. UPS UNIT)	-
BILL NO. 3	POWER POINTS WIRING AND INSTALLATIONS	-
BILL NO. 4	LIGHTING SYSTEM INSTALLATIONS	-
BILL NO. 5	FIRE ALARM SYSTEM INSTALLATIONS	-
BILL NO. 6	DATA & SECURITY SYSTEM	-
	SUB-TOTAL AMOUNT	-
	ADD 16% ALLOWANCE FOR VAT	-
	TOTAL FOR ELECTRICAL AND IT SERVICES	-

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT IN (KSHS).
AC.01.00	<p>AIR CONDITIONING INSTALLATIONS</p> <p>Supply, deliver to site and install, test and commission the complete equipment including for all control panels inclusive of phase failure relays, under and over voltage protection devices, sensors, switches, remote control accessories, fittings, fixings, thermometers, thermostats, gauges, time controls, automatic valves, anti-vibration mounting and insulation. Include in the rates for all condensate drainage pipework and traps complete to collection and drainage point. Include for fire barriers and all or any item not specifically detailed but required for the satisfactory completion of the installation and operation of the systems to the manufacturers specifications. Preferred equipment models:-LG or similar of equal or better quality and approved.</p>				
AC.01.01	<p>Single Split inverter type CEILING CONCEALED air condition equipment, including indoor and outdoor units and treated against rust and corrosion prepared for installation in tropical regions and all supplied inclusive of refrigerant copper pipework, (approximately distance between indoor and outdoor = 15 metres) insulated with `aero flex' insulation between indoor and outdoor unit and R410a gas charge. Include in the rates for all power and control wiring, wired remote controls, fixings and fittings, mounting bracket kits for the indoor unit and accessories. Capacity Rating 3.6kW.</p>	No	1		
AC.01.02	<p><u>Electrical Works</u></p> <p>Supply of Single Phase Monitor / Voltage Surge Protection Device for Outdoor units. Include in the rates for equipment connection to power points (Supplied by others) within a distance of 1 metre.</p>	No.	1		
TOTAL CARRIED TO FORWARD.					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT IN (KSHS).
	BALANCE BROUGHT FORWARD				
	<u>Drainage Pipework</u>				
AC.01.03	Allow for supply and installation of 32mm diameter condensate drainage pipe complete with K-Flex insulation and inclusive of all pipe accessories, hangers, brackets and fixings.	Lm	25		
	<u>Ducting and grilles</u>				
AC.01.04	Supply and install Louvred Face Diffuser, 600mm x 600mm complete with connection plenum box and volume control dampers for supply/ return as "Waterloo DF Core 41" or equal and approved.	No.	4		
AC.01.05	Supply and Install Pre-insulated pal Ducts complete with necessary bends, reducers, transformations, Corner pieces, corner clips/bolts, flanges, self driving screws, gasket tape , sealant, support brackets, hangers/fixtures etc.	SM	10		
AC.01.06	Supply and install 160mm diameter Insulated Flexible Duct as "S&P GSI 160" complete with all hangers, brackets and fixings.	Lm.	12		
TOTAL CARRIED TO SUMMARY PAGE					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT IN (KSHS).
	<u>MECHANICAL VENTILATION SYSTEM FOR WASHROOMS.</u>				
MV1.00	Supply and deliver complete on site of itemized equipment and accessories, assemble complete and install including in the rates for lifting and positioning and allow for the supply of all materials including but not limited to fixings, supports, suspensions, control and power connection to DP switches provided by others, switches and brackets. Allow in the rates for Testing & Commissioning of the mechanical air ventilation system complete inclusive of balancing the air flows to achieve a uniform output at each grille to the satisfactory of the engineer.				
MV1.01	Centrifugal inline Air Extract Fan as S&P TD SILENT series with minimum airflow of 1,200m³/Hr @50Pa , model TD-1300/250 SILENT , or similar of equal or better quality and approved Manufactured for outdoor installation, complete with PIR sensor for fan control, with all brackets, hangers and fixings, anti-vibration mounting supports, rectangular flexible connectors, duct connection clamps and all fixings and accessories necessary for proper mounting of the equipment to required standards.	No.	4		
MV1.02	Ditto but with minimum airflow of 750m³/Hr @50Pa , model TD 800/200 SILENT with a timer for fan control.	No.	1		
MV1.03	Ditto but with minimum airflow of 300m³/Hr @40Pa , model TD 350/125 SILENT with PIR sensor for fan contro	No.	1		
MV1.04	Ditto but with minimum airflow of 160m³/Hr @20Pa , model TD 160/100 SILENT with time for fan control	No.	1		
MV1.05	Extract Louvre as Soler&Palau; GRI-250 complete with fixings.	No.	4		
MV1.06	Extract Louvre as Soler&Palau; GRI-200 complete with fixings.	No.	1		
	TOTAL CARRIED FORWARD				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT IN (KSHS).
	TOTAL BROUGHT FORWARD				
MV1.07	Extract Louvre as Soler&Palau; GRA-125 complete with fixings.	No.	2		
MV1.08	160mm diameter air valve with adjustable central valve for air flow regulation as Soler&Palau Ref# BOC-160 complete with fixed clamps as S&P COF 200, for securing extract duct onto the valve.	No.	6		
MV1.09	200mm diameter air valve with adjustable central valve for air flow regulation as Soler&Palau Ref# BOC-200 complete with fixed clamps as S&P COF 200, for securing extract duct onto the valve.	No.	24		
MV1.10	160mm flexible Aluminium ducting with spiral steel wire frame as Soler&Palau GSA 160 MO , complete with hangers and fixings.	Lm.	12		
MV1.11	200mm flexible Aluminium ducting with spiral steel wire frame as Soler&Palau GSA 200 MO , complete with hangers and fixings.	Lm.	48		
MV1.12	22 SWG Galvanized Ducting complete with necessary bends, reducers, transformations, Corner pieces, corner clips/bolts, flanges, self driving screws, gasket tape , sealant, support brackets, hangers/fixtures etc.	SM	33		
TOTAL CARRIED TO SUMMARY PAGE					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT IN (KSHS).
	<u>HOOD FAN & DUCTING.</u>				
MV2.00	Supply and deliver complete on site of itemised equipment and accessories, assemble complete and install including in the rates for lifting and positioning and allow for the supply of all materials including but not limited to fixings, supports, suspensions, control and power connection to DP switches provided by others, switches and brackets. Allow in the rates for Testing & Commissioning of the mechanical air ventilation system complete inclusive of balancing the air flows to achieve a uniform output at each grille to the satisfactory of the engineer.				
MV2.01	CYLINDRICAL CASED AXIAL FLOW FAN F400-120 with adjustable pitch aerofoil blade, cased axial flow fans designed for smoke extract in fire conditions. Casings formed from rolled sheet steel with a corrosion resistant hot dipped galvanised finish for all models as S&P THGT Series air flow of 6,700m³/hr. @270Pa, Model THGT/2-450-6/22-BLK-1.5kW-F400-3-230/400V-50Hz-IE3 . Or similar of equal or better specifications and complete with, attenuator, exhaust protection guard and flexible connection. (For the Kitchen Hood System).	No.	1		
MV2.02	Complete set of Sound Attenuator as Soler&Palau; Model SIL 450, or similar of equal or better quality and to approval and complete with duct connection accessories, all brackets and fixings.	Pair	1		
MV2.03	Fan control and protection unit complete with IP 54 enclosure start/stop push buttons, phase failure relay, 4P contactor, RYB Lamps and all fixings necessary for its mounting recessed on wall or similar and to approval.	No.	1		
MV2.04	22 SWG Galvanized Ducting complete with necessary bends, reducers, transformations, Corner pieces, corner clips/bolts, flanges, self driving screws, gasket tape , sealant, support brackets, hangers/fixtures etc.	SM	15		
TOTAL CARRIED TO SUMMARY PAGE					

HVAC INSTALLATIONS - SUMMARY PAGE.

ITEM.DESCRPTION		AMOUNT. IN KSH
AC.01.00	AIR CONDITIONING INSTALLATIONS	
MV1.00	MECHANICAL VENTILATION SYSTEM FOR WASHROOMS.	
MV2.00	HOOD FAN & DUCTING.	
MV.02.00	CONTIGENCY	Excluded
	SUB-TOTAL AMOUNT	
	ADD16% ALLOWANCE FOR VAT	
	GRAND TOTAL FOR PROPOSED HVAC INSTALLATIONS.	

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS).
	SANITARYWARE & EQUIPMENT SUPPLY & INSTALLATION.				
P.01.00	Supply the listed sanitary ware items and equipment complete, deliver to the project site, and assemble install. Allow for supply and installation of all fixings, supports and connections to services, control, isolating and non-return valves. Include for supply and installation of all fittings, angle valves and accessories. Allow for any other item required for the satisfactory execution and completion of the installation. The approved ceramic Sanitary ware manufacture shall be "DURAVIT" and Chrome fittings and accessories manufacture shall be "HANSGROHE" or "DOCOL" or as described in the tender bills or similar of equal or better quality and approved.				
P.01.01	W.C Pan as Duravit D-Code ; floor mount, back to wall; 56cm; Model # 21150900002 complete with soft close Seat & Cover Model # 0067390, W.C outlet Connector and inclusive of all fixings and fittings.	No.	6		
P.01.02	Concealed Dual flush valve (4/6L) for WC with square stainless steel face plate, female inlet and outlet and complete with unfertile installation kit (flush assembly) and stainless steel plate all as DOCOL .	No.	6		
P2.01.03	Toilet Paper Dispenser, in stainless steel AISI 304, satin finish as "Mediclinics" PR0789CS and complete with fixings.	No.	6		
P2.01.04	Urinal with Concealed Inlet and Spreader as Duravit D-Code Model #082930.	No.	4		
P2.01.05	Urinal Flush Valve as "DOCOL" Urinal Flush Valve .	No.	4		
P2.01.06	Ceramic Urinal Partition 400mmx 710mm as Duravit D-Code Model number 85000.	No.	4		
P.01.07	Ceramic WHB as Duravit D-Code Ref# 07054500002 complete with Semi-Pedestal Ref# 08571700002 and inclusive of hangers and fixings, 35mm diameter uPVC Anti-syphonage bottle trap with extension pipe to flange and, Chrome plated grid waste.	No.	3		
P.01.08	Ceramic Vanity Basin as Duravit D-Code; 550mm; Model #0339550000 complete with hangers, brackets and fixings and 35mm diameter uPVC Anti-syphon age bottle trap with extension pipe to flange and, Chrome plated grid waste.	No.	5		
TOTAL CARRIED FORWARD.					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS).
	SANITARYWARE & EQUIPMENT SUPPLY & INSTALLATION.				
	Brought Forward.				
P.01.09	Chrome plated Self-closing Push Type Tap 1/2" as DOCOL and inclusive of flexible hose pipe as Cobra C-15-350 and angle valve as Cobra 832-10..	No.	8		
P.01.10	Stainless steel inset kitchen sink Single Bowl Single Drainer as "Franke", size 1015mm x 505mm x 192mm, satin polish finish, complete with grating as Twyfords, complete with sink waste as WF4374CP; uPVC P bottle trap as WF 8483XX with extension pipe to wall; and inclusive of fittings and fixings	No	1		
P.01.11	Chrome plated Sink single lever kitchen mixer with swivel spout 150° as "Hansgrohe Talis Ref# 14870,-000,-800 and inclusive of set of flexible hose pipes as Cobra C-15-350 and set of angle regulating valves as Cobra 832-10.	No	1		
P.01.12	Chrome plated Shower Set Comprising of 2No. Shower Valves complete with concealed mixer, 1No. Ultra-Low flow rate Shower Head complete with water aerator and flow regulator of not more than 6 liters per minute at 80 psi pressure and inclusive of shower Arm all as "HANS GROHE".	No.	12		
P.01.13	Surface mount Soap dish in stainless steel AISI 304, bright finish as "Mediclinics" AI0160C and complete with fixings to approval.	No.	12		
P.01.14	Towel rail, stainless steel AISI 304, bright finish of dimensions, 18x535x66 mm as "MEDICLINICS " Ref# AI0020C or similar of equal or better quality and approved complete with fixings.	No.	12		
P.01.15	Chrome plated double robe hook as VADO ELE-186 103.001.28 or similar and to approval.	No.	12		
P8.01.16	Bevel edged mirror, size 800mm x 600mm x 6mm complete with back pad and chrome dome head screw fixings.	No.	8		
P.01.17	5 Litres undersink Instant water heater 2kW complete with all accessories and fittings necessary for its proper installation .	No	1		
	TOTAL CARRIED TO SUMMARY PAGE.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS).
	<u>WATER DISTRIBUTION SYSTEM (IN CPVC PIPING AND ACCESSORIES)</u>				
P.02.00	<p>Supply, install, test and commission the water distribution system in ASTM D2846 CPVC piping to conform to the requirements of B.S 6700 and to the particular requirements of the site. Each room to be installed with isolation valve. Include for all pipe brackets, hangers and fixings as per pipe manufacturer's recommended spacing. Allow for any other item required for the satisfactory execution, completion and operation of the installation.</p> <p>Allow in the rates for all pipe fittings and accessories of the same manufacture including but not limited to reducer bushings, transition bushings, transition couplings, reducer couplings, brass couplings, Tees, reducer Tees, elbows, adaptors, brass FPT Tees, brass FPT elbows and brass male adaptors all as required for the complete the cold water distribution system.</p>				
P.02.01	50mm diameter inclusive of all connectors, adaptors, supports and valves installed in walls, floors, ceilings and ducts from the existing plumbing system valve within the kitchen area to kitchen sinks, wash hand basins, and WCs as detailed in the drawings.	Lm	180		
P.02.02	Ditto but 32mm diameter	Lm	90		
P.02.03	Ditto but 25mm diameter	Lm	40		
P.02.04	Ditto but 20mm diameter	Lm	20		
P.02.05	25mm diameter inclusive of all connectors, adaptors, supports and all accessories, installed in walls, floors, ceilings and ducts from the Hot Water Storage Tank to the Dishwasher and Selected kitchen sinks as detailed in the drawings.	Lm.	20		
P.02.06	Ditto but 20mm diameter	Lm	30		
P.02.07	Brass Gate Valve, 50mm diameter as "Cobra" 1002/125-25.	No.	3		
P.02.08	Ditto but 32mm diameter.	No.	2		
P.02.09	Ditto but 25mm diameter.	No.	2		
TOTAL CARRIED TO SUMMARY PAGE.					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS).
	SOIL AND WASTE DRAINAGE SYSTEM (uPVC PIPING)				
P.03.00	Supply, install, test and commission the installation in Heavy Duty UPVC pipework; grey for the internal above ground system and golden brown for the buried system all complying to BS 5750 quality system of manufacture and to BS 5572, BS 4515 and BS 5255 and to the particular condition and requirements of the site. The manufacturer's pipe jointing recommendations shall be fully complied with. Allow in the rates for all necessary pipe fittings and accessories of the same manufacture including but not limited to adaptors, connectors, Tees, reducers, elbows, rodding access points, plugs and all pipe brackets, hangers and fixings as required for the satisfactory execution of the work and efficient completion and operation of the soil and waste drainage system.				
P.03.01	32mm diameter.	Lm	29		
P.03.02	40mm diameter.	Lm	10		
P.03.03	50mm diameter.	Lm	65		
P.03.04	75mm diameter.	Lm	55		
P.03.05	110mm diameter.	Lm	135		
P.03.06	150mm x 150mm Floor trap complete with stainless steel access cover with drainage holes.	No.	18		
P.03.08	110mm diameter Terrain 18.49 'P' Trap Spigot outlet gulley traps complete with 300mm x 300mm masonry walling water proof plaster finish internally and purpose made aluminium or galvanised frame complete with precast concrete cover to approval	No.	6		
P.03.09	Allow for linking the new soil and waste drainage system into the existing system complete inclusive of testing.	Item.	1		
	TOTAL CARRIED TO SUMMARY PAGE.				

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS).
	<u>WATER STORAGE TANK INSTALLATION</u>				
P.04.00	Supply and install all the listed materials, equipment inclusive of all fittings, fixings and supports. Include for isolating valves and all fabrication works. Allow for testing and commssioning of the complete works.				
P.04.01	Supply and install, test and commission PVC rotary moulded PVC rectangular water storage tank of capacity 2,500 litres as "Roto" or "Ken tank". Allow in the rates for 25mm diameter (internal orifice) ball valve, Brass Inline Strainers and all inlet, outlet, washout and overflow pipe connections complete with isolating valves and accessories.	No.	3		
P.04.02	Supply and install Brass Gate Valve, 40mm diameter as "Cobra" 1002/125-15 (For Outlet and Wash- out lines).	No.	6		
P.04.03	Supply and install Brass Inline Strainer, 40mm diameter as "Cobra" 1050-32.	No.	3		
P.04.04	Supply and install, test and commision Cold Water system Pressurization Pumpset as "GRUNDFOS CM 3-6A pressure pump" Booster set (duty and standby) with a control panel GRUNDFOS PM1 for the set of pumps to work interchangeably and incoperating thermal protection against motor overload and dry-run protection with auto-restart.	Set	3		
P.04.05	Supply and install, test and commision Cold Water system Pressurization Pumpset as "GRUNDFOS MQ 3-45 pressure pump" Booster set (duty and standby) with a control panel for the set of pumps to work interchangeably and incoperating thermal protection against motor overload and dry-run protection with auto-restart.	Set	1		
P.04.06	Supply and install 40mm PPR PN 25 piping for pump connection, overflow and washout complete with all pipe fittings including but not limited to tees, elbows, adaptors and couplings (Provisional).	Lm.	80		
TOTAL CARRIED TO SUMMARY PAGE.					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS).
	SOLAR WATER HEATING SYSTEM.				
P.05.00	Supply all materials, install, test and commission In-Direct Solar Water Heating System comprising of hot water storage tank, Flat collector panels, Circulation pumps, mounting bracket, immersion heater elements, pressure and high pressure release valves, thermostatic valve with timer switch and all connections and accessories for installation into a pressurized water system. Preferred equipment Manufacturer / model as Solarhart or Haier and to the engineer's approval.				
	Specific Items as follows:				
P.05.01	Flat Collector Panels of 2m ² gross area, in aluminium absorber sheet material with 4mm tempered glass cover material, 24g galvanized iron frame material, rock wool insulation and copper riser pipes and inclusive of all necessary brass interconnection accessories. Allow in the rates for Galvanized Iron Mounting frame.	No.	4		
P.05.02	300 Liters Hot Water Storage tanks in 2mm thick G 316 Steel inner tank material, 50mm polyurethane insulation, copper outer tank, heat exchanger, and complete with automatic air vent and pressure / temperature release valve.	No.	2		
P.05.03	Hot Water Primary Circulation Pump Set as "Grundfos" Model UPA 120 complete with all wiring.	No.	2		
P.05.04	Solar Control Unit complete with all wiring.	No.	2		
P.05.05	25mm GI, Class "C" pipe work between Solar Collector Panels and Storage Tanks and upto 5 meters after the collector panels outlet.	Lm.	20		
P.05.06	32mm diameter PN 25 PPR/Aluminium/PPR Piping inclusive of all connectors, adaptors, supports and valves installed in walls, floors, ceilings and ducts from the Solar system to the kitchen sinks all as detailed in the drawings.	Lm.	60		
TOTAL CARRIED TO SUMMARY PAGE.					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS).
	<u>FIRE FIGHTING EQUIPMENT.</u>				
P.06.00	Supply all the listed materials and equipment complete, and install the Fire Fighting System.				
P.06.01	Supply, deliver to site and install potable fire extinguishers to comply with BS 1288, BS 3465 and BS 5423 and as Nimrod or similar and approved.				
A	Carbon Dioxide - 5kg	No.	3		
B	Dry Powder - 9kg	No.	3		
C	Fire Blanket	No.	1		
TOTAL CARRIED TO SUMMARY PAGE.					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS).
<u>SUMMARY PAGE.</u>					
P.01.00	SANITARYWARE & EQUIPMENT SUPPLY & INSTALLATION.				
P.02.00	WATER DISTRIBUTION SYSTEM (IN CPVC PIPING AND ACCESSORIES)				
P.03.00	SOIL AND WASTE DRAINAGE SYSTEM (uPVC PIPING)				
P.04.00	WATER STORAGE TANK INSTALLATION				
P.05.00	SOLAR WATER HEATING SYSTEM.				
P.06.00	FIRE FIGHTING EQUIPMENT.				
	SUB - TOTAL AMOUNT				
	ADD 16% ALLOWANCE FOR VAT				
	GRAND TOTAL FOR PLUMBING & DRAINAGE INSTALLATIONS.				-

SWIMMING POOL EQUIPMENTS AND PIPEWORK

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
P.01.00	<u>EQUIPMENT AND ACCESSORIES</u>				
P.01.01	Dayliff DX900 pressure sand filters each supplied complete with media and multi-port valve rated at 32m ³ /hr.	No	2		
P.01.02	DAB Euroswim SPP200 end suction pump cross-coupled to a 1.5kw motor and an integral line strainer. Each pump is rated at 28m ³ /hr and supplied complete with an AVS for protection against unstable mains power.	No	2		
P.01.03	DOL starter.	No	2		
P.01.04	Certikin eyeball inlets c/w water bar.	No	12		
P.01.05	Certikin vacuum point c/w water bar.	No	1		
P.01.06	75mm class D suction pipe c/w water bar.	No	1		
P.01.07	Balance tank down and suction pipe.	No	3		
P.01.08	245mm decklevel channel grilles.	No	60		
P.01.09	300x300 stainless steel suction grating.	No	1		
P.01.10	Aqua Specktre light (Blue).	No	4		
P.01.11	Certikin underwater lights deck boxes.	No	4		
P.01.12	240/12V lights Single transformer for one light.	No	4		
P.01.13	4 steps stainless steel ladder for the deep end.	No	1		
P.01.14	3 steps stainless steel ladder for the shallow end.	No	1		
P.01.15	2 steps stainless steel ladder for the shallow end.	No	1		
P.01.16	BSV Evobasic 35A SC chlorinator.	No	1		
P.01.17	Life saving buoy.	No	1		
P.01.18	Pedrollo Top 2 0.37kw pump.	No	1		
P.01.19	Chemicals start up kit comprising of 40kg chlorine 65%, 40kg chlorine 90%, 120 litres pH minus, 5litres magic touch, 5litres pool water sparkle and 23bags of pool salt.	No	1		
P.01.20	Pool cleaning kit comprising of a vacuum head, 15m vacuum hose, hose connector, 5m aluminium handle, a leaf rake, a leaf skimmer, a floor brush, an algae brush and a pool water test kit.	No	1		
TOTAL CARRIED TO SUMMARY PAGE					

SWIMMING POOL EQUIPMENTS AND PIPEWORK

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
P.02.00	<u>PIPEWORK</u>				
P.02.01	110mm class D PVC pipes	LM	80		
P.02.02	75mm class D PVC pipes	LM	90		
P.02.03	63mm class D PVC pipes	LM	75		
P.02.04	50mm class D PVC pipes	LM	15		
P.02.05	32mm class D PVC pipes	LM	10		
P.02.06	110 x 75mm PVC reducers	No	5		
P.02.07	75 x 63mm PVC reducers	No	5		
P.02.08	110mm PVC elbows	No	5		
P.02.09	75mm PVC elbows	No	15		
P.02.10	63mm PVC elbows	No	10		
P.02.11	50mm PVC elbows	No	5		
P.02.12	32mm PVC elbows	No	3		
P.02.13	63mm PVC equal tees	No	10		
P.02.14	75mm PVC equal tees	No	5		
P.02.15	110mm PVC equal tees	No	5		
P.02.16	50mm PVC tees	No	5		
P.02.17	75mm PVC ball valve	No	5		
P.02.18	63mm PVC ball valve	No	1		
P.02.19	2½ balancetank foot valve	No	1		
P.02.20	63 x 50mm PVC reducing sockets	No	5		
P.02.21	4mm ug 2-core cable	LM	120		
P.02.22	Installation sundries	ITEM	1		
P.02.23	Field labour & transport	ITEM	1		
TOTAL CARRIED TO SUMMARY PAGE					

SWIMMING POOL EQUIPMENTS AND PIPEWORK

ITEM	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT IN KSHS.
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P.01.00 **EQUIPMENT AND ACCESSORIES**

P.02.00 **PIPEWORK**

SUB TOTAL AMOUNT

ADD 16% VAT

**GRAND TOTAL FOR SWIMMING POOL EQUIPMENT,
PLUMBING AND DRAINAGE INSTALLATIONS**

PROPOSED SWIMMING POOL FACILITY AT KESRA SCHOOL MOMBASA

FOR KENYA REVENUE AUTHORITY

GRAND SUMMARY

ITEM	DESCRIPTION	TENDERER'S AMOUNT KSHS	OFFICIAL USE ONLY KSHS
1	Preambles & Pricing Notes		
2	Bill No. 1 - Particular Preliminaries	-	
3	Bill No. 2 - General Preliminaries	-	
4	Bill No. 3 - Swimming Pool	-	
5	Bill No. 4 - Changing Rooms	-	
6	Bill No. 5 - Pool Bar	-	
7	Bill No. 6 - Gazebos	-	
8	Bill No. 7 - External Works	-	
9	Bill No. 8 - Electrical & IT Services Installations	-	
10	Bill No. 9 - Mechanical Ventilation	-	
11	Bill No. 10 - Plumbing & Drainage Installations	-	
12	Bill No. 11 - Swimming Pool Equipment & Pipework	-	
SUB - TOTAL AMOUNT		-	
13	Provide Kenya Shillings One Million Five Hundred Thousand Only (Kshs 1,500,000.00) for Contingencies		
TOTAL CARRIED TO FORM OF TENDER		-	

Amount in words:.....

.....

Tenderer's Name:.....

Address:.....

Signature:.....

Rubber stamp:.....

Date:.....

Witness's name:.....

Signature:.....

Address:.....

Date:.....