



# KENYA UTALII COLLEGE

## PROPOSED CONSTRUCTION OF INDIVIDUAL TRAINING KITCHEN AT KENYA UTALII COLLEGE

W.I.P ITEM NO. D117 NB/NB/1802 JOB NO. 10489A

### TENDER SPECIFICATIONS AND BILLS OF QUANTITIES FOR

VOLUME 1 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF KITCHEN  
EQUIPMENT AND LIQUIFIED PETROLEUM GAS INSTALLATION WORKS

VOLUME 2 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF COLD STORAGE  
ROOMS & REFRIGERATION INSTALLATION WORKS

VOLUME 3 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF WATER  
HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING  
INSTALLATION WORK

## VOLUME 1 OF 3

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## INVITATION TO TENDER

PROCURING ENTITY: KENYA UTALII COLLEGE

**CONTRACT NAME AND DESCRIPTION:** PROPOSED CONSTRUCTION OF INDIVIDUAL TRAINING KITCHEN AT KENYA UTALII COLLEGE;

VOLUME 1 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF KITCHEN EQUIPMENT AND LIQUIFIED PETROLEUM GAS INSTALLATION WORKS

VOLUME 2 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF COLD STORAGE ROOMS & REFRIGERATION INSTALLATION WORKS

VOLUME 3 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF WATER HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING INSTALLATION WORKS

1. The *Kenya Utalii College* invites sealed tenders for the *Proposed Construction of Individual Training Kitchen at Kenya Utalii College;*  
*Volume 1 Of 3: Supply, Delivery, Testing and Commissioning of Kitchen Equipment and Liquified Petroleum Gas Installation Works*  
*Volume 2 Of 3: Supply, Delivery, Testing and Commissioning of Cold Storage Rooms & Refrigeration Installation Works*  
*Volume 3 Of 3: Supply, Delivery, Testing and Commissioning of Water Harvesting, Water Reticulation, Water Tanks and Solar Water Heating Installation Works*
2. Tendering will be conducted under open competitive method National using a standardized tender document. Tendering is open to all qualified and interested Tenderers.
3. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours of *0900 to 1700 hours* at the address given below.
4. A complete set of tender documents may be purchased or obtained by interested tenders upon payment of a non-refundable fees of Kshs. 1,000/= in cash or Banker's Cheque and payable to the address given below. Tender documents may be obtained electronically from the Website [utalii.ac.ke](http://utalii.ac.ke) Tender documents obtained electronically will be free of charge.
5. Tender documents may be viewed and downloaded for free from the website [utalii.ac.ke](http://utalii.ac.ke). Tenderers who download the tender document must forward their particulars immediately to (*as per tender advertisement*) to facilitate any further clarification or addendum.
6. Tenders shall be quoted be in Kenya Shillings and shall include all taxes. Tenders shall remain valid for 126 days from the date of opening of tenders.
7. All Tenders must be accompanied by *tender Security of Kshs. 1,500,000.00*
8. The Tenderer shall chronologically serialize all pages of the tender documents submitted.
9. Completed tenders must be delivered to the address below on or before *fas*

*per tender advertisement*]. Electronic Tenders *will not be* permitted.

10. Tenders will be opened immediately after the deadline date and time specified above or any dead line date and time specified later. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.

11. Late tenders will be rejected.

12. The addresses referred to above are:

**A. Address for obtaining further information and for purchasing tender documents**

- (1) Name of Procuring Entity: **KENYA UTALII COLLEGE**
- (2) Physical address for hand Courier Delivery to an office or Tender Box (City, Street Name, Building, Floor Number and Room). *as per tender advertisement*
- (3) Postal Address: *(as per tender advertisement)*

**B. Insert name, telephone number and e-mail address of the officer to be contacted. *(as per tender advertisement)***

**C. Address for Submission of Tenders.**

- 1) Name of Procuring Entity: **KENYA UTALII COLLEGE**
- 2) Postal Address (include designation of Officer to be attentioned). *(as per tender advertisement)*
- 3) Physical address for hand Courier Delivery to an office or Tender Box (City, Street Name, Building, Floor Number and Room). *(as per tender advertisement)*

**D. Address for Opening of Tenders.**

- 4) Name of Procuring Entity. **KENYA UTALII COLLEGE**
- 1) Physical address for the location (City, Street Name, Building, Floor Number and Room). *(as per tender advertisement)*

**THE PRINCIPAL & CHIEF EXECUTIVE OFFICER,  
KENYA UTALII COLLEGE**

Name \_\_\_\_\_  
*(Official of the Procuring Entity issuing the invitation)*

Designation

Signature

Date

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## **PART1: TENDERING PROCEDURES**

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## SECTION I - INSTRUCTIONS TO TENDERERS

### GENERAL PROVISIONS

#### 1.0 Scope of tender

- 1.1 The Procuring Entity as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The name, identification, and number of lots (contracts) of this Tender Document are specified in the TDS.
- 1.2 Throughout this tendering document:
- a) The term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, including if specified in the TDS, distributed or received through the electronic-procurement system used by the Procuring Entity) with proof of receipt;
  - b) if the context so requires, “singular” means “plural” and vice versa;
  - c) “Day” means calendar day, unless otherwise specified as “Business Day”. A Business Day is any day that is an official working day of the Procuring Entity. It excludes official public holidays.

#### 2.0 Fraud and corruption

- 2.1 The Procuring Entity requires compliance with the provisions of the Public Procurement and Asset Disposal Act, 2015, Section 62 “Declaration not to engage in corruption”. The tender submitted by a person shall include a declaration that the person shall not engage in any corrupt or fraudulent practice and a declaration that the person or his or her sub-contractors are not debarred from participating in public procurement proceedings.
- 2.2 The Procuring Entity requires compliance with the provisions of the Competition Act 2010, regarding collusive practices in contracting. Any tenderer found to have engaged in collusive conduct shall be disqualified and criminal and/or civil sanctions may be imposed. To this effect, Tenders shall be required to complete and sign the “Certificate of Independent Tender Determination” annexed to the Form of Tender.
- 2.3 Tenderers shall permit and shall cause their agents (whether declared or not), subcontractors, sub-consultants, service providers, suppliers, and their personnel, to permit the Procuring Entity to inspect all accounts, records and other documents relating to any initial selection process, pre-qualification process, tender submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Procuring Entity.
- 2.4 Unfair Competitive Advantage - Fairness and transparency in the tender process require that the firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender. To that end, the Procuring Entity shall indicate in the **Data Sheet** and make available to all the firms together with this tender document all information that would in that respect give such firm any unfair competitive advantage over competing firms.

#### 3.0 Eligible tenderers

- 3.1** A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.8, or an individual or any combination of such entities in the form of a joint venture (JV) under an existing agree mentor with the intent to enter in to such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender. The maximum number of JV members shall be specified in the **TDS**.
- 3.2** Public Officers of the Procuring Entity, their Spouses, Child, Parent, Brothers or Sister. Child, Parent, Brother or Sister of a Spouse, their business associates or agents and firms/organizations in which they have a substantial or controlling interest shall not be eligible to tender or be awarded a contract. Public Officers are also not allowed to participate in any procurement proceedings.
- 3.3** A Tenderer shall not have a conflict of interest. Any tenderer found to have a conflict of interest shall be disqualified. A tenderer may be considered to have a conflict of interest for the purpose of this tendering process, if the tenderer:
- a) Directly or indirectly controls, is controlled by or is under common control with another tenderer;
  - b) Receives or has received any director indirect subsidy from another tenderer;
  - c) Has the same legal representative as another tenderer;
  - d) Has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process;
  - e) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods or works that are the subject of the tender;
  - f) Any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as a consultant for Contract implementation;
  - g) Would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the contract specified in this Tender Document;
  - h) Has a close business or personal relationship with senior management or professional staff of the Procuring Entity who has the ability to influence the bidding process and:
    - i) Are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract; or

- ii) May be involved in the implementation or supervision of such Contract unless the conflicts teeming from such relationship has been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.
- 3.4** A tenderer shall not be involved in corrupt, coercive, obstructive or fraudulent practice. A tenderer that is proven to have been involved in any of these practices shall be automatically disqualified
- 3.5** A Tenderer (either individually or as a JV member) shall not participate in more than one Tender, except for permitted alternative tenders. This includes participation as a subcontractor in other Tenders. Such participation shall result in the disqualification of all Tenders in which the firm is involved. Members of a joint venture may not also make an individual tender, be a sub-contractor in a separate tender or be part of another joint venture for the purposes of the same Tender. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender.
- 3.6** A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT3.9. Tenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed sub-contractors or sub-consultants for any part of the Contract including related Services.
- 3.7** A Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA [www.ppra.go.ke](http://www.ppra.go.ke).
- 3.8** A Tenderer that is a state-owned enterprise or a public institution in Kenya may be eligible to tender and be awarded Contract(s) only if it is determined by the Procuring Entity to meet the following conditions, i.e. if it is:
  - i) A legal public entity of Government and/or public administration,
  - ii) financially autonomous and not receiving any significant subsidies or budget support from any public entity or Government, and;
  - (iii) operating under commercial law and vested with legal rights and liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.
- 3.9** Firms and individuals shall be ineligible if their countries of origin are:
  - (a) As a matter of law or official regulations, Kenya prohibits commercial relations with that country;
  - (b) By an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods or

contracting of works or services from that country, or any payments to any country, person, or entity in that country.

A tenderer shall provide such documentary evidence of eligibility satisfactory to the Procuring Entity, as the Procuring Entity shall reasonably request.

- 3.10** Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, local sub-contracts and labor) from citizen suppliers and contractors. To this end, a foreign tenderer shall provide in its tender documentary evidence that this requirement is met. Foreign tenderers not meeting this criterion will be automatically disqualified. Information required to enable the Procuring Entity determine if this condition is met shall be provided for this purpose in *“SECTION II - EVALUATION AND QUALIFICATION CRITERIA, Item 9”*.
- 3.11** Pursuant to the eligibility requirements of ITT 3.10, a tender is considered a foreign tenderer, if it is registered in Kenya and has less than 51 percent ownership by nationals of Kenya and if it does not subcontract to foreign firms or individuals more than 10 percent of the contract price, excluding provisional sums. JVs are considered as foreign tenderers if the individual member firms registered in Kenya have less 51 percent ownership by nationals of Kenya. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.
- 3.12** The National Construction Authority Act of Kenya requires that all local and foreign contractors be registered with the National Construction Authority and be issued with a Registration Certificate before they can undertake any construction works in Kenya. Registration shall not be a condition for tender, but it shall be a condition of contract award and signature. A selected tenderer shall be given opportunity to register before such award and signature of contract. Application for registration with National Construction Authority may be accessed from the website [www.nca.go.ke](http://www.nca.go.ke).
- 3.13** The Competition Act of Kenya requires that firms wishing to tender as Joint Venture undertakings which may prevent, distort or lessen competition in provision of services are prohibited unless they are exempt in accordance with the provisions of Section 25 of the Competition Act, 2010. JVs will be required to seek for exemption from the Competition Authority. Exemption shall not be a condition for tender, but it shall be a condition of contract award and signature. A JV tenderer shall be given opportunity to seek such exemption as a condition of award and signature of contract. Application for exemption from the Competition Authority of Kenya may be accessed from the website [www.cak.go.ke](http://www.cak.go.ke).
- 3.14** A Kenyan tenderer shall be eligible to tender if it provides evidence of having fulfilled his/her tax obligations by producing valid tax compliance certificate or tax exemption certificate issued by the Kenya Revenue Authority.
- 4.0 Eligible goods, equipment, and services**
- 4.1** Goods, equipment and services to be supplied under the Contract may have their origin in any country that is not ineligible under ITT 3.9. At

the Procuring Entity's request, Tenderers may be required to provide evidence of the origin of Goods, equipment and services.

- 4.2 Any goods, works and production processes with characteristics that have been declared by the relevant national environmental protection agency or by other competent authority as harmful to human beings and to the environment shall not be eligible for procurement.

**5.0 Tenderer's responsibilities**

- 5.1 The tenderer shall bear all costs associated with the preparation and submission of his/her tender, and the Procuring Entity will in no case be responsible or liable for those costs.

- 5.2 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the Site of the Works and its surroundings and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be the tenderer's own expense.

- 5.3 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter upon its premises and lands for the purpose of such visit. The Tenderer shall indemnify the Procuring Entity against liability arising from death or personal injury, loss of or damage to property, and any other losses and expenses incurred as a result of the examination and inspection.

- 5.4 The tenderer shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including charts, as necessary or required.

**B. CONTENTS OF TENDER DOCUMENTS**

**6.0 Sections of Tender Document**

- 6.1 The tender document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT 10.

**PART 1: Tendering Procedures**

Section I – Instructions to Tenderers  
Section II – Tender Data Sheet (TDS)  
Section III- Evaluation and Qualification Criteria  
Section IV – Tendering Forms

**PART 2: Works' Requirements**

Section V - Bills of Quantities  
Section VI - Specifications  
Section VII - Drawings

**PART 3: Conditions of Contract and Contract Forms**

**Section VIII - General Conditions (GCC)**  
Section IX - Special Conditions of Contract  
Section X- Contract Forms

- 62 The Invitation to Tender Notice issued by the Procuring Entity is not part of the Contract documents. Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of a pre-arranged site visit and those of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 10. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.
- 63 The Tenderer is expected to examine all instructions, forms, terms, and specifications in the Tender Document and to furnish with its Tender all information and documentation as is required by the Tender document.
- 70 **Clarification of Tender Document, Site Visit, Pre-tender Meeting**
- 71 A Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address specified in the **TDS** or raise its enquiries during the pre-Tender meeting if provided for in accordance with ITT 7.2. The Procuring Entity will respond in writing to any request for clarification, provided that such request is received no later than the period specified in the **TDS** prior to the deadline for submission of tenders. The Procuring Entity shall forward copies of its response to all tenderers who have acquired the Tender documents in accordance with ITT 7.4, including a description of the inquiry but without identifying its source. If so specified in the **TDS**, the Procuring Entity shall also promptly publish its response at the web page identified in the **TDS**. Should the clarification result in changes to the essential elements of the Tender Documents, the Procuring Entity shall amend the Tender Documents following the procedure under ITT 8 and ITT 22.2.
- 72 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the site(s) of the required contracts and obtain all information that may be necessary for preparing a tender. The costs of visiting the Site shall be at the Tenderer's own expense. The Procuring Entity shall specify in the **TDS** if a pre-arranged Site visit and or a pre-tender meeting will be held, when and where. The Tenderer's designated representative is invited to attend a pre-arranged site visit and a pre-tender meeting, as the case may be. The purpose of the site visit and the pre-tender meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 73 The Tenderer is requested to submit any questions in writing, to reach the Procuring Entity not later than the period specified in the **TDS** before the meeting.
- 74 Minutes of a pre-arranged site visit and those of the pre-tender meeting, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents. Minutes shall not identify the source of

the questions asked.

**75** The Procuring Entity shall also promptly publish anonymized (*no names*) Minutes of the pre-arranged site visit and those of the pre-tender meeting at the web page identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-arranged site visit and those of the pre-tender meeting shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT 8 and not through the minutes of the pre-Tender meeting. Non-attendance at the pre-arranged site visit and the pre-tender meeting will not be a cause for disqualification of a Tenderer.

#### **8.0 Amendment of Tender Documents**

**8.1** At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tender Documents by issuing addenda.

**8.2** Any addendum issued shall be part of the Tender Documents and shall be communicated in writing to all who have obtained the Tender Documents from the Procuring Entity. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's website in accordance with ITT 7.5.

**8.3** To give Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity should extend the dead line for the submission of Tenders, pursuant to ITT 22.2.

### **C. PREPARATION OF TENDERS**

#### **9. Cost of Tendering**

The Tenderer shall bear all costs associated with the preparation and submission of its Tender, and the Procuring Entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

#### **10.0 Language of Tender**

The Tender, as well as all correspondence and documents relating to the tender exchanged by the tenderer and the Procuring Entity, shall be written in the English Language. Supporting documents and printed literature that are part of the Tender may be in another language provided they are accompanied by an accurate and notarized translation of the relevant passages into the English Language, in which case, for purposes of interpretation of the Tender, such translation shall govern.

#### **11.0 Documents Comprising the Tender**

**11.1** The Tender shall comprise the following:

- a) Form of Tender prepared in accordance with ITT 12;
- b) Schedules including priced Bill of Quantities, completed in accordance with ITT 12 and ITT 14;

- c) Tender Security or Tender-Securing Declaration, in accordance with ITT 19.1;
- d) Alternative Tender, if permissible, in accordance with ITT 13;
- e) **Authorization:** written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 20.3;
- f) **Qualifications:** documentary evidence in accordance with ITT 17 establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
- g) **Conformity:** a technical proposal in accordance with ITT 16;
- h) Any other document required in the **TDS**.

**11.2** In addition to the requirements under ITT 11.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Tender shall be signed by all members and submitted with the Tender, together with a copy of the proposed JV Agreement. Change of membership and conditions of the JV prior to contract signature will render the tender liable for disqualification.

## **12.0 Form of Tender and Schedules**

- 12.1 The Form of Tender and Schedules, including the Bill of Quantities, shall be prepared using the relevant forms furnished in Section IV, Tendering Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITT 20.3. All blank spaces shall be filled in with the information requested. The Tenderer shall chronologically serialize all pages of the tender documents submitted.
- 12.2 The Tenderer shall furnish in the Form of Tender information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Tender.

## **13. Alternative Tenders**

- 13.1 Unless otherwise specified in the TDS, alternative Tenders shall not be considered.
- 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the **TDS**, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.
- 13.3 Except as provided under ITT 13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Tenderer with the Winning Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.



13.4 When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the **TDS**, as will the method for their evaluating, and described in Section VII, Works' Requirements.

#### **14.0 Tender Prices and Discounts**

14.1 The prices and discounts (including any price reduction) quoted by the Tenderer in the Form of Tender and in the Bill of Quantities shall conform to the requirements specified below.

14.2 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Procuring Entity. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Tender, and provided that the Tender is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Tenderers will be added to the Tender price and the equivalent total cost of the Tender so determined will be used for price comparison.

14.3 The price to be quoted in the Form of Tender, in accordance with ITT 12.1, shall be the total price of the Tender, including any discounts offered.

14.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 12.1.

14.5 It will be specified in the **TDS** if the rates and prices quoted by the Tenderer are or are not subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, except in cases where the contract is subject to fluctuations and adjustments, not fixed price. In such a case, the Tenderer shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Procuring Entity may require the Tenderer to justify its proposed indices and weightings.

14.6 Where tenders are being invited for individual lots (contracts) or for any combination of lots (packages), tenderers wishing to offer discounts for the award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 14.4, provided the Tenders for all lots (contracts) are opened at the same time.

14.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of Tenders, shall be included in the rates and prices and the total Tender Price submitted by the Tenderer.

## **15.0 Currencies of Tender and Payment**

- 15.1** The currency (ies) of the Tender and the currency (ies) of payments shall be the same.
- 15.2** Tenderers shall quote entirely in Kenya Shillings. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya shillings.
- a) A Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya (referred to as “the foreign currency requirements”) shall (if so allowed in the **TDS**) indicate in the Appendix to Tender the percentage(s) of the Tender Price (excluding Provisional Sums), needed by the Tenderer for the payment of such foreign currency requirements, limited to no more than two foreign currencies.
  - b) The rates of exchange to be used by the Tenderer in arriving at the local currency equivalent and the percentage(s) mentioned in (a) above shall be specified by the Tenderer in the Appendix to Tender and shall be based on the exchange rate provided by the Central Bank of Kenya on the date 30 days prior to the actual date of tender opening. Such exchange rate shall apply for all foreign payments under the Contract.
- 15.3** Tenderers may be required by the Procuring Entity to justify, to the Procuring Entity's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Schedule of Adjustment Data in the Appendix to Tender are reasonable, in which case a detailed breakdown of the foreign currency requirements shall be provided by Tenderers.

## **16.0 Documents Comprising the Technical Proposal**

The Tenderer shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Tender Forms, and sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

## **17.0 Documents Establishing the Eligibility and Qualifications of the Tenderer**

- 17.1** Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT 4.
- 17.2** In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract the Tenderer shall provide the information requested in the corresponding information sheets included in Section IV, Tender Forms.
- 17.3** If a margin of preference applies as specified in accordance with ITT 33.1, national tenderers, individually or in joint ventures, applying for eligibility for national preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.
- 17.4** Tenderers shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a particular contractor or group of contractors qualifies for a margin of preference. Further the information will enable the

Procuring Entity identify any actual or potential conflict of interest in relation to the procurement and/or contract management processes, or a possibility of collusion between tenderers, and thereby help to prevent any corrupt influence in relation to the procurement process or contract management.

- 17.5** The purpose of the information described in **ITT 17.4** above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by the Procuring Entity as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.
- 17.6** The Tenderer shall provide further documentary proof, information or authorizations that the Procuring Entity may request in relation to ownership and control which information on any changes to the information which was provided by the tenderer under ITT 6.4. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.
- 17.7** All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to the Procuring Entity. In submitting the information required pursuant to these requirements, the Tenderer shall warrant that the information submitted is complete, current and accurate as at the date of submission to the Procuring Entity.
- 17.8** If a tenderer fails to submit the information required by these requirements, its tender will be rejected. Similarly, if the Procuring Entity is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.
- 17.9** If information submitted by a tenderer pursuant to these requirements, or obtained by the Procuring Entity (whether through its own enquiries, through notification by the public or otherwise), shows any conflict of interest which could materially and improperly benefit the tenderer in relation to the procurement or contract management process, then:
- i) If the procurement process is still ongoing, the tenderer will be disqualified from the procurement process,
  - ii) if the contract has been awarded to that tenderer, the contract award will be set aside depending on the outcome of (iii),
  - iii) The tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other person has committed any criminal offence.
- 17.10** If a tenderer submits information pursuant to these requirements that is incomplete, inaccurate or out-of-date, or attempts to obstruct the verification process, then the consequences of ITT 17.8 will ensue unless the tenderer can show to the reasonable satisfaction of the Procuring

Entity that any such act was not material, or was due to genuine error which was not attributable to the intentional act, negligence or recklessness of the tender.

## **18.0 Period of Validity of Tenders**

18.1. Tenders shall remain valid for the Tender Validity period specified in the **TDS**. The Tender Validity period starts from the date fixed for the Tender submission deadline (as prescribed by the Procuring Entity in accordance with ITT 22). A tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

18.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. Thereupon the request shall be made in writing. If a Tender Security is requested in accordance with ITT 19, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting the request shall not be required or permitted to modify its Tender.

## **19.0 Tender Security**

19.1 The Tenderer shall furnish as part of its Tender, either a Tender-Securing Declaration or a Tender Security as specified in the **TDS**, in original form and, in the case of a Tender Security, in the amount and currency **specified** in the **TDS**. A Tender-Securing Declaration shall use the form included in Section IV, Tender Forms.

19.2 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security shall be a demand guarantee in any of the following forms at the Tenderer's option:

- I) cash;
- ii) a bank guarantee;
- iii) a guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority listed by the Authority;
- (iv) a guarantee issued by a financial institution approved and licensed by the Central Bank of Kenya, from a reputable source, and an eligible country.

19.3 If an unconditional bank guarantee is issued by a bank located outside Kenya, the issuing bank shall have a correspondent bank located in Kenya to make it enforceable. The Tender Security shall be valid for thirty (30) days beyond the original validity period of the Tender, or beyond any period of extension if requested under ITT 18.2.

19.4 If a Tender Security or Tender-Securing Declaration is specified pursuant to ITT 19.1, any Tender not accompanied by a substantially responsive Tender Security or Tender-Securing Declaration shall be rejected by the Procuring Entity as non-responsive.

19.5 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security of unsuccessful Tenderers shall be returned as promptly as possible

upon the successful Tenderer's signing the Contract and furnishing the Performance Security and any other documents required in the TDS. The Procuring Entity shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined non-responsive or a bidder declines to extend tender validity period.

- 19.6** The Tender Security of the successful Tenderer shall be returned as promptly as possible once the successful Tenderer has signed the Contract and furnished the required Performance Security, and any other documents required in the TDS.
- 19.7** The Tender Security may be forfeited or the Tender-Securing Declaration executed:
- a) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension there to provided by the Tenderer; or
  - b) if the successful Tenderer fails to: -
    - i) sign the Contract in accordance with ITT47; or
    - ii) furnish a Performance Security and if required in the TDS, and any other documents required in the TDS.
- 19.8** Where tender securing declaration is executed, the Procuring Entity shall recommend to the PPRA to debar the Tenderer from participating in public procurement as provided in the law.
- 19.9** The Tender Security or the Tender-Securing Declaration of a JV shall be in the name of the JV that submits the Tender. If the JV has not been legally constituted into a legally enforceable JV at the time of tendering, the Tender Security or the Tender-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITT 4.1 and ITT 11.2.
- 19.10** A tenderer shall not issue a tender security to guarantee itself.
- 20.0 Format and Signing of Tender**
- 20.1** The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 11 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 13, shall be clearly marked "ALTERNATIVE." In addition, the Tenderer shall submit copies of the Tender, in the number specified in the **TDS** and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.
- 20.2** Tenderers shall mark as "CONFIDENTIAL" all information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.
- 20.3** The original and all copies of the Tender shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Tenderer. This authorization shall consist of a written confirmation as specified in the **TDS** and shall be attached to the Tender.

The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Tender where entries or amendments have been made shall be signed or initialed by the person signing the Tender.

- 20.4** In case the Tenderer is a JV, the Tender shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- 20.5** Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Tender.

#### **D. SUBMISSION AND OPENING OF TENDERS**

##### **21.0 Sealing and Marking of Tenders**

- 21.1** The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Procuring Entity and a warning not to open before the time and date for Tender opening date. Within the single envelope, package or container, the Tenderer shall place the following separate, sealed envelopes:
- a) in an envelope or package or container marked “ORIGINAL”, all documents comprising the Tender, as described in ITT 11; and
  - b) in an envelope or package or container marked “COPIES”, all required copies of the Tender; and
  - c) if alternative Tenders are permitted in accordance with ITT 13, and if relevant:
    - i) in an envelope or package or container marked “ORIGINAL – ALTERNATIVE TENDER”, the alternative Tender; and
    - ii) in the envelope or package or container marked “COPIES-ALTERNATIVE TENDER”, all required copies of the alternative Tender.

The inner envelopes or packages or containers shall:

- a) bear the name and address of the Procuring Entity,
  - b) bear the name and address of the Tenderer; and
  - c) bear the name and Reference number of the Tender.
- 21.2** If an envelope or package or container is not sealed and marked as required, the *Procuring Entity* will assume no responsibility for the misplacement or premature opening of the Tender. Tenders misplaced or opened prematurely will not be accepted.

##### **22.0 Deadline for Submission of Tenders**

- 22.1** Tenders must be received by the Procuring Entity at the address specified in the **TDS** and no later than the date and time also specified in the **TDS**. When so specified in the **TDS**, tenderers shall have the option of submitting their Tenders electronically. Tenderers submitting Tenders electronically shall follow the electronic Tender submission procedures specified in the **TDS**.

**22.2** The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders by amending the Tender Documents in accordance with ITT 8, in which case all rights and obligations of the Procuring Entity and Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

### **23.0 Late Tenders**

The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 22. Any Tender received by the Procuring Entity after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the Tenderer.

### **24.0 Withdrawal, Substitution, and Modification of Tenders**

**24.1** A Tenderer may withdraw, substitute, or modify its Tender after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITT 20.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:

- a) prepared and submitted in accordance with ITT 20 and ITT 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;" and
- b) received by the Procuring Entity prior to the deadline prescribed for submission of Tenders, in accordance with ITT 22.

**24.2** Tenders requested to be withdrawn in accordance with ITT 24.1 shall be returned unopened to the Tenderers.

**24.3** No Tender may be withdrawn, substituted, or modified in the interval between the deadline for submission of Tenders and the expiration of the period of Tender validity specified by the Tenderer on the Form of Tender or any extension thereof.

### **25. Tender Opening**

**25.1** Except in the cases specified in ITT 23 and ITT 24.2, the Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified **in the TDS**, in the presence of Tenderers' designated representatives who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 22.1, shall be as specified in the **TDS**.

**25.2** First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelopes with the corresponding Tender shall not be opened but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Tender opening.

- 253 Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Tender being substituted, and the substituted Tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Tender opening.
- 254 Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Tender. No Tender modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Tender opening.
- 255 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Tenderer and whether there is a modification; the total Tender Price, per lot (contract) if applicable, including any discounts and alternative Tenders; the presence or absence of a Tender Security or Tender-Securing Declaration, if required; and any other details as the Procuring Entity may consider appropriate.
- 256 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further for evaluation. The Form of Tender and pages of the Bill of Quantities (to be decided on by the tender opening committee) are to be initialed by the members of the tender opening committee attending the opening.
- 257 At the Tender Opening, the Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 23.1).
- 258 The Procuring Entity shall prepare minutes of the Tender Opening that shall include, as a minimum: -
- a) the name of the Tenderer and whether there is a withdrawal, substitution, or modification;
  - b) the Tender Price, per lot (contract) if applicable, including any discounts;
  - c) any alternative Tenders;
  - d) the presence or absence of a Tender Security, if new as required;
  - e) number of pages of each tender document submitted.
- 259 The Tenderers' representatives who are present shall be requested to sign the minutes. The omission of a Tenderer's signature on the minutes shall not invalidate the contents and effect of the minutes. A copy of the tender opening register shall be distributed to all Tenderers.

## **E. EVALUATION AND COMPARISON OF TENDERS**

### **26. Confidentiality**

- 26.1 Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 43.
- 26.2 Any effort by a Tenderer to influence the Procuring Entity in the



evaluation of the Tenders or Contract award decisions may result in the rejection of its tender.

263 Notwithstanding ITT 26.2, from the time of tender opening to the time of contract award, if a tenderer wishes to contact the Procuring Entity on any matter related to the tendering process, it shall do so in writing.

## **27.0 Clarification of Tenders**

27.1 To assist in the examination, evaluation, and comparison of the tenders, and qualification of the tenderers, the Procuring Entity may, at its discretion, ask any tenderer for a clarification of its tender, given a reasonable time for a response. Any clarification submitted by a tenderer that is not in response to a request by the Procuring Entity shall not be considered. The Procuring Entity's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the tender shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Procuring Entity in the evaluation of the tenders, in accordance with ITT 31.

27.2 If a tenderer does not provide clarifications of its tender by the date and time set in the Procuring Entity's request for clarification, its Tender may be rejected.

## **28.0 Deviations, Reservations, and Omissions**

28.1 During the evaluation of tenders, the following definitions apply: -

- a) *“Deviation”* is a departure from the requirements specified in the tender document;
- b) *“Reservation”* is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the tender document; and
- c) *“Omission”* is the failure to submit part or all of the information or documentation required in the Tender document.

## **29.0 Determination of Responsiveness**

29.1 The Procuring Entity's determination of a Tender's responsiveness is to be based on the contents of the tender itself, as defined in ITT 11.

29.2 A substantially responsive Tender is one that meets the requirements of the Tender document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that, if accepted, would:

- a) Affect in any substantial way the scope, quality, or performance of the Works specified in the Contract;
- b) limit in any substantial way, inconsistent with the tender document, the Procuring Entity's rights or the tenderer's obligations under the proposed contract;
- c) if rectified, would unfairly affect the competitive position of other tenderers presenting substantially responsive tenders.

29.3 The Procuring Entity shall examine the technical aspects of the tender submitted in accordance with ITT 16, to confirm that all requirements

of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.

**29.4** If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

### **30.0 Non-material Non-conformities**

**30.1** Provided that a tender is substantially responsive, the Procuring Entity may waive any non-conformities in the tender.

**30.2** Provided that a Tender is substantially responsive, the Procuring Entity may request that the tenderer submit the necessary information or documentation, within a reasonable period of time, to rectify non-material non-conformities in the tender related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the price of the tender. Failure of the tenderer to comply with the request may result in the rejection of its tender.

**30.3** Provided that a tender is substantially responsive, the Procuring Entity shall rectify quantifiable non-material non-conformities related to the Tender Price. To this effect, the Tender Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified in the TDS.

### **31.0 Arithmetical Errors**

**31.1** The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity.

**31.2** Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis: -

- a) Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.
- b) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and
- c) if there is a discrepancy between words and figures, the amount in words shall prevail

**31.3** Tenderers shall be notified of any error detected in their bid during the notification of award.

### **32.0 Conversion to Single Currency**

For evaluation and comparison purposes, the currency (ies) of the Tender shall be converted in to a single currency as specified in the TDS.

### **33.0 Margin of Preference and Reservations**

- 33.1** A margin of preference may be allowed only when the contract is open to international competitive tendering where foreign contractors are expected to participate in the tendering process and where the contract exceeds the value/threshold specified in the Regulations.
- 33.2** A margin of preference shall not be allowed unless it is specified so in the **TDS**.
- 33.3** Contracts procured on basis of international competitive tendering shall not be subject to reservations exclusive to specific groups as provided in ITT 33.4.
- 33.4** Where it is intended to reserve a contract to a specific group of businesses (these groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be), and who are appropriately registered as such by the authority to be specified in the **TDS**, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses or firms belonging to the specified group are eligible to tender. No tender shall be reserved to more than one group. If not so stated in the Invitation to Tender and in the Tender documents, the invitation to tender will be open to all interested tenderers.

### **34.0 Nominated Subcontractors**

- 34.1** Unless otherwise stated in the **TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity. In case the Procuring Entity nominates a subcontractor, the subcontract agreement shall be signed by the Subcontractor and the Procuring Entity. The main contract shall specify the working arrangements between the main contractor and the nominated subcontractor.
- 34.2** Tenderers may propose sub-contracting up to the percentage of total value of contracts or the volume of works as specified in the **TDS**. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.
- 34.3** Domestic subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works unless their specialized parts of the Works were previously designated so by the Procuring Entity in the **TDS** a scan be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Tenderer may be added to the qualifications of the Tenderer.

### **35. Evaluation of Tenders**

- 35.1** The Procuring Entity shall use the criteria and methodologies listed in this ITT and Section III, Evaluation and Qualification Criteria No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies the Procuring Entity shall determine the Lowest Evaluated Tender in accordance with ITT 40.
- 35.2** To evaluate a Tender, the Procuring Entity shall consider the following:
- a) price adjustment in accordance with ITT 31.1 (iii); excluding

- provisional sums and contingencies, if any, but including Daywork items, where priced competitively;
- b) price adjustment due to discounts offered in accordance with ITT 14.4;
- c) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 32;
- d) price adjustment due to quantifiable non material non-conformities in accordance with ITT 30.3; and
- e) any additional evaluation factors specified in the **TDS** and Section III, Evaluation and Qualification Criteria.

353 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be considered in Tender evaluation.

354 Where the tender involves multiple lots or contracts, the tenderer will be allowed to tender for one or more lots (contracts). Each lot or contract will be evaluated in accordance with ITT 35.2. The methodology to determine the lowest evaluated tenderer or tenderers base done lot (contract) or based on a combination of lots (contracts), will be specified in Section III, Evaluation and Qualification Criteria. In the case of multiple lots or contracts, tenderer will be will be required to prepare the Eligibility and Qualification Criteria Form for each Lot.

### **36.0 Comparison of tenders**

The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders established in accordance with ITT 35.2 to determine the Tender that has the lowest evaluated cost.

### **37.0 Abnormally low tenders and abnormally high tenders**

#### **Abnormally Low Tenders**

371 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price or that genuine competition between Tenderers is compromised.

372 In the event of identification of a potentially Abnormally Low Tender, the Procuring Entity shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

373 After evaluation of the price analyses, in the event that the Procuring Entity determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, the Procuring Entity shall reject the Tender.

#### **Abnormally high tenders**

- 374** An abnormally high tender price is one where the tender price, in combination with other constituent elements of the Tender, appears unreasonably too high to the extent that the Procuring Entity is concerned that it (the Procuring Entity) may not be getting value for money or it may be paying too high a price for the contract compared with market prices or that genuine competition between Tenderers is compromised.
- 375** In case of a nab normally high price, the Procuring Entity shall make a survey of the market prices, check if the estimated cost of the contract is correct and review the Tender Documents to check if the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. The Procuring Entity may also seek written clarification from the tenderer on the reason for the high tender price. The Procuring Entity shall proceed as follows:
- i) If the tender price is abnormally high based on wrong estimated cost of the contract, the Procuring Entity may accept or not accept the tender depending on the Procuring Entity's budget considerations.
  - ii) If specifications, scope of work and/or conditions of contract are contributory to the abnormally high tender prices, the Procuring Entity shall reject all tenders and may retender for the contract based on revised estimates, specifications, scope of work and conditions of contract, as the case may be.
- 376** If the Procuring Entity determines that the Tender Price is abnormally too high because genuine competition between tenderers is compromised (*often due to collusion, corruption or other manipulations*), the Procuring Entity shall reject all Tenders and shall institute or cause competent Government Agencies to institute an investigation on the cause of the compromise, before retendering.
- 380 Unbalanced and/ or front-loaded tenders**
- 381** If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or frontloaded, the Procuring Entity may require the Tenderer to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the tender prices with the scope of works, proposed methodology, schedule and any other requirements of the Tender document.
- 382** After the evaluation of the information and detailed price analyses presented by the Tenderer, the Procuring Entity may as appropriate:
- a) accept the Tender;
  - b) require that the total amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding a 30% of the Contract Price;
  - c) agree on a payment mode that eliminates the inherent risk of the Procuring Entity paying too much for undelivered works;
  - d) reject the Tender,

### **39.0 Qualifications of the tenderer**

**39.1** The Procuring Entity shall determine to its satisfaction whether the eligible Tenderer that is selected as having submitted the lowest evaluated cost and substantially responsive Tender, meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

**39.2** The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 17. The determination shall not take into consideration the qualifications of other firms such as the Tenderer's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Sub-contractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.

**39.3** An affirmative determination shall be a prerequisite for award of the Contract to the Tenderer. A negative determination shall result in disqualification of the Tender, in which event the Procuring Entity shall proceed to the Tenderer who offers a substantially responsive Tender with the next lowest evaluated price to make a similar determination of that Tenderer's qualifications to perform satisfactorily.

### **40.0 Lowest evaluated tender**

Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Lowest Evaluated Tender. The Lowest Evaluated Tender is the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:

- a) Most responsive to the Tender document; and
- b) the lowest evaluated price.

### **41.0 Procuring entity's right to accept any tender, and to reject any or all tenders.**

The Procuring Entity reserves the right to accept or reject any Tender and to annul the Tender process and reject all Tenders at any time prior to Contract Award, without there by incurring any liability to Tenderers. In case of annulment, all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

## **F. AWARD OF CONTRACT**

### **42.0 Award criteria**

The Procuring Entity shall award the Contract to the successful tenderer whose tender has been determined to be the Lowest Evaluated Tender.

### **43.0 Notice of Intention to Enter into a Contract/Notification of Award**

Upon award of the contract and prior to the expiry of the Tender Validity Period the Procuring Entity shall issue a Notification of Intention to Enter into a Contract/Notification of award to all tenderers which shall contain, at a minimum, the following information:

- a) the name and address of the Tenderer submitting the successful tender;

- b) the Contract price of the successful tender;
- c) a statement of the reason(s) the tender of the unsuccessful tenderer to whom the letter is addressed was unsuccessful, unless the price information in (c) above already reveals the reason;
- d) the expiry date of the Standstill Period; and
- e) instruction on how to request a debriefing and/ or submit a complaint during the stand still period;

#### **44.0 Stand still Period**

**44.1** The Contract shall not be signed earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply.

**44.2** Where a Standstill Period applies, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter into a Contract with the successful Tenderer.

#### **45.0 Debriefing by the Procuring Entity**

**45.1** On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 43, an unsuccessful tenderer may make a written request to the Procuring Entity for a debriefing on specific issues or concerns regarding their tender. The Procuring Entity shall provide the debriefing within five days of receipt of the request.

**45.2** Debriefings of unsuccessful Tenderers may be done in writing or verbally. The Tenderer shall bear its own costs of attending such a debriefing meeting.

#### **46.0 Letter of Award**

Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period specified in ITT 42.1, upon addressing a complaint that has been filed with in the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

#### **47.0 Signing of Contract**

**47.1** Upon the expiry of the fourteen days of the Notification of Intention to enter in to contract and upon the parties meeting their respective statutory requirements, the Procuring Entity shall send the successful Tenderer the Contract Agreement.

**47.2** Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.

**47.3** The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period.

#### **48.0 Performance Security**

- 48.1** Within twenty-one (21) days of the receipt of the Letter of Award from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other documents required in the **TDS**, in accordance with the General Conditions of Contract, subject to ITT 38.2 (b), using the Performance Security and other Forms included in Section X, Contract Forms, or another form acceptable to the Procuring Entity. A foreign institution providing a bank guarantee shall have a correspondent financial institution located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent bank is not required.
- 48.2** Failure of the successful Tenderer to submit the above-mentioned Performance Security and other documents required in the **TDS** or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the Tenderer offering the next Best Evaluated Tender.
- 48.3** Performance security shall not be required for contracts estimated to cost less than the amount specified in the Regulations.

#### **49.0 Publication of Procurement Contract**

Within fourteen days after signing the contract, the Procuring Entity shall publish the awarded contract at its notice boards and websites; and on the Website of the Authority. At the minimum, the notice shall contain the following information:

- a) name and address of the Procuring Entity;
- b) name and reference number of the contract being awarded, a summary of its scope and the selection method used;
- c) the name of the successful Tenderer, the final total contract price, the contract duration;
- d) dates of signature, commencement and completion of contract;
- e) names of all Tenderers that submitted Tenders, and their Tender prices as readout at Tender opening.

#### **50.0 Procurement related Complaints and Administrative Review**

**50.1** The procedures for making Procurement-related Complaints are as specified in the **TDS**.

**50.2** A request for administrative review shall be made in the form provided under contract forms.



**Section II - Tender Data Sheet (TDS)**

The following specific data shall complement, supplement, or amend the provisions in the Instructions to Tenderers (ITT). Whenever there is a conflict, the provisions herein shall prevail over those in ITT.

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
<b>A. General</b>	
ITT 1.1	<p>The name of the contract is  <b>PROPOSED CONSTRUCTION OF INDIVIDUAL TRAINING KITCHEN AT KENYA UTALII COLLEGE;</b></p> <p><b>VOLUME 1 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF KITCHEN EQUIPMENT AND LIQUIFIED PETROLEUM GAS INSTALLATION WORKS</b></p> <p><b>VOLUME 2 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF COLD STORAGE ROOMS &amp; REFRIGERATION INSTALLATION WORKS</b></p> <p><b>VOLUME 3 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF WATER HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING INSTALLATION WORKS</b></p> <p>The reference number of the Contract is <b>as per the tender advertisement</b></p>
ITT 2.4	<p>The Information made available on competing firms is as follows:</p> <hr/>
ITT 2.4	<p>The firms that provided consulting services for the contract being tendered for are:  <b>STATE DEPARTMENT FOR PUBLIC WORKS,  P.O. BOX 30743 - 00100  NAIROBI.</b></p> <hr/>
ITT 3.1	Maximum number of members in the Joint Venture (JV) shall be: <b>3</b>
ITT 3.12	NCA Registration certificate shall be required
<b>B. Contents of Tender Document</b>	
ITT 7.1	<p>(i) The Tenderer will submit any request for clarifications in writing at the Address <i>as per the tender advertisement</i> to reach the Procuring Entity not later than <i>as per the tender advertisement</i></p> <p>(ii) The Procuring Entity shall publish its response at the website <i>as per the tender advertisement</i></p>
ITT 7.2	<p>(A) A pre-arranged pretender site visit <i>shall</i> take place at the following date, time and place:  Date: <i>as per the tender advertisement</i>  Time: <i>as per the tender advertisement</i>  Place: <i>as per the tender advertisement</i></p> <p>(B) Pre-Tender meeting <i>shall</i> take place at the following date, time and place:  Date: <i>as per the tender advertisement</i></p>

Reference to ITC Clause	<b>PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS</b>
	Time: <i>as per the tender advertisement</i> Place: <i>as per the tender advertisement</i>
<b>ITT 7.3</b>	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than 1 day <i>before</i> the meeting.
<b>ITT 7.5</b>	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender will be published is <b>as per the tender advertisement</b>
<b>ITT 9.1</b>	For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is:  (1) Name of Procuring Entity <i>as per the tender advertisement</i>  (2) Physical address for hand Courier Delivery to an office or Tender Box (City, Street, Building, Floor Number and Room) <i>as per the tender advertisement</i>  (3) Postal Address <i>as per the tender advertisement</i>  (4) Insert name, telephone number and e-mail address of the officer to be contacted. <i>as per the tender advertisement</i>
<b>C. Preparation of Tenders</b>	
<b>ITT 11.1 (h)</b>	The Tenderer shall submit the following additional documents in its Tender: <i>The list of additional documents should include the following:]</i>  <i>1. Coloured technical brochures</i> <i>2. Evidence of Personnel Academic &amp; Professional Qualifications</i> <i>3. Evidence of ongoing projects of similar nature, complexity or magnitude</i> <i>4. Evidence of completed projects of similar nature, complexity or magnitude in the last five years</i> <i>5. Proof / Evidence of Ownership for all the relevant equipment and transport</i> <i>6. Audited Financial Reports for the last three (3) years (2022, 2021 &amp; 2020)</i> <i>7. Evidence of Financial Resources (Cash in hand, lines of credit, overdraft etc.)</i>
<b>ITT 13.1</b>	Alternative Tenders <i>shall not be</i> considered.
<b>ITT 13.2</b>	Alternative times for completion <i>shall not be</i> permitted.
<b>ITT 13.4</b>	Alternative technical solutions shall be permitted for the following parts of the Works: <b>not applicable</b>
<b>ITT 14.5</b>	The prices quoted by the Tenderer shall be: <b>fixed</b>
<b>ITT 15.2 (a)</b>	Foreign currency requirements <b>not allowed.</b>

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 18.1	The Tender validity period shall be <b>126</b> days.
ITT 18.3	<p>(a) The Number of days beyond the expiry of the initial tender validity period will be 30 days.</p> <p>(b) The Tender price shall be adjusted by the following percentages of the tender price:</p> <p>(i) By <b><i>NIL%</i></b> of the local currency portion of the Contract price adjusted to reflect local inflation during the period of extension, and</p> <p>(ii) By <b><i>NIL %</i></b> the foreign currency portion of the Contract price adjusted to reflect the international inflation during the period of extension.</p>
ITT 19.1	Tender shall provide a <b>Tender Security</b> The type of Tender security shall be required in the amount of Kenya Shillings One Million, Five Hundred Thousand only ( <b>Kshs. 1,500,000/=</b> )
ITT 20.1	In addition to the original of the Tender, the number of copies is: <b>1</b>
ITT 20.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: <b><i>proof of power of attorney</i></b>
<b>D. Submission and Opening of Tenders</b>	
ITT 22.1	<p>(A) For <u>Tender submission purposes</u> only, the Procuring Entity's address is:</p> <p>(1) Name of Procuring Entity <b><i>as indicated in the tender advertisement</i></b></p> <p>(2) Postal Address <b><i>as indicated in the tender advertisement</i></b></p> <p>(3) Physical address for hand Courier Delivery to an office or Tender Box (City, Street, Building, Floor Number and Room) <b><i>as indicated in the tender advertisement</i></b></p> <p>(4) Date and time for submission of Tenders <b><i>as indicated in the tender advertisement</i></b></p> <p>(5) Tenders shall <b>shall not submit</b> tenders electronically.</p>
ITT 25.1	<p>The Tender opening shall take place at the time and the address for Opening of Tenders provided below:</p> <p>(1) Name of Procuring Entity <b><i>as indicated in the tender advertisement</i></b></p> <p>(2) Physical address for the location (City, Street, Building, Floor Number and Room) <b><i>as indicated in the tender advertisement</i></b></p> <p>(3) State date and time of tender opening. <b><i>as indicated in the tender advertisement</i></b></p>

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
<b>E. Evaluation, and Comparison of Tenders</b>	
ITT 30.3	The adjustment shall be based on the <i>average</i> price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its best estimate.
TT 32.1	The currency that shall be used for Tender evaluation and comparison purposes only to convert at the selling exchange rate all Tender prices expressed in various currencies into a single currency is: <i>Kenya Shillings</i>
ITT 33.2	A margin of preference <i>shall not</i> apply.
ITT 33.4	The invitation to tender is extended to the following group that qualify for Reservations: <i>not applicable</i>
ITT 34.1	At this time, the Procuring Entity <i>does not intend to</i> execute certain specific parts of the Works by subcontractors selected in advance.
ITT 34.2	Contractors may propose subcontracting: Maximum percentage of subcontracting permitted is: <b>not applicable</b> . Tenderers planning to subcontract more than 10% of total volume of work shall specify, in the Form of Tender, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualification and experience.
ITT 34.3	The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows: <ol style="list-style-type: none"> <li>1. <b>Cold Storage Rooms &amp; Refrigeration Installation Works</b></li> <li>2. <b>Water Harvesting, Water Reticulation, Water Tanks and Solar Water Heating Installation Works</b></li> </ol> <p>For the above-designated parts of the Works that may require Specialized Subcontractors, the relevant qualifications of the proposed Specialized Subcontractors will be added to the qualifications of the Tenderer for the purpose of evaluation.</p>
ITT 35.2 (e)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
ITT 48.1	Other documents required in addition to the Performance Security are <b>not applicable</b>
ITT 50.1	The procedures for making a Procurement-related Complaint are detailed in the “Notice of Intention to Award the Contract” herein and are also available from the PPRA Website <a href="http://www.ppra.go.ke">www.ppra.go.ke</a> or email <a href="mailto:complaints@ppra.go.ke">complaints@ppra.go.ke</a> . <p>If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to:</p> <p>For the attention: <i>as indicated in the tender advertisement</i></p> <p>Title/position: <i>as indicated in the tender advertisement</i></p>

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	<p data-bbox="441 254 1133 285">Procuring Entity: <i>as indicated in the tender advertisement</i></p> <p data-bbox="441 317 1101 348">Email address: <i>as indicated in the tender advertisement</i></p> <p data-bbox="441 384 1308 449">In summary, a Procurement-related Complaint may challenge any of the following (among others):</p> <ul style="list-style-type: none"> <li data-bbox="441 483 964 514">(i) the terms of the Tender Documents; and</li> <li data-bbox="441 548 1117 579">(ii) the Procuring Entity's decision to award the contract.</li> </ul>

## **SECTION III - EVALUATION AND QUALIFICATION CRITERIA**

### **10 GENERAL PROVISIONS**

- 11 This section contains the criteria that the Employer shall use to evaluate tender and qualify tenderers. No other factors, methods or criteria shall be used other than specified in this tender document. The Tenderer shall provide all the information requested in the forms included in Section IV, Tendering Forms. The Procuring Entity shall use **the Standard Tender Evaluation Document for Goods and Works** for evaluating Tenders.
- 12 Wherever a Tenderer is required to state a monetary amount, Tenderers should indicate the Kenya Shilling equivalent using the rate of exchange determined as follows:
- a) For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.
  - b) Value of single contract - Exchange rate prevailing on the date of the contract signature.
  - c) Exchange rates shall be taken from the publicly available source identified in the ITT 14.3. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.

### **13 EVALUATION AND CONTRACT AWARD CRITERIA**

The Procuring Entity shall use the criteria and methodologies listed in this Section to evaluate tenders and arrive at the Lowest Evaluated Tender. The tender that (i) meets the qualification criteria, (ii) has been determined to be substantially responsive to the Tender Documents, and (iii) is determined to have the Lowest Evaluated Tender price shall be selected for award of contract.

## **2.0 PRELIMINARY EXAMINATION FOR DETERMINATION OF**

### **RESPONSIVENESS Preliminary examination for Determination of**

#### **Responsiveness**

The Procuring Entity will start by examining all tenders to ensure they meet in all respects the eligibility criteria and other mandatory requirements in the ITT, and that the tender is complete in all aspects in meeting the requirements provided for in the preliminary evaluation criteria outlined below. The Standard Tender Evaluation Report Document for Goods and Works for evaluating Tenders provides very clear guide on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered non-responsive and will not be considered further.

*[The Procuring Entity will provide the preliminary evaluation criteria. To facilitate, a template may be attached or clearly described all information and list of documentation to be submitted by Tenderers to enable preliminary evaluation of the Tender]*

**30 TENDER EVALUATION (ITT 35)**

Price evaluation: in addition to the criteria listed in ITT 35.2 (a) – (d) the following criteria shall apply:

- (i) Alternative Completion Times, if permitted under ITT13.2, will be evaluated as follows:  
.....
- (ii) Alternative Technical Solutions for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows:  
.....
- (iii) Other Criteria; if permitted under ITT 35.2(j):  
.....

**4.0 MULTIPLE CONTRACTS**

**4.1** Multiple contracts will be permitted in accordance with ITT 35.4. Tenderers are evaluated on basis of Lots and a lowest evaluated tenderer identified for each Lot. The Procuring Entity will select one Option of the two Options listed below for award of Contracts.

**OPTION 1**

- (i) If a tenderer wins only one Lot, the tenderer will be awarded a contract for that Lot, provided the tenderer meets the Eligibility and Qualification Criteria for that Lot.
- (ii) If a tenderer wins more than one Lot, the tenderer will be awarded a contract for all won Lots, provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the won Lots. The tenderer will be awarded only the combinations for which the tenderer qualifies and the others will be considered for award to second lowest the tenderers.

**OPTION 2**

The Procuring Entity will consider all possible combinations of won Lots [contract(s)] and determine the combination with the lowest evaluated price. Tenders will then be awarded to the Tenderer or Tenderers in the combination provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the won Lots.

**5.0 ALTERNATIVE TENDERS (ITT 13.1)**

**Alternative Tenders (ITT 13.1)**

*An alternative if permitted under ITT 3.1, will be evaluated as follows:*

The Procuring Entity shall consider Tenders offered for alternatives as specified in Part 2 - Works requirements. Only the technical alternatives, if any, of the Tenderer with the Best Evaluated Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.

## 60 MARGIN OF PREFERENCE

61 If the TDS so specifies, the Procuring Entity will grant a margin of preference of fifteen percent (15%) to be loaded on evaluated prices of the foreign tenderers, where the percentage of shareholding of Kenyan citizens is less than fifty- one percent (51%).

62 Contractors shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a particular contractor or group of contractors qualifies for a margin of preference.

63 After Tenders have been received and reviewed by the Procuring Entity, responsive Tenders shall be assessed to ascertain their percentage of shareholding of Kenyan citizens. Responsive tenders shall be classified into the following groups:

- i) *Group A:* tenders offered by Kenyan Contractors and other Tenderers where Kenyan citizens hold shares of over fifty one percent (51%).
- ii) *Group B:* tenders offered by foreign Contractors and other Tenderers where Kenyan citizens hold shares of less than fifty one percent (51%).

64 All evaluated tenders in each group shall, as a first evaluation step, be compared to determine the lowest tender, and the lowest evaluated tender in each group shall be further compared with each other. If, as a result of this comparison, a tender from Group A is the lowest, it shall be selected for the award of contract. If a tender from Group B is the lowest, an amount equal to the percentage indicated in Item 6.1 of the respective tender price, including unconditional discounts and excluding provisional sums and the cost of day works, if any, shall be added to the evaluated price offered in each tender from Group B. All tenders shall then be compared using new prices with added prices to Group B and the lowest evaluated tender from Group A. If the tender from Group A is still the lowest tender, it shall be selected for award. If not, the lowest evaluated tender from Group B based on the first evaluation price shall be selected.

## 7. Post qualification and Contract award (ITT 39), more specifically,

- a) In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of pre-qualification data, if so required.
- b) In case the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tenderer shall be considered for contract award, subject to meeting each of the following conditions.
  - i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow of Kenya Shillings
  - ii) Minimum average annual construction turnover of Kenya



Shillings \_\_\_\_\_ [*insert amount*], equivalent calculated as total certified payments received for contracts in progress and/or completed within the last \_\_\_\_\_ [*insert of year*] years.

- iii) At least **5** of contract(s) of a similar nature executed within Kenya, or the East African Community or a broad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value Kenya shillings \_\_\_\_\_ equivalent.
- iv) Contractor's Representative and Key Personnel, which are specified as \_\_\_\_\_
- v) Contractors key equipment listed on the table "Contractor's Equipment" below and more specifically listed as [*specify requirements for each lot as applicable*]
- vi) Other conditions depending on their seriousness.

a) **History of non-performing contracts:**

Tenderer and each member of JV in case the Tenderer is a JV, shall demonstrate that Non- performance of a contract did not occur because of the default of the Tenderer, or the member of a JV in the last \_\_\_ (*specify years*). The required information shall be furnished in the appropriate form.

b) **Pending Litigation**

Financial position and prospective long-term profitability of the Single Tenderer, and in the case the Tenderer is a JV, of each member of the JV, shall remain sound according to criteria established with respect to Financial Capability under Paragraph (i) above if all pending litigation will be resolved against the Tenderer. Tenderer shall provide information on pending litigations in the appropriate form.

c) **Litigation History**

There shall be no consistent history of court/arbitral award decisions against the Tenderer, in the last 3 (*specify years*). All parties to the contract shall furnish the information in the appropriate form about any litigation or arbitration resulting from contracts completed or on going under its execution over the years specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender.

**TECHNICAL EVALUATION/QUALIFICATION FORM\***

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Item No.</b>	<b>Qualification Subject</b>	<b>Qualification Requirement</b>	<b>Document To be Completed by Tenderer</b>	<b>For Procuring Entity's Use (Qualification met or Not Met)</b>
1	Nationality	Nationality in accordance with ITT 3.6	Forms ELI – 1.1 and 1.2, with attachments	
2	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by Kenya Revenue Authority in accordance with ITT 3.14.	Attachment	
3	Conflict of Interest	No conflicts of interest in accordance with ITT 3.3	Form of Tender	
4	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.7	Form of Tender	
5	State- owned Enterprise	Meets conditions of ITT 3.8	Forms ELI – 1.1 and 1.2, with attachments	
6	Goods, equipment and services to be supplied under the contract	To have their origin in any country that is not determined ineligible under ITT 4.1	Forms ELI – 1.1 and 1.2, with attachments	
7	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since 1 <sup>st</sup> January 2018.	Form CON-2	
8	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.9	Form of Tender	
9	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in 3.1 and assuming that all pending litigation will NOT be resolved against the Tenderer.	Form CON – 2	
10	Litigation History	No consistent history of court/arbitral award decisions	Form CON – 2	

1 Item No.	2 Qualification Subject	3 Qualification Requirement	4 <i>Document To be Completed by Tenderer</i>	5 <i>For Procuring Entity's Use (Qualification met or Not Met)</i>
		against the Tenderer since 1 <sup>st</sup> January 2019		
11	Financial Capabilities	<p>(i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the works cash flow requirements estimated as <b>Kenya Shillings 30,000,000.00</b> equivalent for the subject contract(s) net of the Tenderer's other commitments.</p> <p>(ii) The Tenderers shall also demonstrate, to the satisfaction of the Procuring Entity, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.</p> <p>(iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last <b>3 years</b> shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.</p>	Form FIN – 3.1; 3.2 with attachments	
12	Average Annual Works Turnover	Minimum average annual works turnover of <b>Kenya Shillings 300,000,000.00</b> , equivalent calculated as total certified payments received for contracts in progress and/or completed within the last <b>3 years</b> , divided by <b>3 years</b>	Form FIN – 3.2	
13	General Works Experience	Experience under works contracts in the role of prime contractor, JV member, sub-contractor, or	Form EXP – 4.1 <b>Experience</b>	

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
		management contractor for at least the last 5 years, starting <b>1<sup>st</sup> January 2018</b> .		
14	Specific Works & Contract Management Experience	<p>A minimum number of <b>5</b> similar contracts specified below that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor between <b>1<sup>st</sup> January 2018</b> and tender submission deadline i.e. <b>5</b> contracts, each of minimum value Kenya Shillings <b>Kshs. 30,000,000.00 equivalent</b>.  <i>[In case the Works are to be tender as individual contracts under multiple contract procedure, the minimum number of contracts required for purposes of evaluating qualification shall be selected from the options mentioned in ITT 35.4]</i></p> <p>The similarity of the contracts shall be based on the following: <i>Supply, testing and Commissioning of a standby Generators (comparatively valued and sized)</i></p>	Form EXP -3.4; Form EXP – 4.1; EXP 4.2(a); EXP 4.2(b);	
15	Academic Qualification and Experience of Key Personnel			
	a. Director of the firm	Holder of at least a diploma with 10 years' experience in a relevant field	Form PER – 1; Form PER - 2	
	b. Project Manager/ Foreman	Holder of at least a degree with 5 years' experience in Relevant field	Form PER – 1; Form PER - 2	
	c. At least 3 No. Artisans	Holder of at least a certificate with 5 years' experience in relevant field	Form PER – 1; Form PER - 2	

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Item No.</b>	<b>Qualification Subject</b>	<b>Qualification Requirement</b>	<b><i>Document To be Completed by Tenderer</i></b>	<b><i>For Procuring Entity's Use (Qualification met or Not Met)</i></b>
16.	Adequacy of tools and equipment			
	a. Relevant Transport	At least 3No. Vehicle	Form EQU: Equipment	
	b. Relevant Equipment	At least 3No. Relevant Equipment	Form EQU: Equipment	

*N/B Full compliance by the tenderers shall be required to proceed to the next stage of evaluation. Failure to provide any of the listed requirements shall lead to disqualification*

## **APPENDIX TO SECTION III**

### **1. ADD TO CLAUSE 1.3 AND 2.0**

The evaluation criteria in pages 42-48 shall form part of the evaluation

## EVALUATION CRITERIA

### MANDATORY REQUIREMENTS (MR)

S/No	PRELIMINARY EVALUATION CRITERIA / MANDATORY REQUIREMENTS
MR1	Company Certificate of incorporation/registration;
MR2	Valid Tax Compliance Certificate; accordance to ITT 3.14
MR3	Current Certificate of registration with National Construction Authority in Mechanical Engineering Works on Kitchen Equipment and LP-Gas Installations (NCA 3 and above);
MR4	Current and Valid NCA contractor's practicing license
MR5	The bid has been submitted in the format required by the procuring entity with all the sections as issued by the procuring entity; ( <i>The tender must be downloaded as issued without altering the format</i> ).
MR6	The Tender Security (Bid Bond) of <b>Kshs. 1,500,000.00</b> in form of Bank Guarantee from a reputable bank or insurance company approved by Public Procurement Regulatory Authority (PPRA) and is valid for the period required.
MR7	Attach a duly filled, signed and stamped Form of Tender.
MR8	Attach a duly filled, signed and stamped Tenderer's Eligibility-Confidential Business Questionnaire
MR9	Attach a duly filled, signed and stamped Certificate of Independent Tender Determination
MR10	Attach a duly filled, signed and stamped Self Declaration that the tenderer is not debarred in the matter of the Public Procurement and Asset Disposal Act 2015. (Form SD1)
MR11	Attach a duly filled, signed and stamped Self Declaration that the tenderer will not engage in any corrupt or fraudulent practice. (Form SD2)
MR12	Attach a duly filled, signed and stamped Declaration and Commitment to the Code of Ethics form
MR13	Duly Filled Form CR12 from the Registrar of Companies not older than 3 months.
MR14	The required number of copies of the Bid has been submitted and all required documents, information and samples have been submitted if stipulated in the tender, advertisement/Invitation letter;
MR15	Sub contract agreements with domestic sub-contractors signed and stamped by authorized personnel of both firms

### MANDATORY REQUIREMENTS (MR) FOR COLD ROOM STORAGE AND REFRIGERATION SUB CONTRACTOR (VOLUME 2 OF 3)

MR1	Company Certificate of incorporation/registration;
MR2	Valid Tax Compliance Certificate;
MR3	Current Certificate of registration with National Construction Authority in Mechanical Engineering Works on Cold-room Storage and Refrigeration (NCA 3 and above);
MR4	Current and Valid NCA contractor's practicing license
MR5	Duly Filled Form CR12 from the Registrar of Companies not older than 3 months.

### MANDATORY REQUIREMENTS (MR) FOR WATER STORAGE AND SOLAR WATER HEATING SUB CONTRACTOR (VOLUME 3 OF 3)

MR1	Company Certificate of incorporation/registration;
MR2	Valid Tax Compliance Certificate;
MR3	Current Certificate of registration with National Construction Authority in Mechanical Engineering Works on High & Low-Level Water Tanks and Solar Water Heating System Installation (NCA 3 and above);
MR4	Current and Valid NCA contractor's practicing license
MR5	Duly Filled Form CR12 from the Registrar of Companies not older than 3 months.

***N/B Full compliance by the tenderers shall be required to proceed to the next stage of evaluation. Failure to provide any of the listed requirements shall lead to disqualification***

**Note:**

The bid security shall be in accordance with the following notes; -

- **(A)** *The tenderer shall furnish as part of his tenders a tender surety in the amount as stated in the tender document.*
- **(B)** *The unconditional Tender surety shall be in Kenya shillings and be in form of a certified cheque, bank draft, an irrevocable letter of credit or a guarantee from a reputable Bank/ Insurance approved by PPRA located in the Republic of Kenya. The format of the surety shall be in accordance with the sample form included in the tender documents and the tender surety shall be valid for **156 days** from the date of tender opening”.*
- **(C)** *A substantially responsive tender is one which conforms to all terms and condition and specifications of the tender document without material deviation or reservation and has a valid Bank/Insurance guarantee”.*

The employer/procuring entity may seek further clarification/confirmation, if necessary, to confirm authenticity/compliance of any condition of the tender. Further, in case of a discrepancy between the amounts stated in the appendix to instruction to tenderers and the one stated in the advertisement or invitation letter, the bid security shall be taken as the amount in the advertisement/ letter of invitation.

**The bidders’ who do not satisfy any of the above requirements shall be considered non-Responsive and their tenders will not be evaluated further.**

**TECHNICAL EVALUATION**

At this stage technical evaluation shall be done by comparing each tender to the technical requirements in the tender document

Item	Description	YES/NO
1.	<b>Compliance with Technical Specifications</b> <i>(Note: Tender Evaluation Committee to carry out analysis showing how decision on this requirement has been arrived at)</i>	
2.	<b>Qualification and Experience of Key Personnel</b>	
	<b>Academic Qualification and Experience (Provide evidence in form copies of Academic Certificates)</b> <b>a) Director of the firm</b> <ul style="list-style-type: none"> <li>• Holder of at least a diploma with 10 years’ experience in a relevant field</li> </ul>	
	<b>b) Project Manager</b> <ul style="list-style-type: none"> <li>• Holder of at least a degree with 5 years’ experience in a relevant Engineering field</li> </ul>	
	<b>c) At least 3 No artisans</b> <ul style="list-style-type: none"> <li>• Holder of at least a certificate with 5 years’ experience in relevant field</li> </ul>	



Item	Description	YES/NO
	<p>The tenderer <b>MUST</b> fill the forms listed below in the format provided and attach the necessary qualification certificates:</p> <ol style="list-style-type: none"> <li>1. Form PER - 1 Contractor's Representative and Key Personnel Schedule</li> <li>2. Form PER - 2 Resume and Declaration - Contractor's Representative and Key Personnel.</li> </ol>	
3.	<p><b>Experience of the firm in similar services: Kitchen Equipment and LPG Installation Works</b></p> <p>a) Provide Three (3No.) projects of similar nature, complexity or magnitude between the Period 2018 – 2022: <b>(Provide evidence in form of copies of Award letters, Completion Certificates, LSOs etc.)</b></p> <p>The tenderer <b>MUST</b> fill the forms listed below in the format provided</p> <ol style="list-style-type: none"> <li>1. Form EXP – 3.4 Current contract commitments/works in progress</li> <li>2. Form EXP – 4.1 General Works and contract Experience</li> <li>3. Form EXP – 4.2.a Specific and Contract Management Experience</li> <li>4. Form EXP – 4.2.b Works Experience and Key Activities</li> </ol>	
4.	<p><b>Financial report</b></p> <p>a) Audited financial report (last three (3) years)</p> <ul style="list-style-type: none"> <li>• Average Annual Turn-over equal to or greater than the cost of the project</li> </ul> <p>b) Evidence of Financial Resources (cash in hand, lines of credit, over draft facility etc.)</p> <ul style="list-style-type: none"> <li>• Has financial resources to finance the projected <b>monthly cash flow*</b> for three months</li> </ul> <p>The tenderer <b>MUST</b> fill the forms listed below in the format provided.</p> <ol style="list-style-type: none"> <li>1. Form FIN 3.2 Average Annual Works Turnover</li> <li>2. Form FIN 3.3 Financial resources</li> </ol>	
5.	<p><b>Adequacy of tools and equipment (Provide evidence in form Log Books, Purchase Receipts, Lease Agreements etc.)</b></p> <p>The tenderer <b>must</b> show proof of ownership or leasing of the following equipment: -</p> <p>a) <b>Relevant Transport (at least 3No.)</b></p> <ul style="list-style-type: none"> <li>• Means of transport</li> </ul> <p>b) <b>Relevant Equipment (at least 3No.)</b></p> <ul style="list-style-type: none"> <li>• Has relevant equipment for work being tendered</li> </ul> <p>The tenderer <b>MUST</b> fill the forms listed below in the format provided.</p> <ol style="list-style-type: none"> <li>1. Form EQU: Equipment</li> </ol>	

Item	Description	YES/NO
6.	<p><b>Litigation History</b></p> <p>The tenderer <b>MUST</b> fill the forms listed below in the format provided.</p> <p>1. Form Con-2: Historical contract Non-performance, pending litigation and Litigation history</p>	
	<b>QUALIFIED YES / NO</b>	

**TECHNICAL EVALUATION FOR COLD ROOM STORAGE AND REFRIGERATION  
SUB CONTRACTOR**

Item	Description	YES/NO
1.	<p><b>Compliance with Technical Specifications (Vol. 2 of 3 of the Tender Documents)</b></p> <p><i>(Note: Tender Evaluation Committee to carryout analysis showing how decision on this requirement has been arrived at)</i></p>	
2.	<p><b>Qualification and Experience of Key Personnel</b></p> <p><b>Academic Qualification and Experience (Provide evidence in form copies of Academic Certificates)</b></p> <p><b>a) Director of the firm</b></p> <ul style="list-style-type: none"> <li>Holder of at least a diploma with 10 years' experience in a relevant field</li> </ul> <p><b>b) Project Manager</b></p> <ul style="list-style-type: none"> <li>Holder of at least a degree with 5 years' experience in a relevant Engineering field</li> </ul> <p><b>c) At least 3 No artisans</b></p> <ul style="list-style-type: none"> <li>Holder of at least a certificate with 5 years' experience in relevant Engineering field</li> </ul>	
3.	<p><b>Experience of the firm in similar services: Cold Room Storage and Refrigeration or related Works</b></p> <p>a) Provide Three (3No.) projects of similar nature, complexity or magnitude between the Period 2018 – 2022: <b>(Provide evidence in form of copies of Award letters, Completion Certificates, LSOs etc.)</b></p>	
4.	<p><b>Adequacy of tools and equipment (Provide evidence in form Log Books, Purchase Receipts, Lease Agreements etc.)</b></p> <p>The tenderer <b><i>must</i></b> show proof of ownership or leasing of the following equipment: -</p> <p><b>a) Relevant Transport (at least 3No.)</b></p> <ul style="list-style-type: none"> <li>Means of transport</li> </ul>	

Item	Description	YES/NO
	<b>b) Relevant Equipment (at least 3No.)</b> <ul style="list-style-type: none"> <li>Has relevant equipment for work being tendered</li> </ul>	
	<b>QUALIFIED YES / NO</b>	

**TECHNICAL EVALUATION FOR WATER HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING SUB CONTRACTOR**

Item	Description	YES/NO
1.	<b>Compliance with Technical Specifications (Vol. 3 of 3 of the Tender Documents)</b> <i>(Note: Tender Evaluation Committee to carryout analysis showing how decision on this requirement has been arrived at)</i>	
2.	<b>Qualification and Experience of Key Personnel</b>	
	<b>Academic Qualification and Experience (Provide evidence in form copies of Academic Certificates)</b>	
	<b>a) Director of the firm</b> <ul style="list-style-type: none"> <li>Holder of at least a diploma with 10 years' experience in a relevant field</li> </ul>	
	<b>b) Project Manager</b> <ul style="list-style-type: none"> <li>Holder of at least a degree with 5 years' experience in a relevant field</li> </ul>	
	<b>c) At least 3 No artisans</b> <ul style="list-style-type: none"> <li>Holder of at least a certificate with 5 years' experience in relevant Engineering field</li> </ul>	
3.	<b>Experience of the firm in similar services: Water Storage, Plumbing, Solar Water Heating or related Works</b> a) Provide Three (3No.) projects of similar nature, complexity or magnitude between the Period 2018 – 2022: <b>(Provide evidence in form of copies of Award letters, Completion Certificates, LSOs etc.)</b>	
4.	<b>Adequacy of tools and equipment (Provide evidence in form Log Books, Purchase Receipts, Lease Agreements etc.)</b> The tenderer <b><i>must</i></b> show proof of ownership or leasing of the following equipment: - <ul style="list-style-type: none"> <li><b>a) Relevant Transport (at least 3No.)</b> <ul style="list-style-type: none"> <li>Means of transport</li> </ul> </li> <li><b>b) Relevant Equipment (at least 3No.)</b> <ul style="list-style-type: none"> <li>Has relevant equipment for work being tendered</li> </ul> </li> </ul>	
	<b>QUALIFIED YES / NO</b>	

*N/B Full compliance by the tenderers shall be required. Failure to provide any of the listed requirements shall lead to disqualification. Hence the tenderer shall not proceed to financial evaluation.*

**Technical Specifications**

*The tender document shall be examined based on their capability and adequacy of resources to effectively carry out the subject contract.*

*In order to comply with the Technical requirements, the tenderers shall be required;*

*a) To fill the tenderer shall also fill in the Technical Schedule as specified in the tender document for Equipment and Items indicating the Country of Origin, Model/Make/Manufacturer and catalogue numbers of the Items/Equipment they propose to supply.*

*b) To supply equipment's/items which comply with the technical specifications set out in the bid document.*

*In this regard, the bidders shall be required to submit relevant technical brochures/catalogues with the tender document, highlighting the Catalogue Numbers of the proposed items. Such brochures/catalogues should indicate comprehensive relevant data of the proposed equipment/items which should include but not limited to the following:*

- i. Standards of manufacture;*
- ii. Performance ratings/characteristic*
- iii. Material of manufacture;*
- iv. Electrical power ratings; and*
- v. Any other necessary requirements (Specify).*

*The bid will then be analyzed, using the information in the technical brochures, to determine compliance with General and Particular technical specifications for the works as indicated in the tender document.*

*Non compliance with the Technical Specifications will render the tenderer Non responsive and therefore unqualified for further evaluation:*

**FINANCIAL EVALUATION**

Bidders who qualify at the technical evaluation shall be evaluated at this stage. The successful bidder shall be the tenderer with the lowest evaluated tender price subject to the **procuring entity's right to exercise due diligence relating to confirmation of information submitted by the bidder before the award of the tender pursuant to Section 83 of the Public Procurement and Asset Disposal Act, 2015.**

**RECOMMENDATIONS FOR AWARD**

The Procuring Entity will start by examining all tenders to ensure they meet in all respects the eligibility criteria and other requirements in the ITT, and that the tender is complete in all aspects in meeting the requirements of "Part 2 – Procuring Entity's Works Requirements", including checking for tenders with unacceptable errors, abnormally low tenders,

abnormally high tenders and tenders that are front loaded.

**Arithmetical Errors** Any errors in the submitted tender arising from a miscalculation of unit price, quantity, subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive.

**The tenderer with the lowest price that meets all the above requirements at financial evaluation stage will be awarded the contract**

## SECTION IV - TENDERING FORMS

### QUALIFICATION FORMS

#### 1. FOREIGN TENDERERS 40%RULE

Pursuant to ITT 3.9, a foreign tenderer must complete this form to demonstrate that the tender fulfils this condition.

ITEM	Description of Work Item	Describe location of Source	COST in K. shillings	Comments, if any
A	Local Labor			
1				
2				
3				
4				
5				
B	Sub contracts from Local sources			
1				
2				
3				
4				
5				
C	Local materials			
1				
2				
3				
4				
5				
D	Use of Local Plant and Equipment			
1				
2				
3				
4				
5				
E	Add any other items			
1				
2				
3				
4				
5				
6				
	TOTAL COST LOCAL CONTENT		XXXXX	
	PERCENTAGE OF CONTRACT PRICE			

## 2. FORMEQU: EQUIPMENT

The Tenderer shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Tenderer.

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Tenderer.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

### 3. FORM PER -1

#### Contractor's Representative and Key Personnel Schedule

Tenderers should provide the names and details of the suitably qualified Contractor's Representative and Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

#### Contractor' Representative and Key Personnel

1.	<b>Title of position:</b> Contractor's Representative	
	<b>Name of candidate:</b>	
	<b>Duration of appointment:</b>	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	<b>Time commitment: for this position:</b>	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	<b>Expected time schedule for this position:</b>	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>
2.	<b>Title of position:</b> [ _____ ]	
	<b>Name of candidate:</b>	
	<b>Duration of appointment:</b>	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	<b>Time commitment: for this position:</b>	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	<b>Expected time schedule for this position:</b>	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>
3.	<b>Title of position:</b> [ _____ ]	
	<b>Name of candidate:</b>	
	<b>Duration of appointment:</b>	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	<b>Time commitment: for this position:</b>	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	<b>Expected time schedule for this position:</b>	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart]</i>



4.	Title of position: [ _____ ]	
	Name of candidate:	
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]
5.	Title of position: [insert title]	
	Name of candidate	
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]

**4. FORM PER - 2:**

Resume and Declaration - Contractor's Representative and Key Personnel.

Name of Tenderer
------------------

Position [# 1]: <i>[title of position from Form PER-1]</i>		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: <i>[language and levels of speaking, reading and writing skills]</i>	
Details	Address of Procuring Entity:	
	Telephone:	Contact (manager / personnel officer):
	Fax:	
	Job title:	Years with present Procuring Entity:

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	Role	Duration of involvement	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

**Declaration**

I, the undersigned *[insert either “Contractor’s Representative” or “Key Personnel” as applicable]*, certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Tender:

<b>Commitment</b>	<b>Details</b>
Commitment to duration of contract:	<i>[insert period (start and end dates) for which this Contractor’s Representative or Key Personnel is available to work on this contract]</i>
Time commitment:	<i>[insert period (start and end dates) for which this Contractor’s Representative or Key Personnel is available to work on this contract]</i>

I understand that any misrepresentation or omission in this Form may:

- (a) be taken into consideration during Tender evaluation;
- (b) result in my disqualification from participating in the Tender;
- (c) result in my dismissal from the contract.

Name of Contractor’s Representative or Key Personnel: *[insert name]*

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

Countersignature of authorized representative of the Tenderer:

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

## 5. TENDERERS QUALIFICATION WITHOUT PREQUALIFICATION

To establish its qualifications to perform the contract in accordance with Section III, Evaluation and Qualification Criteria the Tenderer shall provide the information requested in the corresponding Information Sheets included hereunder.

### 5.1 FORM ELI -1.1 Tenderer

#### Information Form

Date: \_\_\_\_\_ ITT No. and title: \_\_\_\_\_

Tenderer's name
In case of Joint Venture (JV), name of each member:
Tenderer's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Tenderer's actual or intended year of incorporation:
Tenderer's legal address [in country of registration]:
Tenderer's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITT 3.6 <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 <input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: <ul style="list-style-type: none"><li>• Legal and financial autonomy</li><li>• Operation under commercial law</li></ul> <ol style="list-style-type: none"><li>1. Establishing that the Tenderer is not under the supervision of the Procuring Entity</li><li>2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.</li></ol>

## 5.2 FORM ELI – 1.2

### Tenderer's JV Information Form

(To be completed for each member of Tenderer's JV)

Date: \_\_\_\_\_ ITT No. and title: \_\_\_\_\_

Tenderer's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 3.6. <input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.5.
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

### 5.3 FORM CON – 2

#### Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> Contract non-performance did not occur since 1 <sup>st</sup> January <i>[insert year]</i> specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.			
<input type="checkbox"/> Contract(s) not performed since 1 <sup>st</sup> January <i>[insert year]</i> specified in Section III, Evaluation and Qualification Criteria, requirement 2.1			
<input type="checkbox"/> Contract(s) withdrawn since 1 <sup>st</sup> January <i>[insert year]</i> specified in Section III, Evaluation and Qualification Criteria, requirement 2.1			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and Kenya Shilling equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i>  Name of Procuring Entity: <i>[insert full name]</i>  Address of Procuring Entity: <i>[insert street/city/country]</i>  Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.			
<input type="checkbox"/> Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below.			

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)
		Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
		Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
<b>Litigation History in accordance with Section III, Evaluation and Qualification Criteria</b>			
<input type="checkbox"/> No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4. <input type="checkbox"/> Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.			

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)
<i>[insert year]</i>	<i>[insert percentage]</i>	<p>Contract Identification: [indicate complete contract name, number, and any other identification]</p> <p>Name of Procuring Entity: <i>[insert full name]</i></p> <p>Address of Procuring Entity: <i>[insert street/city/country]</i></p> <p>Matter in dispute: <i>[indicate main issues in dispute]</i></p> <p>Party who initiated the dispute: <i>[indicate "Procuring Entity" or "Contractor"]</i></p> <p>Reason(s) for Litigation and award decision <i>[indicate main reason(s)]</i></p>	<i>[insert amount]</i>

Include details relating to potential bid-rigging practices such as previous occasions where tenders were withdrawn, joint bids with competitors, subcontracting work to unsuccessful tenderers, etc.



**5.4 FORM FIN – 3.1:**

**Financial Situation and Performance**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

**5.4.1. Financial Data**

Type of Financial information in _____ (currency)	Historic information for previous _____ years, _____ (amount in currency, currency, exchange rate*, USD equivalent)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

\*Refer to ITT 15 for the exchange rate

**5.4.2 Sources of Finance**

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (Kenya Shilling equivalent)
1		
2		
3		

### 5.4.3 Financial documents

The Tenderer and its parties shall provide copies of financial statements for \_\_\_\_\_ years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

- (a) reflect the financial situation of the Tenderer or in case of JV member, and not an affiliated entity (such as parent company or group member).
  - (b) be independently audited or certified in accordance with local legislation.
  - (c) be complete, including all notes to the financial statements.
  - (d) correspond to accounting periods already completed and audited.
- Attached are copies of financial statements<sup>1</sup> for the \_\_\_\_\_ years required above; and complying with the requirements

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<sup>1</sup> If the most recent set of financial statements is for a period earlier than 12 months from the date of Tender, the reason for this should be justified.

**5.5 FORM FIN – 3.2:**

**Average Annual Works Turnover**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

Annual turnover data (works only)			
Year	Amount Currency	Exchange rate	Kenya Shilling equivalent
<i>[indicate year]</i>	<i>[insert amount and indicate currency]</i>		
Average Annual Works Turnover *			

\* See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

**5.6 FORM FIN – 3.3:**

**Financial Resources**

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total works cash flow demands of the subject contract or contracts as specified in Section III, Evaluation and Qualification Criteria

<b>Financial Resources</b>		
<b>No.</b>	<b>Source of financing</b>	<b>Amount (Kenya Shilling equivalent)</b>
1		
2		
3		

**5.7 FORM FIN – 3.4:**

**Current Contract Commitments / Works in Progress**

Tenderers and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

<b>Current Contract Commitments</b>					
<b>No.</b>	<b>Name of Contract</b>	<b>Procuring Entity's Contact Address, Tel,</b>	<b>Value of Outstanding Work [Current Kenya Shilling /month Equivalent]</b>	<b>Estimated Completion Date</b>	<b>Average Monthly Invoicing Over Last Six Months [Kenya Shilling /month]</b>
1					
2					
3					
4					
5					

**5.8 FORM EXP - 4.1**

**General Works Experience**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_ pages

Starting Year	Ending Year	Contract Identification	Role of Tenderer
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	

**5.9 FORM EXP - 4.2(a)**

**Specific Works and Contract Management Experience**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	Kenya Shilling			
If member in a JV or sub-contractor, specify participation in total Contract amount				
Procuring Entity's Name:				
Address:				
Telephone/fax number				
E-mail:				

**5.9 FORM EXP - 4.2(a)**

**Specific Works and Contract Management Experience**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	Kenya Shilling			
If member in a JV or sub-contractor,				

specify participation in total Contract amount			
Procuring Entity's Name:			
Address:			
Telephone/fax number			
E-mail:			

**5.9 FORM EXP - 4.2 (a) (cont.)**

**Specific Works and Contract Management Experience (cont.)**

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Work rate for key activities	
6. Other Characteristics	

**5.10 FORM EXP - 4.2(b)**

**Works Experience in Key Activities**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

Tenderer's JV Member Name: \_\_\_\_\_

Sub-contractor's Name<sup>2</sup> (as per ITT 34): \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

All Sub-contractors for key activities must complete the information in this form as per ITT 34 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.

1. Key Activity No One: \_

Information				
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount			Kenya Shilling	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				

<sup>2</sup> If applicable



	<b>Information</b>
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

- 2. Activity No. Two
- 3. ....

## OTHER FORMS

### 6. FORM OF TENDER

#### *INSTRUCTIONS TO TENDERERS*

- i) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.*
- ii) All italicized text is to help Tenderer in preparing this form.*
- iii) Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER attached to this Form of Tender.*
- iv) The Form of Tender shall include the following Forms duly completed and signed by the Tenderer.*
  - Tenderer's Eligibility- Confidential Business Questionnaire*
  - Certificate of Independent Tender Determination*
  - Self-Declaration of the Tenderer*

**Date of this Tender submission:** *[insert date (as day, month and year) of Tender submission]*

**Request for Tender No.:** *[insert identification]*

**Name and description of Tender** *[Insert as per ITT]*

**Alternative No.:** *[insert identification No if this is a Tender for an alternative]*

**To:** *[insert complete name of Procuring Entity]*

Dear Sirs,

- 1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to construct and complete the Works and remedy any defects therein for the sum<sup>3</sup> of Kenya Shillings *[Amount in figures]* \_\_\_\_\_ Kenya Shillings *[amount in words]* \_\_\_\_\_*

*The above amount includes foreign currency<sup>4</sup> amount (s) of *[state figure or a percentage and currency]* *[figures]* \_\_\_\_\_ *[words]* \_\_\_\_\_*

\_\_\_\_\_

—

- 2. We undertake, if our tender is accepted, to commence the Works as soon as is*

<sup>3</sup> *This sum should be carried forward from the Summary of the Bills of Quantities.*

<sup>4</sup> *The percentage quoted above should not include provisional sums, and not more than two foreign currencies are allowed.*

reasonably possible after the receipt of the Architect notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.

3. We agree to adhere by this tender until \_\_\_\_\_ *[Insert date]*, and it shall remain binding upon us and may be accepted at any time before that date.
4. We understand that you are not bound to accept the lowest or any tender you may receive.
5. We, the under signed, further declare that:
  - i) No reservations: We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;
  - ii) Eligibility: We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;
  - iii) Tender - Securing Declaration: We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;
  - iv) Conformity: We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the works schedule, the following Works: *[insert a brief description of the Works]*;
  - v) Tender Price: The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*
  - vi) Option 1, in case of one lot: Total price is: *[insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies]*;  
or  
Option2, in case of multiple lots:
    - (a) Total price of each lot *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies]*; and
    - (b) Total price of all lots (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies]*;
  - vii) Discounts: The discounts offered and the methodology for their application are:
  - viii) The discounts offered are: *[Specify in detail each discount offered.]*
  - ix) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts]*;
  - x) Tender Validity Period: Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that

period;

- x) Performance Security: If our Tender is accepted, we commit to obtain a Performance Security in accordance with the Tendering document;
- xii) One Tender Per Tender: We are not submitting any other Tender(s) as an individual Tender, and we are not participating in any other Tender(s) as a Joint Venture member or as a sub-contractor, and meet the requirements of ITT 3.4, other than alternative Tenders submitted in accordance with ITT 13.3;
- xiii) Suspension and Debarment: We, along with any of our subcontractors, suppliers, Engineer, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.
- xiv) State-owned enterprise or institution: [*select the appropriate option and delete the other*] [*We are not a state- owned enterprise or institution*]/[*We are a state-owned enterprise or institution but meet the requirements of ITT3.8*];
- xv) Commissions, gratuities, fees: We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender process or execution of the Contract: [*insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity*].

Name of Recipient	Address	Reason	Amount

*(If none has been paid or is to be paid, indicate "none.")*

- xvi) Binding Contract: We understand that this Tender, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- xvii) Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Most Advantageous Tender or any other Tender that you may receive;
- xviii) Fraud and Corruption: We here by certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption; and
- xix) Collusive practices: We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the "Certificate of Independent Tender Determination" attached below.
- xx) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from \_\_(*specify website*) during

the procurement process and the execution of any resulting contract.

- vii) **Beneficial Ownership Information:** We commit to provide to the procuring entity the Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form upon receipt of notification of intention to enter into a contract in the event we are the successful tenderer in this subject procurement proceeding.
- viii) We, the Tenderer, have completed fully and signed the following Forms as part of our Tender:
  - a) Tenderer's Eligibility; Confidential Business Questionnaire - to establish we are not in any conflict to interest.
  - (b) Certificate of Independent Tender Determination - to declare that we completed the tender without colluding with other tenderers.
  - (a) Self-Declaration of the Tenderer - to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
  - (d) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal.

Further, we confirm that we have read and understood the full content and scope of fraud and corruption as informed in “**Appendix 1 - Fraud and Corruption**” attached to the Form of Tender.

**Name of the Tenderer:**

*[insert complete name of person signing the Tender]*

**Name of the person duly authorized to sign the Tender on behalf of the Tenderer:**

*\*\*[insert complete name of person duly authorized to sign the Tender]*

**Title of the person signing the Tender:**

*[insert complete title of the person signing the Tender]*

**Signature of the person named above:**

*[insert signature of person whose name and capacity are shown above]*

**Date signed** *[insert date of signing]* day of *[insert month]*, *[insert year]*

Date signed \_\_\_\_\_ day

of \_\_\_\_\_,

**Notes**

*\* In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer.*

*\*\*Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.*

(a) **TENDERER'S ELIGIBILITY-CONFIDENTIAL BUSINESS**

**QUESTIONNAIRE** Instruction to Tenderer

Tender is instructed to complete the particulars required in this Form, *one form for each entity if Tender is a JV*. Tenderer is further reminded that it is an offence to give false information on this Form.

(a) **Tenderer's details**

	<b>ITEM</b>	<b>DESCRIPTION</b>
1	Name of the Procuring Entity	
2	Reference Number of the Tender	
3	Date and Time of Tender Opening	
4	Name of the Tenderer	
5	Full Address and Contact Details of the Tenderer.	1. Country 2. City 3. Location 4. Building 5. Floor 6. Postal Address 7. Name and email of contact person.
6	Current Trade License Registration Number and Expiring date	
7	Name, country and full address ( <i>postal and physical addresses, email, and telephone number</i> ) of Registering Body/Agency	
8	Description of Nature of Business	
9	Maximum value of business which the Tenderer handles.	
10	State if Tenders Company is listed in stock exchange, give name and full address ( <i>postal and physical addresses, email, and telephone number</i> ) of state which stock exchange	

**General and Specific Details**

(b) **Sole Proprietor**, provide the following details.

Name in full \_\_\_\_\_ Age \_\_\_\_\_  
Nationality \_\_\_\_\_ Country of Origin \_\_\_\_\_  
Citizenship \_\_\_\_\_

(c) **Partnership**, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

(d) **Registered Company**, provide the following details.

i) Private or public Company \_\_\_\_\_

ii) State the nominal and issued capital of the Company \_\_\_\_\_

Nominal Kenya Shillings (Equivalent).....

Issued Kenya Shillings (Equivalent).....

iii) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

(e) **DISCLOSURE OF INTEREST - Interest of the Firm in the Procuring Entity.**

i) Are there any person/persons in..... (Name of Procuring Entity) who has/have an interest or relationship in this firm?  
Yes/No.....

If yes, provide details as follows.

	Names of Person	Designation in the Procuring Entity	Interest or Relationship with Tenderer
1			
2			
3			

(iii) **Conflict of interest disclosure**

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
1	Tenderer is directly or indirectly controls, is controlled by or is under common control with another tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or		

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
	through common third parties that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process.		
5	Any of the Tenderer's affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender.		
6	Tenderer would be providing goods, works, non-consulting services or consulting services during implementation of the contract specified in this Tender Document.		
7	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract.		
8	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who would be involved in the implementation or supervision of the Contract.		
9	Has the conflict stemming from such relationship stated in item 7 and 8 above been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.		



**Certification**

On behalf of the Tenderer, I certify that the information given above is complete, current and accurate as at the date of submission.

Full Name

---

Title or Designation

---

---

---

*(Signature)*

*(Date)*

**b) CERTIFICATE OF INDEPENDENT TENDER DETERMINATION**

I, the undersigned, in submitting the accompanying Letter of Tender to the \_\_\_\_\_  
\_\_\_\_\_ [Name of  
Procuring Entity] for: \_\_\_\_\_ [Name and  
number of tender] in response to the request for tenders made by: \_\_\_\_\_ [Name of  
Tenderer] do hereby make the following statements that I certify to be true and complete  
in every respect:

I certify, on behalf of \_\_\_\_\_ [Name of Tenderer]  
that:

1. I have read and I understand the contents of this Certificate;
2. I understand that the Tender will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am the authorized representative of the Tenderer with authority to sign this Certificate, and to submit the Tender on behalf of the Tenderer;
4. For the purposes of this Certificate and the Tender, I understand that the word “competitor” shall include any individual or organization, other than the Tenderer, whether or not affiliated with the Tenderer, who:
  - a) Has been requested to submit a Tender in response to this request for tenders;
  - b) could potentially submit a tender in response to this request for tenders, based on their qualifications, abilities or experience;
5. The Tenderer discloses that [check one of the following, as applicable]:
  - a) The Tenderer has arrived at the Tender independently from, and without consultation, communication, agreement or arrangement with, any competitor;
  - b) the Tenderer has entered into consultations, communications, agreements or arrangements with one or more competitors regarding this request for tenders, and the Tenderer discloses, in the attached document(s), complete details thereof, including the names of the competitors and the nature of, and reasons for, such consultations, communications, agreements or arrangements;
6. In particular, without limiting the generality of paragraphs (5)(a) or(5)(b) above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - a) prices;
  - b) methods, factors or formulas used to calculate prices;
  - c) the intention or decision to submit, or not to submit, a tender; or
  - d) the submission of a tender which does not meet the specifications of the request for Tenders; except as specifically disclosed pursuant to paragraph (5)(b) above;
7. In addition, there has been no consultation, communication, agreement or arrangement with any competitor regarding the quality, quantity, specifications or delivery particulars of the works or services to which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph(5)(b) above;

8. The terms of the Tender have not been, and will not be, knowingly disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening, or of the awarding of the Contract, whichever comes first, unless otherwise required by law or as specifically disclosed pursuant to paragraph (5)(b) above.

Name

---

Title

---

Date

---

*[Name, title and signature of authorized agent of Tenderer and Date]*

(c) SELF- DECLARATION FORMS

FORM SD1

**SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENT AND ASSET DISPOSAL ACT 2015.**

I, ....., of Post Office Box ..... being a resident of..... in the Republic of ..... do hereby make a statement as follows: -

1. THAT I am the Company Secretary/Chief Executive/Managing Director/Principal Officer/Direct or of..... (*insert name of the Company*) who is a Bidder in respect of **Tender No.** ..... for ..... (*insert tender title/description*) for ..... (*insert name of the Procuring entity*) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.
3. THAT what is deponed to here in above is true to the best of my knowledge, information and belief.

.....

(Title)

Bidder Official Stamp

.....

(Signature)

.....

(Date)

FORM SD2

**SELF DECLARATION THAT THE PERSON/TENDERER WILL NOT ENGAGE IN ANY CORRUPT OR FRAUDULENT PRACTICE.**

I, .....of P.O. Box ..... being a resident of ..... in the Republic of ..... do hereby make a statement as follows: -

1. THAT I am the Chief Executive/Managing Director/Principal Officer/Director of ..... (insert name of the Company) who is a Bidder in respect of **Tender No.**..... for ..... (*insert tender title/description*) for ..... (*insert name of the Procuring entity*) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its servants and/or agents/subcontractors will not engage in any corrupt or fraudulent practice and has not been requested to pay any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ..... (*insert name of the Procuring entity*) which is the procuring entity.
3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ..... (*name of the procuring entity*).
4. THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender
5. THAT what is deponed to here in above is true to the best of my knowledge information and belief.

.....  
(Title) (Signature) (Date)

Bidder Official Stamp

**DECLARATION AND COMMITMENT TO THE CODE OF ETHICS**

I ..... (person) on behalf of *(Name of the Business/ Company/Firm)* .....

..... declare that I have read and fully understood the contents of the Public Procurement & Asset Disposal Act, 2015, Regulations and the Code of Ethics for persons participating in Public Procurement and Asset Disposal and my responsibilities under the Code.

I do here by commit to abide by the provisions of the Code of Ethics for persons participating in Public Procurement and Asset Disposal.

Name of Authorized signatory.....

Sign.....

Position.....

Office address.....

Telephone.....

E-mail.....

Name of the Firm/Company.....

Date.....

**(Company Seal/ Rubber Stamp where applicable)**

Witness

Name.....

Sign.....

Date.....

**(d) APPENDIX 1 - FRAUD AND CORRUPTION**

*(Appendix 1 shall not be modified)*

**1. Purpose**

- 1.1 The Government of Kenya's Anti-Corruption and Economic Crime laws and their sanction's policies and procedures, Public Procurement and Asset Disposal Act (*no. 33 of 2015*) and its Regulation, and any other Kenya's Acts or Regulations related to Fraud and Corruption, and similar offences, shall apply with respect to Public Procurement Processes and Contracts that are governed by the laws of Kenya.

**2. Requirements**

- 2.1 The Government of Kenya requires that all parties including Procuring Entities, Tenderers, (applicants/proposers), Consultants, Contractors and Suppliers; any Sub-contractors, Sub-consultants, Service providers or Suppliers; any Agents (whether declared or not); and any of their Personnel, involved and engaged in procurement under Kenya's Laws and Regulation, observe the highest standard of ethics during the procurement process, selection and contract execution of all contracts, and refrain from Fraud and Corruption and fully comply with Kenya's laws and Regulations as per paragraphs 1.1 above.
- 22 Kenya's public procurement and asset disposal act (*no. 33 of 2015*) under Section 66 describes rules to be followed and actions to be taken in dealing with Corrupt, Coercive, Obstructive, Collusive or Fraudulent practices, and Conflicts of Interest in procurement including consequences for offences committed. A few of the provisions noted below highlight Kenya's policy of no tolerance for such practices and behavior:
- 1) A person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or as set disposal proceeding;
  - 2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
  - 3) Without limiting the generality of the subsection (1) and (2), the person shall be: -
    - a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
    - b) if a contract has already been entered into with the person, the contract shall be voidable;
  - 4) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;
  - 5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement: -
    - a) Shall not take part in the procurement proceedings;
    - b) shall not, after a procurement contract has been entered in to, take part in any decision relating to the procurement or contract; and

- c) shall not be a subcontract or for the tender to whom was awarded contract, or a member of the group of tenderers to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.
- 6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;
  - 7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5)(a) and the contract is awarded to the person or his relative or to another person in whom one of them had a direct or indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer. Etc.
- a) In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:
  - b) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:
    - i) "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
    - ii) "fraudulent practice" is any act or omission, including is representation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
    - iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party; "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
    - iv) "obstructive practice" is:
      - Deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
      - acts intended to materially impede the exercise of the PPRA's or the appointed authority's inspection and audit rights provided for under paragraph 2.3 e. below.
  - c) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:
 

"fraudulent practice" includes a misrepresentation of fact in order to influence a procurement or disposal process or the exercise of a contract to the detriment of the procuring entity or the tenderer or the contractor, and includes collusive



practices amongst tenderers prior to or after tender submission designed to establish tender prices at artificial non-competitive levels and to deprive the procuring entity of the benefits of free and open competition.

- d) Rejects a proposal for award<sup>1</sup> of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- e) Pursuant to the Kenya's above stated Acts and Regulations, may recommend to appropriate authority(ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;
- f) Requires that a clause be included in Tender documents and Request for Proposal documents requiring(i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub-consultants, Service providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect<sup>2</sup> all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and
- g) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a "Self-Declaration Form" as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/will not engage in any corrupt or fraudulent practices.

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<sup>1</sup>For the avoidance of doubt, a party's in eligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and tendering, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

<sup>2</sup> Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Investigating Authority or persons appointed by the Procuring Entity to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

**FORM OF TENDER SECURITY-[Option 1–Demand Bank Guarantee]**

**Beneficiary:** \_\_\_\_\_ **Request for Tenders**

**No:** \_\_\_\_\_ **Date:** \_\_\_\_\_

\_\_\_\_\_ **TENDER**

**GUARANTEE No.:** \_\_\_\_\_

**Guarantor:** \_\_\_\_\_

1. We have been informed that \_\_\_\_\_ (herein after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (hereinafter called "the Tender") for the execution of \_\_\_\_\_ under Request for Tenders No. ("the ITT").
2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.
3. At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ (\_\_\_\_\_) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:
  - (a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Applicant; or
  - b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.
4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) thirty days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

\_\_\_\_\_  
*[signature(s)]*

**FORMAT OF TENDER SECURITY [Option 2–Insurance Guarantee]**

**TENDER GUARANTEE No.:** \_\_\_\_\_

1. Whereas ..... [*Name of the tenderer*] (hereinafter called “the tenderer”) has submitted its tender dated ..... [*Date of submission of tender*] for the ..... [*Name and/or description of the tender*] (hereinafter called “the Tender”) for the execution of\_\_under Request for Tenders No.\_\_\_\_\_(“the ITT”).
2. KNOW ALL PEOPLE by these presents that WE ..... of ..... [**Name of Insurance Company**] having our registered office at ..... (hereinafter called “the Guarantor”), are bound unto ..... [*Name of Procuring Entity*] (hereinafter called “the Procuring Entity”) in the sum of ..... (Currency and guarantee amount) for which payment well and truly to be made to the said Procuring Entity, the Guarantor binds itself, its successors and assigns, jointly and severally, firmly by these presents.

Sealed with the Common Seal of the said Guarantor this \_\_\_day of \_\_\_\_\_ 20 \_\_.

3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Applicant:
  - a) has withdrawn its Tender during the period of Tender validity set forth in the Principal's Letter of Tender (“the Tender Validity Period”), or any extension thereto provided by the Principal; or
  - b) having been notified of the acceptance of its Tender by the Procuring Entity during the Tender Validity Period or any extension thereto provided by the Principal; (i) failed to execute the Contract agreement; or (ii) has failed to furnish the Performance Security, in accordance with the Instructions to tenderers (“ITT”) of the Procuring Entity's Tendering document.

then the guarantee undertakes to immediately pay to the Procuring Entity up to the above amount upon receipt of the Procuring Entity's first written demand, without the Procuring Entity having to substantiate its demand, provided that in its demand the Procuring Entity shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii)twenty-eight days after the end of the Tender Validity Period.

5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

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*[Date]*

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*[Signature of the Guarantor]*

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*[Witness]*

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*[Seal]*

**FORM OF TENDER - SECURING DECLARATION**

*[The Bidder shall complete this Form in accordance with the instructions indicated]*

Date: ..... *[insert date (as day, month and year) of Tender Submission]*

Tender No.: ..... *[insert number of tendering process]*

To: ..... *[insert complete name of Purchaser]* I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.
2. I/We accept that I/we will automatically be suspended from being eligible for tendering in any contract with the Purchaser for the period of time of [insert number of months or years] starting on [insert date], if we are in breach of our obligation(s) under the bid conditions, because we—(a) have withdrawn our tender during the period of tender validity specified by us in the Tendering Data Sheet; or (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the instructions to tenders.
3. I/We understand that this Tender Securing Declaration shall expire if we are not the successful Tenderer(s), upon the earlier of:
  - a) Our receipt of a copy of your notification of the name of the successful Tenderer; or
  - b) thirty days after the expiration of our Tender.
4. I/We understand that if I am /we are/ in a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid, and the Joint Venture has not been legally constituted at the time of bidding, the Tender Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed:..... Capacity/title

(director or partner or sole proprietor, etc.) .....

Name:..... Duly

authorized to sign the bid for and on behalf of: *[insert complete name of Tenderer]*

Dated on ..... day of ....., ..... *[Insert date of signing]* Seal or stamp

**Appendix to Tender**

**Schedule of Currency requirements**

Summary of currencies of the Tender for \_\_\_\_\_ *[insert name of Section of the Works]*

<i>Name of currency</i>	<i>Amounts payable</i>
Local currency: _____	
Foreign currency #1: _____	
Foreign currency #2: _____	
Foreign currency #3: _____	
Provisional sums expressed in local currency	<i>[To be entered by the Procuring Entity]</i>

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**PART II - WORKS REQUIREMENTS**

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**SECTION V - BILLS OF QUANTITIES**  
**BILLS OF QUANTITIES**

**(a) Preambles**

1. The method of measurement of completed work for payment shall be in accordance with *The Standard Method of Measurements for Building Works and Associated Civil Works for Eastern Africa (2<sup>nd</sup> edition) of 2008 prepared by The Architectural Association of Kenya (Quantity Surveyors Chapter)*
2. The Site is situated in **Kenya Utalii College, Ruaraka, Nairobi**. Any damage caused to the surfaces of this road shall be made good at the Contractor's expense. The Contractor shall visit the site and acquaint itself with its nature and position, the nature of the ground, substrata and other local conditions, positions of existing power, water and other services, access roads or any other limitations that might affect his cost or progress. No claim for extras shall be considered on account of lack of knowledge in this respect.
3. The Contractor shall obtain the Architect's approval on the siting of all temporary buildings, spoil heaps, temporary access path, and storage of materials. The Contractor shall also obtain the Architect approval and direction regarding the use of any materials found on the Site.
4. The drawings used in the preparation of these Bills of Quantities can be inspected at the offices of the Procuring Entity or Procuring Entity's Representative during normal working hours. Two sets of the Working Drawings shall be provided to the contractor but additional copies shall be provided at a cost to be determined by the Engineer.
5. The Contractor shall allow for the payment of all bank charges in connection with the procurement of Bank Guarantees and stamp charges in connection with this contract Agreement.
6. The Contractor shall carry out the various sections of the Works in such an order as the Architect May direct. The Procuring Entity reserves the right to occupy the Works by sections on completion provided that such occupation is considered to be both practical and reasonable and will not interfere with the Works. The Contractor shall allow any costs associated with such occupation.
7. The main Contractor will be fully responsible for paying his Sub-Contractor but the Procuring Entity reserves the right in very exceptional circumstances to make such payments direct in the interests of the project where the completion thereof might be jeopardized by any dispute or vicariousness between the Contractor and the Sub-Contractor involve.
8. The Contractor shall complete and deliver the Works in the period inserted in the Form of Tender as his time for completion of the Works from the date for Possession, to be agreed with the Engineer. The Contract Period is presumed to have been calculated making due allowance for seasonal inclement weather conditions. No claim or extension of time due to the normal inclement weather for this area shall be entertained.
9. The Contractor shall, upon receiving instructions to proceed with the Works, draw up a Programme and Progress Chart setting out the order in which the Works are to be carried out, with the appropriate dates thereof. This Chart shall be agreed with the



Architect and no deviation from the order set out in it will be permitted without the written consent of the Engineer. The Contractor will be responsible for arranging the above programme with all his sub-Contractors and Specialties. The Contractor shall allow in his rates for carrying out this exercise, and for updating it as required.

10. The Contractor shall submit to the Architect on the first day of each week or such longer period as the Architect from time to time direct, a Progress Report and any information for the proceeding period, showing the progress during the period and the up-to-date cumulative progression all important items of each section or portion of the Works.
11. The Contractor shall arrange for photographs of the Site to be taken by a professional photographer approved by the Engineer. The Photographs shall provide a record of the Site and adjacent areas as prior to the commencement of the Works and shall cover such portion of the works in progress and completion as the Architect shall direct. All prints shall be full plate size, unmounted, and marked on the reverse side with the date of exposure, identification reference and brief description. The copyright of all photographs shall be vested in the Procuring Entity. The negatives and four prints from each negative shall be delivered to the Architect within two weeks of exposure.
12. Figured dimensions are to be followed in preference to dimensions scaled from the Drawings, but whenever possible dimensions are to be taken on the Site or from the buildings. Before any work is commenced by Sub- Contractors or Specialist Firms, dimensions must be checked on the site comparable dimensions shown on the drawings. The Contractor shall be responsible for the accuracy of such dimensions.
13. Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any services shall be reported immediately to the Architect and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense. Where appropriate the Contractor shall open up the ground in advance of the main work by hand digging if necessary, to locate precisely the position and details of the services which are likely to affect his operations.
14. The Contractor shall include in his prices for the transport of materials, workmen, etc. /, to and from the site of the proposed works, at such hours and by such route as are permitted by the Authorities.
15. The Contractor will be required to make good, at his own expense and damage he may cause to the present road surface and pavements within or beyond the boundary of the Site, during the period of the works. All existing paths, storm water channels, etc., that may be destroyed or damaged during the progress of the Works shall be reinstated by the Contractor to the satisfaction of the Engineer.
16. The Contractor is to allow for complying with all instructions and regulations of the Police Authorities.
17. All water shall be fresh, clean and pure, free from earthly, vegetable or organic matter, acid or alkaline substance in solution. The Contractor shall provide at his own risk and cost all water for use in connection with the Works, (including works of sub-contractors). If need be, he shall make arrangements with the Local Water Authority for the installation of a separate meter for all water used by him throughout the Contract and pay all cost and fees in connection therewith. He shall also provide

temporary storage tanks and tubing, etc., as may be necessary, and clear away at completion.

18. The Contractor shall provide all artificial lighting and power for his own use on the Works, (including Sub – Contractor's) including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection there with.
19. 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 time to the superintendence of the works. (Including works of sub – contractors). Such Agent or Representative shall receive on behalf of the Contractor directions and instruction from the Engineer, and such directions and instructions shall be deemed to be given to the contractor in accordance with the Conditions of Contract. The Agent shall not be replaced without the specific approval of the Engineer.
20. The Contractor shall ensure that the safety of his work people and all authorized visitors to the site are protected at all times. In particular, there shall be the proper provision of guard-rails to scaffolding, protection against falling materials, tools on site, dust, nail and other sharp objects. The site shall be kept tidy and clear of dangerous rubbish. The Architect shall be empowered to suspend work on site should it be considered this condition is not being observed and no claim arising from such suspension will be allowed.
21. They are as available to the Contractor for work yards, offices and other facilities shall be directed by the Architect and any existing features to remain shall be protected from damage throughout the Contract Period and handed back in good condition when they are vacated at the end of the Contract. If additional areas are required, the contractor shall source them at own cost.
22. The Contractor shall give the Architect reasonable notice of the intention to set out or take levels for any part of the Works so that arrangements may be made for checking the work. The accuracy of setting out and leveling shall be within the tolerances specified in the Specifications or on the Drawings. The checking of setting out or leveling by the Architect shall not relieve the Contractor of his duties or responsibilities under the Contract.
23. The Contractor must take steps necessary to safe guard and shall beheld fully responsible for any damage caused to existing and adjacent property, including buildings that are not a subject of demolition. He shall make good at his own cost damage to persons and property caused there on, and he shall indemnify the Procuring Entity against any loss or claim that may arise.
24. The Contractor shall take such steps and exercise such care and diligence as to minimize nuisance arising from dust, noise or any other cause to the occupiers of the existing and adjacent property. He must provide such temporary and special screens and tarpaulins or gummy bags, hoarding, barriers, warning signs etc. as he considers necessary and sufficient for the protection of the existing and adjacent property and or prevention of nuisance etc. as directed by Engineer.
25. The Contractors attention is drawn to the standards levy order which was amended on 15<sup>th</sup> October 1998. Legal notice No.154 of 1998. The Contractor is required to pay a monthly level of 0.2% of his factory price of works with effect from January

1999. Tenderer shall allow for this in the build-up of his rates.

26. The Contractor shall provide temporary sheds, offices meshrooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.
27. Contractor shall provide/build labor camp sat areas to be agreed with the Engineer. Labor camps shall be complete with sanitary accommodation and fencing gates.
28. The Contractor must provide the necessary toilet facilities to the requirement and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.
29. The Contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, Plant and materials against damage and theft.
30. The Contractor shall provide all necessary hoists, tackle, plant, equipment, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove the same on completion. All such plant, tools and equipment shall comply with all regulations in force throughout the period of the Contract and shall be altered or adopted during the Contract period as may be necessary to comply with any amendments in or additions to such regulations.
31. Provide, erect and maintain all necessary scaffolding, sufficiently strong and efficient for the due performance of the works, including Sub-Contract Works, provide special scaffolding as required by Sub-Contractors, alter and adopt all scaffolding as and when required during the Works, and remove on completion. No scaffolding is measured here in after and the Contractor must allow in his rates for this.
32. The Contractor shall take all necessary precautions such as temporary fencing, hoarding fans, planked footways, guard-rails gantries screen, etc., for the safe custody of the Works, materials and public protection and adjacent properties.
33. Cover up all and protect from damage, including damage from inclement weather, all finished work and unfixd materials, including that of Sub-Contractors, etc., to the satisfaction of the Architect until the completion of the Contract.
34. The Contractor shall, after completion of the works, at his own expense, remove and clear away all surplus excavated demolition materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Engineer, sheds, camps, etc. Particular care shall be taken to leave clean all floors and windows and tore move all paint and cement all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection there with.
35. Concrete test cubes shall be prepared in a set of three, as described including testing fees, labor and materials, making molds, transport, handling, etc. Allow in your rates for making at least four cubes on each occasion, from different batches; the concrete being taken from the point of deposit.
36. The Contractors Hall furnish at the earliest possible opportunity before work commences, and at his own cost, any samples of materials and workmanship that may be called for by the Architect for the approval or rejection, and any further samples in the case of rejection, until such samples are approved by the Engineer. Such samples,

when approved, shall be the minimum standard for the work to which they apply. The procedure of or submitting samples of materials for testing or approval and the method of marking for identification shall be as laid down by the Engineer. The Contractor shall allow in his Tender for such samples and tests, including those in connection with his Sub-Contractors work.

37. The Contractors attention is drawn to the Finance Bill of the year 2000/2001 on withholding tax on contractual payment section 35(7) (i) (ii) which became effective on 1<sup>st</sup> July 2000. A 3% withholding tax will be applicable to all interim payments exceeding Kshs..... for work done in respect of building or civil works. The contractor shall allow for any costs arising resulting there from in the build-up of rates.
38. Blasting will only be allowed with the express permission of the Architect in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost, in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Architect governing the use and storage of explosives.
39. The National Construction Authority is a state corporation established under the national construction authority Act No.14 of 2011. The broad Mandate of the Authority is to oversee the construction industry and coordinate its development. The National Construction Authority Regulations 2014 with an effective date of 6<sup>th</sup> June 2014, regulation 25, - Allow 0.5% of the tender sum/contract sum for construction levy.
40. The Contractor attention is drawn to Finance Bill of 1993 where VAT was introduced in all contracts for construction services. The tenderer is also drawn to VAT Act Cap 476 clause 19(9). The tenderer must allow for VAT1.19 as instructed elsewhere.
41. The contractor shall allow and pay for all insurance to cover risks and indemnities required Items 17 and 18 of the Conditions of contract and also specified in the Special Conditions of Contract.

**BILL NO. - PRELIMINARY ITEMS**

**1.1 PARTICULAR PRELIMINARIES**

Item	Description	Kshs.	Cts.
A	<p>PRICING ITEMS OF PRELIMINARIES</p> <p>Prices SHALL BE INSERTED against items of “preliminaries” in the tenderer’s priced Bills of Quantities. 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. The contractor is advised to read and understand all preliminary items.</p>		
B	<p>EMPLOYER</p> <p>The “Employer” is KENYA UTALII COLLEGE</p> <p>The term “Employer” and “Government” wherever used in the contract document shall be synonymous</p>		
C	<p>PROJECT MANAGER</p> <p>The term “P.M.” wherever used in these Bills of Quantities shall be deemed to imply the Project Manager as defined in Condition 1 of the Conditions of Contract or such person or persons as may be duly Authorized to represent him on behalf of the Government.</p>		
D	<p>ARCHITECT</p> <p>The term “Architect” shall be deemed to mean “The Project Manager.” As defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, P.O. Box 30743, NAIROBI.</p>		
E	<p>QUANTITY SURVEYOR</p> <p>The term “Quantity Surveyor” shall be deemed to mean “The Project Manager.” As defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, P.O. Box 30743, NAIROBI</p>		
	<p><b>Carried to Collection</b></p>		

Item	Description	Kshs.	Cts.
A	<p><b>ELECTRICAL ENGINEER</b></p> <p>The term "Electrical Engineer" shall be deemed to mean "The Project Manager." as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, P.O. Box 30743, NAIROBI.</p>		
B	<p><b>MECHANICAL ENGINEER</b></p> <p>The term "Mechanical Engineer" shall be deemed to mean "The Project Manager." as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, P.O. Box 30743, NAIROBI.</p>		
C	<p><b>STRUCTURAL ENGINEER</b></p> <p>The term "Structural Engineer" shall be deemed to mean "The Project Manager." as defined above whose address unless otherwise notified is Ministry of Lands, Public Works, Housing and Urban Development, P.O. Box 30743, NAIROBI.</p>		
D	<p><b>CONTRACT AGREEMENT</b></p> <p>Contract Agreement shall be as stipulated in the Republic of Kenya's Standard Tender Document for Procurement Works Building and Associated Civil Engineering Works (2022 Edition) included in this Tender Document. The Conditions of Contract are also included. Particulars of insertions to be made in the Appendix to the Contract Agreement will be found in the Particular Preliminaries part of these Bills of Quantities.</p>		
E	<p><b>DESCRIPTION OF THE WORKS</b></p> <p>The works to be carried out under this contract involves <b>PROPOSED CONSTRUCTION OF INDIVIDUAL TRAINING KITCHEN AT KENYA UTALII COLLEGE</b></p> <p><b>VOLUME 1 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF KITCHEN EQUIPMENT AND LIQUIFIED PETROLEUM GAS INSTALLATION WORKS</b></p> <p><b>VOLUME 2 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF COLD STORAGE ROOMS &amp; REFRIGERATION INSTALLATION WORKS</b></p> <p><b>VOLUME 3 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF WATER HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING INSTALLATION WORKS</b></p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>MEASUREMENTS</b></p> <p>In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately be referred to the PROJECT MANAGER in accordance with Clause 13.0 of the General Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 13.0 of the said Conditions.</p>		
B	<p><b>LOCATION OF SITE</b></p> <p>The site is located in RUARAKA along THIKA HIGHWAY within the NAIROBI CITY. The Contractor is advised to visit the site, to familiarize with the nature and position of the site. No claims arising from the Contractor's failure to do so will be entertained.</p>		
C	<p><b>CLEARING AWAY</b></p> <p>The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate and upon completion of the works, remove and clear away all plant, equipment, rubbish, unused materials and stains and leave in a clean and tidy state to the reasonable satisfaction of the Project Manager. The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the Project Manager.</p>		
D	<p><b>PAYMENTS</b></p> <p>The tenderer's attention is drawn to the fact that the GOVERNMENT SHALL NOT MAKE ADVANCE PAYMENTS</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</b></p> <p>The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other normal activities. The Contractor is instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of normal activities being carried out by the Client. The Contractor shall allow in his rates any expense he deems necessary by taking such care within the site.</p>		
B	<p><b>BID SECURITY</b></p> <p>The contractor shall provide a bid security duly signed, sealed and stamped from an approved Institution in an approved format of required amount.</p>		
C	<p><b>WORKING CONDITIONS</b></p> <p>The Contractor shall allow in his rates for any interference that he may encounter in the course of execution of the works for the Client may in some cases ask the Contractor not to proceed with the works until some activities within the site are completed, as the facility will be operating as usual during the course of the contract.</p>		
D	<p><b>SIGNBOARD</b></p> <p>Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the Project Manager.</p>		
E	<p><b>LABOUR CAMPS</b></p> <p>The Contractor shall not be allowed to house labour on site. Allow for transporting workers to and from the site during the tenure of the contract.</p>		
F	<p><b>MATERIALS FROM DEMOLITIONS</b></p> <p>Any materials arising from demolitions and not re-used shall become the property of the government. The Contractor shall allow in his rates the cost of transporting the demolished materials to the County Works Office Nairobi.</p>		
	<b>Carried to Collection</b>		



Item	Description	Kshs.	Cts.
A	<p><b>PRICING RATES</b></p> <p>The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.</p>		
B	<p><b>SECURITY</b></p> <p>The Contractor shall allow for providing adequate security for the works and the workers in the course of execution of this contract. No claim will be entertained from the Contractor for not maintaining adequate security for both the works and workers.</p>		
C	<p><b>URGENCY OF THE WORKS</b></p> <p>The Contractor is notified that these “works are urgent” and should be completed within the period stated in these Particular Preliminaries. The Contractor shall allow in his rates for any costs he deems that he/she may incur by having to complete the works within the stipulated contract period.</p>		
D	<p><b>PAYMENT FOR MATERIALS ON SITE</b></p> <p>All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the Project Manager. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.</p>		
E	<p><b>EXISTING SERVICES</b></p> <p>Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he/she shall make whatever provisions may be required by the authorities concerned for the support, maintenance and protection of such services.</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>PERFORMANCE BOND</b></p> <p>A bond of 5% of the contract sum will be required. No payment on account for the works executed will be made to the contractor until he has submitted the Performance Bond to the Project Manager duly signed, sealed and stamped from an approved Bank in the approved format.</p>		
B	<p><b>TENDER DOCUMENTS</b></p> <p>Tender documents are as listed in Clause 6.1 of the Instruction to Tenderer's Page</p>		
C	<p><b>DELIVERY OF TENDER</b></p> <p>Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents or as indicated in the advertisement. Tenders will be opened at the time specified in the letter accompanying these Tender Documents or as indicated in the advertisement. Tenders delivered/received later than the above time will not be opened.</p>		
D	<p><b>VALUE ADDED TAX</b></p> <p>The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1st September, 1993 which requires payment of VAT on all contracts. The tenderer is advised that in accordance with Government public notice No. 35 &amp; 36 Dated 11th September 2003 operational from 1st October 2003, withholding VAT will be levied against the contract sum by the Employer and remitted to the Commissioner of VAT through all interim certificates. The contractor should therefore include this tax in the rates.</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
	<p>PROJECT MANAGEMENT EXPENSES</p> <p>A A Provisional Sum of Kenya Shillings Two Million (KShs. 2,000,000.00) only for Projects Management Expenses</p> <p>B Allow a percentage sum for the contractor's administrative costs (including taxes) and profits for the above</p>	2,000,000	00
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
	<p><u>PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT</u></p> <p>The following are the insertions to be made in the appendix to the Contract Agreement</p> <p>Period of Final Measurement- Completion      3 Months from Practical Completion</p> <p>Defects Liability Period - Completion      6 Months from Practical Completion</p> <p>Date for Possession -      To be agreed with the Project Manager</p> <p>Date for Completion -      30 weeks from date of Site Possession</p> <p>Liquidated and Ascertained Damages -      at a rate of Kshs 0.005% of contract price per day</p> <p>Period of Interim Certificates      -      Monthly</p> <p>Period of Honouring Certificates      -      30 Days</p> <p>Percentage of Certified Value Retained      -      10%</p> <p>Limit of Retention Fund      -      5%</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
	<u>COLLECTION</u> Brought forward from page 96  Brought forward from page 97  Brought forward from page 98  Brought forward from page 99  Brought forward from page 100  Brought forward from page 101  Brought forward from page 102  Brought forward from page 103		
	PARTICULAR PRELIMINARIES CARRIED TO SUMMARY PAGE		

## 1.2 GENERAL PRELIMINARIES

Item	Description	Kshs.	Cts.
A	<p>PRICING OF 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> <p>ABBREVIATIONS</p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows: -</p> <p>C.M. - Shall mean cubic metre</p> <p>S.M. - Shall mean square metre</p> <p>L.M. - Shall mean linear metre</p> <p>MM - Shall mean Millimetre</p> <p>Kg. - Shall mean Kilogramme</p> <p>No. - Shall mean Number</p> <p>Prs. - Shall mean Pairs</p> <p>B.S. - Shall mean the British Standard Specification Published by the British Standards Institution, 2 Park Street, London W.1., England.</p> <p>Ditto - Shall mean the whole of the preceding description except as qualified in the description in which it occurs.</p> <p>m.s. - Shall mean measured separately.</p> <p>a.b.d - Shall mean as before described.</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</b>  Attendance; Clause B19 (a) of the Standard Method of Measurement is deleted and the following clause is substituted: -</p> <p>Attendance on nominated Sub-Contractors shall be given as an item in each case shall be deemed to include: allowing use of standing scaffolding, mess rooms, sanitary accommodation and welfare facilities; provision of special scaffolding where necessary; providing space for office accommodation and for storage of plant and materials; providing light and water for their work: clearing away rubbish; unloading checking and hoisting: providing electric power and removing and replacing duct covers, pipe casings and the like necessary for the execution and testing of Sub- Contractors' work and being responsible for the accuracy of the same.</p> <p>Fix Only: -  "Fix Only" shall mean take delivery at nearest railway station (Unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, unload, store, unpack, assemble as necessary, distribute to position, hoist and fix only.</p> <p>The works to be carried out under this contract involves  <b>PROPOSED CONSTRUCTION OF INDIVIDUAL TRAINING KITCHEN AT KENYA UTALII COLLEGE</b></p> <p><b>VOLUME 1 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF KITCHEN EQUIPMENT AND LIQUIFIED PETROLEUM GAS INSTALLATION WORKS</b></p> <p><b>VOLUME 2 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF COLD STORAGE ROOMS &amp; REFRIGERATION INSTALLATION WORKS</b></p> <p><b>VOLUME 3 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF WATER HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING INSTALLATION WORKS</b></p> <p><b>PLANT, TOOLS AND VEHICLES</b>  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>		
B	<p><b>Carried to Collection</b></p>		

Item	Description	Kshs.	Cts.
A	<p><b>TRANSPORT.</b></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>		
B	<p><b>MATERIALS AND WORKMANSHIP.</b></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>		
C	<p><b>SIGN FOR MATERIALS SUPPLIED.</b></p> <p>The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT MANAGER at the time of taking deliver thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacements of any such loss or damage with articles and/or materials which will be supplied by the PROJECT MANAGER at the current market prices including Customs Duty and V.A.T., all at the Contractor's own cost and expense, to the satisfaction of the PROJECT MANAGER.</p>		
D	<p><b>STORAGE OF MATERIALS</b></p> <p>The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT MANAGER Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.</p>		
E	<p><b>CLAIMS</b></p> <p>It shall be a condition of this contract that upon it becoming reasonably apparent to 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 to claim notice to the PROJECT MANAGER within the contract period. No claims shall be entertained upon the expiry of the said contract period.</p>		
	<b>Carried to Collection</b>		



Item	Description	Kshs.	Cts.
A	<p><b>SAMPLES</b></p> <p>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 MANAGER, 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 Ministry of Public Works.</p> <p>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 The Contractor shall allow in his tender for such samples and tests except those in connection with nominated sub-contractors' work.</p>		
B	<p><b>GOVERNMENT ACTS REGARDING WORK PEOPLE ETC.</b></p> <p>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 organisation 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.</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p>PUBLIC AND PRIVATE ROADS.</p> <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>		
B	<p>EXISTING PROPERTY.</p> <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>		
C	<p>VISIT SITE AND EXAMINE DRAWINGS.</p> <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. No claim arising from his failure to comply with this recommendation will be considered.</p>		
D	<p>ACCESS TO SITE AND TEMPORARY ROADS.</p> <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>		
E	<p>AREA TO BE OCCUPIED BY THE CONTRACTOR</p> <p>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.</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>SUPERVISION AND WORKING HOURS</b></p> <p>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.</p>		
B	<p><b>INSURANCE</b></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>		
C	<p><b>OFFICE ETC. FOR THE PROJECT MANAGER</b></p> <p>The Contractor shall provide, erect and maintain where directed on site and afterwards dismantle the site office of the type noted in the Particular Preliminaries, complete with Furniture. He shall also provide a strong metal trunk complete with strong hasp and staple fastening and two keys. He shall provide, erect and maintain a lock-up type water or bucket closet for the sole use of the PROJECT MANAGER including making temporary connections to the drain where applicable to the satisfaction of Government and Medical Officer of Health 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 office and closet shall be completed before the Contractor is permitted to commence the works. 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.</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</b></p> <p>The Contractor shall provide at his own risk and cost all necessary water, electric light and power required for use in the works. The Contractor must make his own arrangements for connection to the nearest suitable water main and for metering the water used. He must also provide temporary tanks and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the PROJECT MANAGER. The Contractor shall pay all charges in connection herewith. 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. Nominated Sub--contractors are to be made liable for the cost of any water or electric current used and for any installation provided especially for their own use.</p>		
B	<p><b>SANITATION OF THE WORKS</b></p> <p>The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the PROJECT MANAGER.</p>		
C	<p><b>PROVISIONAL SUMS.</b></p> <p>The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(i) of the Standard Method of Measurement. Such sums are net and no addition shall be made to them for profit.</p>		
D	<p><b>PRIME COST (OR P.C.) SUMS.</b></p> <p>The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurement. Persons or firms nominated by the PROJECT MANAGER to execute work or to provide and fix materials or goods are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described herein as Nominated Suppliers.</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>PROGRESS CHART.</b></p> <p>The Contractor shall provide within two weeks 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><b>ADJUSTMENT OF P.C. SUMS.</b></p> <p>In the final account all P.C. Sums shall be deducted and the amount properly expended upon the PROJECT MANAGER'S order in respect of each of them added to the Contract sum. The Contractor shall produce to the PROJECT MANAGER such quotations, invoices or bills, properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of "attendance" (as previously described) following P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of them. Should the Contractor be permitted to tender and his tender be accepted of any work for which a P.C. Sum is included in these Bill of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a Nominated Sub-Contractor.</p>		
C	<p><b>ADJUSTMENT OF PROVISIONAL SUMS.</b></p> <p>In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the PROJECT MANAGER's order added to the Contract Sum. Such work shall be valued, but should any part of the work be executed by a Nominated Sub-Contractor, the value of such work or articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>NOMINATED SUB-CONTRACTORS</b></p> <p>When any work is ordered by the PROJECT MANAGER to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts and shall thereafter be responsible for such sub-contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractors any or all of the facilities described in these Preliminaries. The Contractor should price for these with the nominated Sub-contract Contractor's work concerned in the P.C. Sums under the description "add for Attendance".</p>		
B	<p><b>DIRECT CONTRACTS</b></p> <p>Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum in the priced Bills of Quantities will be adjusted as described for P.C. Sums is allowed.</p>		
C	<p><b>ATTENDANCE UPON OTHER TRADESMEN, ETC.</b></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>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>PROVISIONAL WORK</b></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>		
B	<p><b>ALTERATIONS TO BILLS, PRICING, ETC.</b></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>		
C	<p><b>BLASTING OPERATIONS</b></p> <p>Blasting will only be allowed with the express permission of the PROJECT MANAGER in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the PROJECT MANAGER governing the use and storage of explosives</p>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
A	<p><b>MATERIALS ARISING FROM EXCAVATIONS</b></p> <p>Materials of any kind obtained from the excavations shall be the property of the Government. Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the PROJECT MANAGER Should such permission be given, the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.</p>		
B	<p><b>PROTECTION OF THE WORKS.</b></p> <p>Provide protection of the whole of the works contained in the Bills of Quantities, including casing, 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.</p>		
C	<p><b>WORKS TO BE DELIVERED UP CLEAN</b></p> <p>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.</p>		
D	<p><b>GENERAL SPECIFICATION.</b></p> <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>Carried to Collection</b>		



Item	Description	Kshs.	Cts.
A	<p><b>TRAINING LEVY</b></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>		
B	<p><b>MATERIALS ON SITE</b></p> <p>All materials for incorporation in the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the PROJECT MANAGER. This includes the materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.</p>		
C	<p><b>HOARDING</b></p> <p>The Contractor shall enclose the site or part of the works under construction with a hoarding 2400 mm high consisting of iron sheets on 100 x 50 mm timber posts firmly secured at 1800 mm centres with two 75 x 50 mm timber rails approximately seven hundred and fifty metres. The Contractor is in addition required to take all precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on the site.</p>		
D	<p><b>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</b></p> <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>		
	<b>Carried to Collection</b>		

Item	Description	Kshs.	Cts.
	<u>COLLECTION</u> Brought forward from page 105  Brought forward from page 106  Brought forward from page 107  Brought forward from page 108  Brought forward from page 119  Brought forward from page 110  Brought forward from page 111  Brought forward from page 112  Brought forward from page 113  Brought forward from page 114  Brought forward from page 115  Brought forward from page 116		
	GENERAL PRELIMINARIES CARRIED TO SUMMARY PAGE		

**Bill No. 2.1: RESTAURANT, BAR AND BARRISTER EQUIPMENT**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b><u>Crockery</u></b>				
A	<b><u>Meat plates</u></b> As Arcoroc/Luminous, to be branded 'KUC'	500	No.		
B	<b><u>Entrée plates - 800 x 600mm</u></b> As Arcoroc/Luminous, to be branded 'KUC'	400	No.		
C	<b><u>Consomé cups</u></b> As Arcoroc/Luminous with two handles	400	No.		
D	<b><u>Consomé saucer</u></b> As Arcoroc consommé saucer	400	No.		
E	<b><u>Tea cups (china ware) - 500 x 560</u></b> As China ware - Arcoroc	100	No.		
F	<b><u>Tea saucers</u></b> AS China ware-Arcoroc matching with the tea cups	100	No.		
G	<b><u>Egg cups</u></b> Standard egg cup arcoroc	100	No.		
H	<b><u>Cream pots</u></b> Ceramic cream pot	20	No.		
I	<b><u>Honey pots</u></b> Ceramic honey pot	20	No.		
J	<b><u>Butter dishes</u></b> Small ceramic butter cream	20	No.		
K	<b><u>Side plates</u></b> Branded 'KUC' Arcoroc/luminous, diameter 7” inch 15.3cm.	600	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b><u>Cutlery</u></b>				
A	<b><u>Meat knives</u></b> High quality Standard meat knife stainless steel	600	No.		
B	<b><u>Butter knives</u></b> High quality Standard butter knife stainless steel	800	No.		
C	<b><u>Meat forks</u></b> Heavy gauge stainless steel dessert fork	600	No.		
D	<b><u>Dessert forks</u></b> Heavy gauge stainless steel dessert fork	800	No.		
E	<b><u>Fish slicers</u></b> Stainless steel fish serving slicer	200	No.		
F	<b><u>Fish forks</u></b> Stainless steel fish serving fork	200	No.		
G	<b><u>Tea spoons</u></b> High quality stainless steel teaspoon.	400	No.		
H	<b><u>Soup spoons</u></b> Round shaped stainless steel spoon silver	400	No.		
I	<b><u>Dessert spoons</u></b> Oval shaped stainless steel dessert spoon	400	No.		
J	<b><u>Service spoons</u></b> Medium size serving spoon	40	No.		
K	<b><u>Service forks</u></b> Medium size serving fork	50	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<b><u>Bar spoons</u></b> Bar Spoon Stainless Steel 25.5 cm Stirrer for Rs.200 Spoon Stainless Steel 25.5 cm Stirrer	8	No.		
B	<b><u>Steak knives</u></b> 9" stainless steel steak knives,firm not easily bent	20	No.		
C	<b><u>Ice tongs</u></b> BarCraft Ice Serving Tongs in Stainless Steel, 16 cm	20	No.		
D	<b><u>Lobster crackers</u></b> Master Class Deluxe Polished Crab and Lobster Crackers	20	No.		
E	<b><u>Snail forks SET</u></b> snail forks and tongs stainless steel	20	No.		
F	<b><u>Oyster forks SET</u></b> Oyster fork set stainless	20	No.		
G	<b><u>Oyster spoons SET</u></b> stainless steel oyster spoons	21	No.		
H	<b><u>Lobster pick</u></b> Lobster pick stainless	20	No.		
	<b><u>Glassware</u></b>				
I	<b><u>White wine glass</u></b> Standard 390ml capacity not easily chipped, crystal clear	500	No.		
J	<b><u>Red wine glass</u></b> Standard red wine glass 300ml capacity not easily chipped, crystal clear	500	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<b><u>Liqueur glasses</u></b> Short clear glass capacity 330ml	40	No.		
B	<b><u>Brandy balloons</u></b> Hard strong crystal brandy glass,400ml	100	No.		
C	<b><u>Champagne flute</u></b> Perception crystal Libby 17cl	100	No.		
D	<b><u>Champagne shallow</u></b> Champagne Glass, Clear, 5.1 fl oz (150 ml),	100	No.		
E	<b><u>Carraffe glasses small</u></b> glass carafes with lids17 oz	4	No.		
F	<b><u>Carraffe glasses large</u></b> glass carafes with lids, 35 oz,	4	No.		
G	<b><u>Beer mugs (small)</u></b> Traditional dimpled grafted beer mug of thick glass small	40	No.		
H	<b><u>Beer mugs (Jumbo)</u></b> Traditional dimpled grafted beer mug of thick glass. Large	100	No.		
I	<b><u>Long tumblers</u></b> Long tumbler glass 600ml	400	No.		
J	<b><u>Short tumblers</u></b> Short tumbler 240ml	400	No.		
K	<b><u>Water goblets</u></b> Sheer rim, 16 ounces, ideal for water not easily chipped Diameter 3.5 height 6.3.Edge should be beaded	500	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<u>Whiskey glasses</u> Old fashioned rocks glass with a heavy solid base, crystal clear capacity 330ml	100	No.		
B	<u>Whiskey jugs</u> Luminarc Wavy Jug + Lid, 700ml	10	No.		
C	<u>Port wine glasses</u> Crystal clear Size Port Wine Glass, 7.7-Ounce,	82	No.		
D	<u>Water jugs</u> Glass,clear 2litres with a top plastic cover	80	No.		
E	<u>TOT measures</u> Stainless steel Thimble bar 30ml,60ml (gigger)	6	No.		
F	<u>Sugar bowls</u> Ceramic sugar packet holder	100	No.		
G	<u>Cocktails glasses</u> Assorted different types of glasses varying in sizes and shapes	30	No.		
H	<u>Fancy glasses</u> Assorted shapes and sizes of fancy glasses for cocktails	40	No.		
I	<u>Sherry copita glasses</u> Sherry or port glass capacity of 120ml.	40	No.		
	<u>Plastic/Ceramic</u>				
J	<u>Tea Mugs plastic</u> Plastic stallion 0.5ml brown	1200	No.		
K	<u>Water jugs plastic</u> Plastic clear jug jug 1.5l	30	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<b><u>Water Tumblers plastic</u></b> Clear, Plastic 800x800	30	No.		
B	<b><u>TOT measures</u></b> Aluminum Double Tot Glass Double-sided Measuring Wine Tot stainless	8	No.		
C	<b><u>Soup bowls melamine</u></b> Melamine soup bowl 10oz colour white.	288	No.		
D	<b><u>Flower vases metallic</u></b> Interior decorating luxury gold centerpiece vase modern metal flower vase tube metal vase	90	No.		
E	<b><u>Chopping Board white/blue</u></b> commercial kitchen chopping board... heavy and durable 18x12cm	2	No.		
F	<b><u>Bar hammers</u></b> Stainless steel not easily breakable	2	No.		
G	<b><u>Bevarage trays</u></b> Non Slip Tray Round 35cm brown	40	No.		
H	<b><u>Service trays</u></b> Non Slip Tray Rectangle 35x27cm brown	60	No.		
I	<b><u>Jumbo trays</u></b> Rectangular Non slip jumbo serving tray Food tray 52x38cm	40	No.		
J	<b><u>Coffee pots</u></b> Stainless steel coffee pots 450ml	26	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					



Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<b><u>Cocktail strainers</u></b> Polished Stainless steel, 6", 4 prong cocktail strainer with metal spring.	5	No.		
	<b><u>Furniture</u></b>				
B	<b><u>Arm chairs (white)</u></b> Arm chair white see sample	4	No.		
C	<b><u>Arm chairs (black)</u></b> Arm chair black see sample	6	No.		
D	<b><u>Dining round table</u></b> Round foldable dining tables 5ft see sample	20	No.		
E	<b><u>Dining oblong table</u></b> Rectangular tables with white top and metallic legs easily carried see sample	40	No.		
F	<b><u>Dining banquet table</u></b> Foot Centerfold Folding Table White Use for Catering see sample	20	No.		
G	<b><u>Guerridon</u></b> Rectangular guerridon see sample	60	No.		
H	<b><u>Side boards</u></b> Antique sideboard with utensils and condiments see sample	60	No.		
I	<b><u>Dining red chairs</u></b> red Eames Molded Plastic Side Chair with 4 Leg easily stack	300	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b><u>Glassware</u></b>				
A	<b><u>Demo plate warmer</u></b> Stainless steel, easily movable Weight 32kg,plate capacity 60,internal dimension W45xD48xH85 temperature 30- 85centigrade,230v/50HZ/1 Phase 750W	3	No.		
B	<b><u>Flower vases</u></b> Stainless Steel Luxury Flower Vase Holder Wedding Table Centrepiece	45	No.		
C	<b><u>Fruit squeezers</u></b> Aluminum Fruit Squeezer And Pressure Fruit Juicer Press Household Kitchen Tool Fruit Juicer Citrus Extractor Tool - Silver	5	No.		
D	<b><u>Ice buckets</u></b> Ice Bucket Stainless Steel-5 Litre	15	No.		
E	<b><u>Ice crushers</u></b> Plastic body, capacity 1 litre ideal for a modern busy bar	1	No.		
F	<b><u>Manages Pairs</u></b> Salt and pepper shakers ,stainless steel	50	No.		
G	<b><u>Thermos flasks (small)</u></b> Stainless steel-1.5 litres	6	No.		
H	<b><u>Thermos flasks (large)</u></b> Stainless steel,2-litres	12	No.		
I	<b><u>Bread baskets</u></b> Woven clean can hold bread for five table cover serving	50	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<u>Wine baskets</u> Woven, round red wine basket with holder.	20	No.		
B	<u>TOT measures</u> Stainless steel Thimble bar 30ml,60ml (gigger)	4	No.		
C	<u>Cocktail shakers</u> 3 piece stainless steel cocktail shaker, 8 ounces	5	No.		
D	<u>Tooth pick holders</u> Ceramic with 'KUC' logo	50	No.		
E	<u>Pepper mills</u> Acrylic pepper mill 4.75'' the movable part should rotate easily	20	No.		
F	<u>Cutlery racks</u> Dish washing rack for cutlery,glasses,cups 50x50x10cm	20	No.		
G	<u>Wine cooler stand</u> Round Champagne Cooler with Stand, Deluxe Stainless Steel 18/10	20	No.		
H	<u>Cooler boxes</u> Commercial cooler box with a capacity of three crates of sodas plus ice cubes	4	No.		
I	<u>Table numbers</u> 20-30cm heavy base	45	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<b><u>Flambee trolleys</u></b> Twin Burners flambee trolley (1 Plate, 2 Burners) highly movable	1	No.		
B	<b><u>Flambee pans</u></b> One oval three round Non sticky interior coating for low –fat cooking, heavy gauge forged aluminum body,26”	4	No.		
C	<b><u>Flambee gas cylinders</u></b> Small gas cylinder 3kg	5	No.		
D	<b><u>Sugar bowls</u></b> Ceramic with 'KUC' logo	3	No.		
E	<b><u>Tea pots</u></b> Sunnex 1.0 l / 32 of oz stainless steel.	30	No.		
F	<b><u>Table mats</u></b> Woven restaurant table mats 30cmx45cm	300	No.		
G	<b><u>Milk pots</u></b> Sunnex 1.0 l / 32 of oz stainless steel.milk pot	30	No.		
H	<b><u>Table top heaters</u></b> Commercial table top heaters	3	No.		
I	<b><u>Table top for use in the heater</u></b> See sample	100	No.		
J	<b><u>Sherry copita GL</u></b> Sherry or port glass capacity of 120ml.	34	No.		
K	<b><u>Tea Urns</u></b> 20L, 2500watt, power heating, no rust, stainless steel, keep warm function.	34	No.		
<b>Sub - Total Carried forward to Collection Page 128</b>					

**Bill No. 2.1: Collection Page**

<b>Item</b>	<b>Description</b>	<b>Amount (Ksh)</b>
A	Sub-total brought forward from collection page ..... 118	
B	Sub-total brought forward from collection page ..... 119	
C	Sub-total brought forward from collection page ..... 120	
D	Sub-total brought forward from collection page ..... 121	
E	Sub-total brought forward from collection page ..... 122	
F	Sub-total brought forward from collection page ..... 123	
G	Sub-total brought forward from collection page ..... 124	
H	Sub-total brought forward from collection page ..... 125	
I	Sub-total brought forward from collection page ..... 126	
J	Sub-total brought forward from collection page ..... 127	
<b>Total for Restaurant, Bar and Barristar Equipment carried forward to the Kitchen Equipment and LPG Collection Page ..... 155</b>		

**Bill No. 2.2: NEW DEMONSTRATION AND ITK**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b><u>New Demonstration Kitchen and ITK</u></b>				
A	<b><u>Office Knives</u></b> Blade length 2.5"	42	No.		
B	<b><u>Turning Knives</u></b> blade length 3.5"	42	No.		
C	<b><u>Wire Whisk</u></b> handle 30cm the head balloon 18x10cm	42	No.		
D	<b><u>metal skimmers</u></b> 31 x11 cm	42	No.		
E	<b><u>Tart mould</u></b> 5" diameter	42	No.		
F	<b><u>Tartlet moulds</u></b> 2cm(H) X 4cm diameter x 7.2cm diameter	220	No.		
G	<b><u>Daliole moulds</u></b> 7.52x5.71x2.91 inches (L x W x H)	220	No.		
H	<b><u>egg slicer</u></b> 12cm x 8.2cm	42	No.		
I	<b><u>egg divider</u></b> 12.8cm x 6.1cm x 2.5cm (L x W x H)	42	No.		
J	<b><u>pastry cutters (sets)</u></b> stainless steel with plastic handle	6	No.		
K	<b><u>Piping bags</u></b> 16" long 406x225	50	No.		
L	<b><u>wooden rolling pins</u></b> length 700mm, diameter 38mm	42	No.		
<b>Sub - Total Carried forward to Collection Page 135</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<u>Wooden spatula</u> handle 12" the head 7cm x 10cm	126	No.		
B	<u>Baking mats (silpat)</u> 16.5 x 12.5 full size	22	No.		
C	<u>Lemon Squeezers</u> 425 x 284 inches	42	No.		
D	<u>tray s/s</u> 18 x 13.5cm	84	No.		
E	<u>Gastronorm Large</u> 18 x12 x 8	42	No.		
F	<u>Gastronorm medium</u> 18 x12 x 4	42	No.		
G	<u>Gastronorm - small</u> 18 x 6 x 8	42	No.		
H	<u>Mixing bowls</u> stainless steel	126	No.		
I	<u>Weighing scales (small)</u> rmax 15kg:min2gsR2 max 30kgmin e 5g	10	No.		
J	<u>Wire Skimmers</u> 9"300 x 300	42	No.		
K	<u>Hand Graters</u> size 5.5x4.8x9.5 inches	42	No.		
L	<u>Crepe pans</u> 17.4 "length x 10.0" diameter	42	No.		
M	<u>frying pans (medium</u> stainless, diameter 26cm	42	No.		
<b>Sub - Total Carried forward to Collection Page 135</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<u>Frying pans (large)</u> stainless steel, 32cm	42	No.		
B	<u>Stewing pan 3 lt - induction</u> stainless, diameter 32cm/3L	42	No.		
C	<u>stewing pots 3 lt</u> stainless steel, diameter 28cm/3L	42	No.		
D	<u>stock pot 10lt</u> stainless steel, diameter 28cm/10L	42	No.		
E	<u>stewing pot 5 lt</u> stainless steel 24x12cm/5L	42	No.		
F	<u>stewing pot 2 lt</u> stainless steel 20cm(8")/2L	42	No.		
G	<u>sauce pans (2lt) for induction cooking</u> diameter 22cm	42	No.		
H	<u>sauce pans 1lt</u> diameter 8.5cm(3.5")/1L	42	No.		
I	<u>mashing machines</u> 10.91 x 3.54 x3.66 inches	22	No.		
J	<u>flour dumpling sieve</u> diameter 26cm	22	No.		
K	<u>Hand Peeler</u> Blade length 2.5"	42	No.		
L	<u>meat butt/marlet</u> 8.7x3.5x2inches(22.1x8.9x5.1cm)	10	No.		
Sub - Total Carried forward to Collection Page 135					



Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<u>can opener</u> 4.47"(l),9.35"(H) X 4.62"(W)	6	No.		
B	<u>sauce boats</u> stainless steel with handle 450ml	42	No.		
C	<u>fancy dinner plates</u> KUC Log Ceramics, Luminous porcelain 31cm	300	No.		
D	<u>side plates</u> KUC Log ceramic diameter 7" 15.3 cm	300	No.		
E	<u>dessert plates</u> with KUC logo 20cm diameter	300	No.		
F	<u>Oval platters - large</u> stainless steel 24"	42	No.		
G	<u>Oval platters - medium</u> stainless steel 12"	42	No.		
H	<u>julienne knives</u> 2-1/2- 3-inch length	10	No.		
I	<u>sharpening stones</u> 150mmX50mmX25mm coarse grit	12	No.		
J	<u>sharpening steel</u> sharpening steel 25.5 cm	4	No.		
K	<u>kitchen scissors</u> blade 3 3/4 inches	10	No.		
L	<u>flat stainless steel trays</u> 18 x 13.5cm	42	No.		
<b>Sub - Total Carried forward to Collection Page 135</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<u>colander</u> long handle, 24 cm (9.5")	42	No.		
B	<u>meat forks</u> 12" stainless steel	42	No.		
C	<u>cooks knives</u> 45cm (victorinox)	42	No.		
D	<u>filleting knives</u> 20cm wide blade	42	No.		
E	<u>deboning knives</u> 15cm	42	No.		
F	<u>pallette knives</u> 10 inch at Rs	42	No.		
G	<u>sea food knives</u> stainless steel 9.5"	42	No.		
H	<u>larding kneedle</u> stainless steel 8"(20cm)	42	No.		
I	<u>bone saw</u> stainless steel blade	5	No.		
J	<u>laddles - 1 dl</u> 240mm length, stainless steel	42	No.		
K	<u>laddles 2 dl</u> 260mm length, stainless steel	42	No.		
L	<u>laddles 3 dl</u> 320mm length, stainless steel	42	No.		
M	<u>metal spatula</u> 30cm stainless steel	42	No.		
<b>Sub - Total Carried forward to Collection Page 135</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	<u>saw knives</u> 12 inch	42	No.		
B	<u>meat cleavers</u> 18cm	42	No.		
C	<u>butchers knives</u> length of blade/weight 195g	42	No.		
D	<u>Flour sieves</u> 18cm (7")	20	No.		
E	<u>Conical strainers</u> conical 8.75/23cm	42	No.		
F	<u>Fresh noodle machines with cutters &amp; roller</u> 0.5-3mm	10	No.		
G	<u>cast iron griddle</u> 10.5-inch	42	No.		
H	<u>cast iron roasting pan</u> 27x20cm, stainless steel	42	No.		
I	<u>blow torch</u> 17cm(L)X6cm(W)X11cm(Depth)	2	No.		
J	<u>plastic crates for storage</u> 540x355x290mm	30	No.		
K	<u>Chocolate moulds</u> approved PETG plastic	5	No.		
L	<u>Meat slicer</u> 250mm 10 inch blade	1	No.		
M	<u>Vaccum packing machine</u> sealing length 60"	1	No.		
<b>Sub - Total Carried forward to Collection Page 135</b>					

**Bill No. 2.2: Collection Page**

Item	Description	Amount (Ksh)
A	Sub-total brought forward from collection page ..... 129	
B	Sub-total brought forward from collection page ..... 130	
C	Sub-total brought forward from collection page ..... 131	
D	Sub-total brought forward from collection page ..... 132	
E	Sub-total brought forward from collection page ..... 133	
F	Sub-total brought forward from collection page ..... 134	
	<b>Total for New Demonstration and ITK carried forward to the Kitchen Equipment and LPG Collection Page ..... 155</b>	

**Bill No. 2.3: DEMONSTRATION KITCHEN EQUIPMENT**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Cooking Island</b>				
A	Single bowl single drainer SS Sink with rimmed edge profile suitable for a worktop to be supplied with fixing clips and dimensions 1028 x 500 x 182 mm. It should be inclusive of waste satin polish finish and no overflow. To have two tap holes. The sheet to be of 1.5 mm thickness.	1	No.		
B	Stainless steel worktop 750 m long and the sheet to be of 1.5 mm thickness with a cabinet below and door	1	No.		
C	A commercial kitchen 4 Burner gas cooking range (two burners of low pressure and two burners of high pressure).	1	No.		
D	Electric deep fat fryer 1 basket of capacity 6 litres and a power consumption of 2.5 kW with undershelf storage.	1	No.		
E	Electrical 2 hot plates cooker of the induction type with undershelf storage	1	No.		
F	A comercila ice cream maker of the table top kind with a capacity of 3.79 litres and a production rate of 40 minutes per batch. The material to be stainless steel.	1	No.		
<b>Sub - Total Carried forward to Collection Page 137</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	An electric combi oven on a stand of the following capacity: 1. with 4 shelves inserts 2. with 12 No. regeneration racks holding plates with a diameter of 28 mm 3. a production of between 30-80 meals per day 4. to have a power consumption of 7.8 kW and to have its fuse protection The dimensions desired is 550 x 787 x784 mm IT SHALL BE MADE OF STAINLESS STEEL A MINIMUM OF 1.5 mm THICKNESS.	1	No.		
B	A stainless steel Single Door Split Upright Refrigerator with a capacity of 685 litres with 4 shelves and movement going front and back on casters/ the temperature of operation (0-8) degrees Celsius and to have dimensions of external 740 x 830 x 2010 mm and a weight of 134 kg.	1	No.		
<b>Sub - Total Carried forward to Collection Page 137</b>					

**Bill No. 2.3: Demonstration Kitchen Collection Page**

Item	Description	Amount (Ksh)
1	Sub-total brought forward from collection page ..... 136	
2	Sub-total brought forward from collection page ..... 137	
<b>Total for Demonstration Kitchen Equipment carried forward to the Kitchen Equipment and LPG Collection Page ..... 155</b>		

**Bill No. 2.4: INDIVIDUAL TRAINING KITCHEN EQUIPMENT ITK 1**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b><u>Cooking Island for 20 students</u></b>				
A	Single bowl single drainer SS Sink with rimmed edge profile suitable for a worktop to be supplied with fixing clips and dimensions 1028 x 500 x 182 mm. It should be inclusive of waste satin polish finish and no overflow. To have two tap holes. The sheet to be of 1.5 mm thickness.	20	No.		
B	Stainless steel worktop 750 m long and the sheet to be of 1.5 mm thickness with a cabinet below and door	20	No.		
C	A commercial kitchen 4 Burner gas cooking range (two burners of low pressure and two burners of high pressure) with oven that has to be of electric type with a power consumption of 3 kW.	20	No.		
D	Electric deep fat fryer 1 basket of capacity 3 litres and a power consumption of 2.5 kW with undershelf storage.	20	No.		
E	Electrical 2 hot plates cooker with undershelf storage	12	No.		
F	A commercial electric meat mincer of capacity 60kg/hr of stainless steel.	1	No.		
G	A commercial electric sausage filler of capacity 5 litres	1	No.		
H	A multifunction compact table top food processor cutter and vegetable slicer with feed tubes (a half moon hopper of 1.6 litres and cylindrical hopper of diameter 58 mm all of stainless steel), cutter of capacity 4.5 litres stainless steel bowl with handle and stainless steel smooth blade	2	No.		
<b>Sub - Total Carried forward to the Collection Page 142</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Vegetable Preparation</b>				
A	Teflon Chopping Block that should be on a stand stainless steel that is approximately 800mm high from the floor.	3	No.		
B	Stainless steel worktop 3000mm long with unsder shelf and splashback of 1.5 mm.	2	No.		
	<b>Pastry</b>				
C	Bench Electronic weighing scale (1 - 10 Kg.)	6	No.		
D	Universal Mixing Machine 10 litres on stands	6	No.		
	<b>Wash - up</b>				
E	A dishwasher of five baskets and to be complete with: a. food scraper b. sink strainer c. scrap container 60L volume of preffered dimensions dia. 410mm and 635mm high d. infeed table(length 625mm x depth 700mm x 850mm high) with sink (500 x 400 x 250 mm) fitted to the left of the dishwasher e. shower head unit for the infeed table with mixer tap and tall swivel hose holder inclusive of wall spacer f. multipurpose table to be fitted to the right of the dishwasher (length 625mm x depth 700mm x 850mm high) and a rear 200mm upstand g. accessories for both partial and full demineralisation cartridges and partial reduction in mineral content h. the tank and all its accessories to make it stand and function i. a water softner j. baskets of 500mm x 500mm for the complete functioning of the washing system	1	No.		
<b>Sub - Total Carried forward to the Collection Page 142</b>					



Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	Plate Rack	3	No.		
B	Glass Rack	3	No.		
C	General Purpose Trolley	3	No.		
D	Double bowl Pot wash Sink	0	No.		
	<b>Servery</b>				
E	Salamander an electric lift kind with a weight of 28kg, dimensions of 800 x 450 x 500 mm and to be of a single phase 220-240 volts consuming a power of 5.6 kW	2	No.		
F	Electric heated Bain Marie of dimensions 600 x 700 x 850 mm to have a hotcupboard	1	No.		
G	Electric heated Bain Marie of dimensions 300 x 700 x 850 mm to have a hotcupboard	1	No.		
H	A 2 group semi automatic coffee machine	2	No.		
I	A coffee beans grinder	1	No.		
J	Water softner for the coffee machine	2	No.		
K	Insectocutor	5	No.		
L	Ice cube maker with a capacity of 24 kg/day	1	No.		
M	Commercial multi-purpose juice extractor	2	No.		
	<b>Builders work</b>				
N	The supplier to ensure that builders work associated with the installation of the equipments	1	Item		
O	Mobile Refuse Bin 50 litre	9	No.		
<b>Sub - Total Carried forward to the Collection Page 142</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Cold area</b>				
A	Upright Freezer of depth 700mm and 1920mm high x 1200 mm wide. Its construction be of stainless steel with rounded corners and moulded bottom. A 50mm insulation with polyurethane that is water expanded environmentally friendly. An air cooled refrigerating unit with a working ambient temperature of +43 degrees celsius using R404A to have an electronic control panel, automatic defrosting, automatic evaporation of condensate water and a key lock. it should have self closing doors with easily replaceable magnetic gaskets and stainless steel feet adjustable in height (130-185mm)	2	No.		
B	Double Door Upright Refrigerator with a capacity of 1250 litres with 8 shelves and movement going front and back on casters/ the temperature of operation (0-8) degrees Celsius and to have dimensions of external 1417 x 762 x 1994 mm and internally 1341 x 622 x 1556 mm and a weight of 212 kg.	2	No.		
	<b>Store</b>				
C	4-tier stainless steel rack plain board of size 1200 x 600 x 1800 mm	2	No.		
D	4-tier stainless steel rack slotted of size 1200 x 600 x 1800 mm	2	No		
E	Commercial juice blender heavy duty of 1.5 litres	6	No.		
	<b>Testing and Commissioning</b>				
F	Testing and commissioning, setting to work to the requirements of the specification and to the satisfaction of the Project Engineer.	1	Item		
<b>Sub - Total Carried forward to the Collection Page 142</b>					

**Bill No. 2.4: Collection Page**

Item	Description	Amount (Ksh)
A	Sub-total brought forward from collection page ..... 138	
B	Sub-total brought forward from collection page ..... 139	
C	Sub-total brought forward from collection page ..... 140	
D	Sub-total brought forward from collection page ..... 141	
	<b>Total for Individual Training Kitchen 1 Equipment carried forward to the Kitchen Equipment and LPG Collection Page ..... 155</b>	

**Bill No. 2.5: INDIVIDUAL TRAINING KITCHEN EQUIPMENT ITK 2**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b><u>Cooking Island for 20 students</u></b>				
A	Single bowl single drainer SS Sink with rimmed edge profile suitable for a worktop to be supplied with fixing clips and dimensions 1028 x 500 x 182 mm. It should be inclusive of waste satin polish finish and no overflow. To have two tap holes. The sheet to be of 1.5 mm thickness.	20	No.		
B	Stainless steel worktop 750 m long and the sheet to be of 1.5 mm thickness with a cabinet below and door	20	No.		
C	A commercial kitchen 4 Burner gas cooking range (two burners of low pressure and two burners of high pressure) with oven that has to be of electric type with a power consumption of 3 kW.	20	No.		
D	Electric deep fat fryer 1 basket of capacity 3 litres and a power consumption of 2.5 kW with undershelf storage.	20	No.		
E	Electrical 2 hot plates cooker with undershelf storage	12	No.		
F	A commercial electric meat mincer of capacity 60kg/hr of stainless steel.	1	No.		
G	A commercial electric sausage filler of capacity 5 litres	1	No.		
H	A multifunction compact table top food processor cutter and vegetable slicer with feed tubes (a half moon hopper of 1.6 litres and cylindrical hopper of diameter 58 mm all of stainless steel), cutter of capacity 4.5 litres stainless steel bowl with handle and stainless steel smooth blade	2	No.		
<b>Sub-total carried forward to the collection page 147</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Vegetable Preparation</b>				
A	Teflon Chopping Block that should be on a stand stainless steel that is approximately 800mm high from the floor.	3	No.		
B	Stainless steel worktop 3000mm long with unsder shelf and splashback of 1.5 mm.	2	No.		
	<b>Pastry</b>				
C	Bench Electronic weighing scale (1 - 10 Kg.)	6	No.		
D	Universal Mixing Machine 10 litres on stands	6	No.		
E	Plate Rack	3	No.		
F	Glass Rack	3	No.		
G	General Purpose Trolley	3	No.		
	<b>Servery</b>				
H	Salamander an electric lift kind with a weight of 28kg, dimensions of 800 x 450 x 500 mm and to be of a single phase 220-240 volts consuming a power of 5.6 kW	2	No.		
I	Electric heated Bain Marie of dimensions 600 x 700 x 850 mm to have a hotcupboard	1	No.		
J	Electric heated Bain Marie of dimensions 300 x 700 x 850 mm to have a hotcupboard	1	No.		
K	A 2 group semi automatic coffee machine	2	No.		
L	A coffee beans grinder	1	No.		
<b>Sub-total carried forward to the collection page 147</b>					



Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Cold area</b>				
A	Upright Freezer of depth 700mm and 1920mm high x 1200 mm wide. Its construction be of stainless steel with rounded corners and moulded bottom. A 50mm insulation with polyurethane that is water expanded environmentally friendly. An air cooled refrigerating unit with a working ambient temperature of +43 degrees celsius using R404A to have an electronic control panel, automatic defrosting, automatic evaporation of condensate water and a key lock. it should have self closing doors with easily replaceable magnetic gaskets and stainless steel feet adjustable in height (130-185mm)	2	No.		
B	Double Door Upright Refrigerator with a capacity of 1250 litres with 8 shelves and movement going front and back on casters/ the temperature of operation (0-8) degrees Celsius and to have dimensions of external 1417 x 762 x 1994 mm and internally 1341 x 622 x 1556 mm and a weight of 212 kg.	2	No.		
	<b>Store</b>				
C	4-tier stainless steel rack plain board of size 1200 x 600 x 1800 mm	2	No.		
D	4-tier stainless steel rack slotted of size 1200 x 600 x 1800 mm	2	No		
E	Commercial juice blender heavy duty of 1.5 litres	6	No.		
	<b>Builders work</b>				
F	The supplier to ensure that builders work associated with the installation of the equipments	1	Item		
<b>Sub-total carried forward to the collection page 147</b>					

**Bill No. 2.5: Collection Page**

Item	Description	Amount (Ksh)
A	Sub-total brought forward from collection page ..... 143	
B	Sub-total brought forward from collection page ..... 144	
C	Sub-total brought forward from collection page ..... 145	
D	Sub-total brought forward from collection page ..... 146	
<b>Total for Individual Training Kitchen 2 Equipment carried forward to the Kitchen Equipment and LPG Collection Page ..... 155</b>		



**Bill No 2.6: Liquefied Petroleum Gas Installations**

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b><u>LPG installations in ITK 1</u></b>				
	Supply, delivery, installation, testing and commissioning of the following LPG installations complete with all the accessories including all connections to the services				
	(i) The contractor for this works to note that the exact dimensions and a copy of a certified drawing shall be needed before the works commence from the LPG supplier they intend to use.				
	(ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings.				
	(iii) Equal models may be acceptable.				
	<b>Storage tank</b>				
A	LPG Tank, with a nominal LPG capacity of 2,000 kg, a water capacity of 4500 litres and a continuous off-take of 10.19 cu.m/hr. To have preferred dimensions of diameter 1220 mm, overall length 4100 mm and an overall height of 1685 mm.	1	No.		
B	High Pressure Regulator	1	No.		
C	Leak detector plus solenoid valve	1	No.		
	<b>Reticulation Piping and Fittings</b>				
D	Seamless Schedule 40 pipe 1.25"	250	Lm.		
E	Weldon Elbow 1.25"	2	No.		
F	Weldon Tee 1.25"	5	No.		
G	Flanges 1.25" class 300	2	No.		
H	LPG Ball Valves 1.25" brass	3	No.		
<b>Sub Total Carried Forward to Collection Page 154</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	LPG Ball Valves 1/2" brass	24	No.		
B	LPG Manifold one in five out	4	No.		
	<b>Safety</b>				
C	LPG Detectors and shut off valves	6	No.		
D	Allow for refilling the LPG system with necessary amount of gas for initial testing and one more time during operation.	1	No.		
	<b>LPG Metering, Pressure Control and Isolation Valves</b>				
E	Gas Meter	5	No.		
F	Gas Meter Compartment	5	No.		
G	Low Pressure gas regulator	20	No.		
H	Gas Filter 1.25"	5	No.		
I	Meter connection flexible hoses	5	No.		
	<b>Painting and Signage</b>				
J	Allow for painting of the LPG installation with 2 coats of yellow super gloss painting on anti corrosion primer coat	1	Item		
K	Laminated labels for the LPG installation and " No Smoking" Labels	1	Item		
L	Allow for setting to work, testing and commissioning of the LPG installation system.	1	Item		
<b>Sub Total Carried Forward to Collection Page 154</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Associated works</b>				
A	Place an industrial type fence to cover an area that is 12 m long and 8 m wide rectangular in shape to be at least 1.8 m high to the satisfaction of the engineer	1	Item		
B	Underground pipework must be a minimum of 500mm below finished ground level. Trenches shall be dug deeper than 500mm and all stones should be removed from the bottom of the excavation before backfilling and compacting the bottom 75mm of the trench with sifted material. In addition the pipework shall be supported with sifted material and a warning tape should be laid 150mm above the pipework	1	Item		
C	The soil needs to be tested and results submitted to the engineer. If found to be corrosive the contractor shall ensure that the pipework laid is protected from corrosion. It is important to note that no pipework shall be laid without a report on the nature of the soil	1	Item		
D	The pipework insatallations shall be pressure tested before connecting to the tank.	1	Item		
E	All the above associated works will need to be approved by the engineer before the works proceed in the steps allow a sum for engineers inspection at all steps	1	Item		
<b>Sub Total Carried Forward to Collection Page 154</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b><u>LPG installations in ITK 2</u></b>				
	Supply, delivery, installation, testing and commissioning of the following LPG installations complete with all the accessories including all connections to the services				
	(i) The contractor for this works to note that the exact dimensions and a copy of a certified drawing shall be needed before the works commence from the LPG supplier they intend to use.				
	(ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings.				
	(iii) Equal models may be acceptable.				
	<b>Storage tank</b>				
A	LPG Tank, with a nominal LPG capacity of 2000 kg, a water capacity of 4500 litres and a continuous off-take of 10.19 cu.m/hr. To have preferred dimensions of diameter 1220 mm, overall length 4100 mm and an overall height of 1685 mm.	1	No.		
B	High Pressure Regulator	1	No.		
C	Leak detector plus solenoid valve	1	No.		
	<b>Reticulation Piping and Fittings</b>				
D	Seamless Schedule 40 pipe 1.25"	250	Lm.		
E	Weldon Elbow 1.25"	2	No.		
F	Weldon Tee 1.25"	5	No.		
G	Flanges 1.25" class 300	2	No.		
H	LPG Ball Valves 1.25" brass	3	No.		
<b>Sub Total Carried Forward to Collection Page 154</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	LPG Ball Valves 1/2" brass	24	No.		
B	LPG Manifold one in five out	4	No.		
	<b>Safety</b>				
C	LPG Detectors and shut off valves	6	No.		
D	Allow for refilling the LPG system with necessary amount of gas for initial testing and one more time during operation.	1	No.		
	<b>LPG Metering, Pressure Control and Isolation Valves</b>				
E	Gas Meter	5	No.		
F	Gas Meter Compartment	5	No.		
G	Low Pressure gas regulator	20	No.		
H	Gas Filter 1.25"	5	No.		
I	Meter connection flexible hoses	5	No.		
	<b>Painting and Signage</b>				
J	Allow for painting of the LPG installation with 2 coats of yellow super gloss painting on anti corrosion primer coat	1	Item		
K	Laminated labels for the LPG installation and " No Smoking" Labels	1	Item		
L	Allow for setting to work, testing and commissioning of the LPG installation system	1	Item		
<b>Sub Total Carried Forward to Collection Page 154</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
<b>Associated works</b>					
A	Place an industrial type fence to cover an area that is 12 m long and 8 m wide rectangular in shape to be at least 1.8 m high to the satisfaction of the engineer	1	Item		
B	Underground pipework must be a minimum of 500mm below finished ground level. Trenches shall be dug deeper than 500mm and all stones should be removed from the bottom of the excavation before backfilling and compacting the bottom 75mm of the trench with sifted material. In addition the pipework shall be supported with sifted material and a warning tape should be laid 150mm above the pipework	1	Item		
C	The soil needs to be tested and results submitted to the engineer. If found to be corrosive the contractor shall ensure that the pipework laid is protected from corrosion. It is important to note that no pipework shall be laid without a report on the nature of the soil	1	Item		
D	The pipework insatallations shall be pressure tested before connecting to the tank.	1	Item		
E	All the above associated works will need to be approved by the engineer before the works proceed in the steps allow a sum for engineers inspection at all steps	1	Item		
<b>Sub Total Carried Forward to Collection Page 154</b>					

**Bill No. 2.6: Collection Page**

Item	Description	Amount (Ksh)
A	Sub-total brought forward from collection page ..... 148	
B	Sub-total brought forward from collection page ..... 149	
C	Sub-total brought forward from collection page ..... 150	
D	Sub-total brought forward from collection page ..... 151	
E	Sub-total brought forward from collection page ..... 152	
F	Sub-total brought forward from collection page ..... 153	
	<b>Total for Liquefied Petroleum Gas Installations carried forward to the Kitchen Equipment and LPG Collection Page ..... 155</b>	

Kitchen Equipment and LPG Works Collection Page

Item	Description	Amount (Ksh)
A	2.1: Total for Restaurant, Bar and Barristar Equipment b/f page .. 128	
B	2.2: Total for New Demonstration and ITK Equipment b/f page .. 135	
C	2.3: Total for New Demonstration Equipment b/f page ..... 137	
D	2.4: Total for Individual Training Kitchen 1 Equipment b/f page ... 142	
E	2.5: Total for Individual Training Kitchen 2 Equipment b/f page .. 147	
F	2.6: Total for Liquified Petroleum Gas Installations b/f page ..... 154	
<b>Total for Kitchen Equipment and LPG Works carried forward to the Grand Summary Page ..... 160</b>		



**Bill No. 3: Schedule of Daywork Rates - Labor**

Item no.	Description	Unit	Nominal quantity	Rate	Amount
	Subtotal				
	Allow ___ percent <sup>a</sup> of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 3 (b) above.				
	Total for Daywork (carried forward to Daywork Summary, p. ____)				

a. To be entered by the Tenderer.

**Bill No. 4: Schedule of Daywork Rates - Materials**

Item no.	Description	Unit	Nominal quantity	Rate	Extended amount
	Subtotal				
	Allow ___ percent a. of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 4 (b) above.				
	Total for Daywork: Materials (carried forward to Daywork Summary, p. _____)				

a. To be entered by the Tenderer.

**Bill No. 5: Schedule of Daywork Rates - Contractor's Equipment**

<i>Item no.</i>	<i>Description</i>	<i>Nominal quantity (hours)</i>	<i>Basic hourly rental rate</i>	<i>Extended amount</i>
	Allow _ percent <sup>a</sup> of Subtotal for Contractor's overhead, profit, etc., in accordance with paragraph 5 above.			
	Total for Daywork: Contractor's Equipment (carried forward to Daywork Summary, p. __)			

a. To be entered by the Tenderer.

**Bill No. 6: Daywork Summary**

	<i>Amount<sup>a</sup></i>	<i>% Foreign</i>	<i>Currency</i>
1. Total for Daywork: Labor			
2. Total for Daywork: Materials			
3. Total for Daywork: Contractor's Equipment			
Total for Daywork (Provisional Sum) (carried forward to Summary of Bills of Quantities, p. ____)			

**Bill No. 7: Provisional Sums**

<i>Item no.</i>	<i>Description</i>	<i>Amount</i>
1.	Allow Provisional Sums for Continuous Professional Development and Training of Project Management Team	1,000,000.00
2.	Allow for V.A.T, profit and attendance on item Above .....%	
3.	Allow Provisional Sums for Overseas Benchmarking visits by the Clients and Project Management Teams	10,000,000.00
4.	Allow for V.A.T, profit and attendance on item Above .....%	
5.	Allow Provisional Sums for Furniture supply	6,000,000.00
6.	Allow for V.A.T, profit and attendance on item above .....%	
7.	Allow Provisional Sums for Teaching Aids Supply	13,000,000.00
8.	Allow for V.A.T, profit and attendance on item Above .....%	
9.	Contingency Sum to be expended at the discretion of the Project Manager	15,000,000
	<b>TOTAL CARRIED TO GRAND SUMMARY</b>	

**GRAND SUMMARY**

<b>SUMMARY ITEMS</b>		<i>Page</i>	<i>Amount</i>
Bill No. 1: Preliminary Items			
1.1	Particular Preliminary Items	104	
1.2	General Preliminary Items	117	
Bill No. 2: Works Items:			
	Volume 1 of 3: Kitchen Equipment and Liquified Petroleum Gas Installations Works	155	
	Volume 2 of 3: Cold Storage Rooms & Refrigeration Installation Works	334	
	Volume 3 of 3: Water Harvesting, Water Reticulation, Water Tanks and Solar Water Heating Installation Works	420	
Bill No. 7: Provisional Sums		159	
Subtotal of Bills No 1-7			
Allow for any Discounts <sup>i</sup>			
	<b>TOTAL TENDER PRICE Carried forward to Form of Tender</b>		

(i) If a percentage used, it should be indicated on which Bill No. items but on Bill No.4 – Provisional Sums.

### SCHEDULE OF UNIT RATES

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorized variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted

ITEM	DESCRIPTION	UNIT	RATE (Kshs)
1.	50 Kg L.P. Gas Cylinder complete with Initial gas fill	Item	
2.	25 Kg -ditto-	Item	
3.	Double Bowl Double Drain SS Kitchen Sink	Item	
4.	Single Bowl Double Drain SS Kitchen Sink	Item	
5.	High Pressure Gas Regulator	No.	
6.	L.P. Gas supply	Item	
7.	32mm GMS pipe work	LM	
8.	6/8mm Copper Gas pipe work	Lm	
9.	Gas tap	No.	

## TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

### TECHNICAL SCHEDULE

1. The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders, especially where the tenderer intends to supply or has based his tender sum on equipment which differs in manufacture, type or performance from the specifications indicated by the Project Manager/Engineer.
2. This schedule shall form part of the technical evaluation criterion, and tenderers are therefore advised to complete the schedule as they shall be considered non responsive.

**NB.** The tenderer must complete in full the technical schedule. Apart from the information required in the technical schedule, the tenderer **MUST SUBMIT LEGIBLE** comprehensive manufacturer's technical brochures and performance details for all items listed in this schedule and **CLEARLY HIGHLIGHT THE SPECIFIC REQUIRED ITEM ONLY.**

S/N O	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No. etc.)
A	Entrée plates - 800 x 600mm			
B	White wine glass			
C	Long tumblers			
D	Coffee pots			
E	Arm chairs (white)			
F	Dining banquet table			
G	Demo plate warmer			
H	Stewing pan 3 lt – induction			
I	Vacuum packing machine sealing length 60"			
J	Single bowl single drainer SS Sink			
K	A commercial kitchen 4 Burner gas cooking range			
L	An electric combi oven on a stand			
M	A commercial electric meat mincer of capacity 60kg/hr			
N	Universal Mixing Machine 10 litres on stands			
O	Upright Freezer of depth 700mm and 1920mm high x 1200 mm wide			

P	Fresh noodle machines with cutters & roller			
Q	Table top food processor			
R	A 2 group semi-automatic coffee machine			
S	Commercial multi-purpose juice extractor			
T	LPG Tank, with a nominal LPG capacity of 2,000 kg			
U	High Pressure Regulator			
V	L.P. Gas Meter			
W	L.P. Gas Manifold			

**Catalogue must be attached for all the items in the schedule of material above**



## SECTION VI – SPECIFICATIONS

## **PARTICULAR SPECIFICATION FOR KITCHEN EQUIPMENT**

These are specifications of various kitchen equipment.

The tenderer is to visit the office of the head of production and the office of the head of food and beverage services at Kenya Utalii College to get to know the kind of equipment that is suitable for the individual training kitchen.

It should be noted that a failure to visit the site might lead you the tenderer to procure materials with the wrong specifications since the kitchen equipment are specialized for offering training to students.

Details that are particular to these works like power ratings, gas consumption and sizes have been included in the bills of quantities and any matters requiring clarification will be provided by the Chief Engineer [Mechanical (BS)].

### **1. SOLID TOP ELECTRIC COOKING RANGE**

Electrically heated solid top cooking range complying with KS 04-1111-15:1993 constructed as follows:

- Exterior satin finish 18/10 stainless steel, minimum 2mm thick.
- Electrically heated cast iron radiant plates with built in thermostats.
- Number of plates and power rating for each plate shall be as specified.
- Heat resistant power control knobs for the plates.
- “Power on “indicator lights for all the plates.
- High temp limit thermostat with manual reset.
- Minimum 0.8mm thick Drip tray in stainless steel

The unit shall have an electrically heated thermally insulated oven constructed as follows:

- Double oven walls in stainless steel insulated with high density fiber glass.
- Oven heating elements positioned at the top and under the oven base plate with total loading to be specified.
- Thermostatically controlled oven temperature to range from 50° C- 350°C with adjustable thermostat.
- High temp limit thermostat with manual reset
- Indicator lamp to show mains on.
- Double skinned counter balanced fiber glass insulated door with heat resistant handles.
- There shall be Chromium plated oven shelves with at least three levels for shelf setting.
- The unit shall be on adjustable stainless-steel feet, padded on the bottom to avoid scratching the floor.

The total rating of range and oven shall be as specified and suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing. Power shall be supplied through heat resistant cables. Its external dimensions shall be as specified.

### **2. GAS COOKING RANGE.**

Gas heated cooking range with oven constructed as follows:

- Exterior satin finish 18/10 stainless steel, minimum 2mm thick.
- Open burners in enameled cast iron with double crown cover in printed brass.
- The number of burners and their gas consumption shall be as specified.
- Heat resistant gas knobs and thermocouple-controlled flame failure gas shut off device.

- Automatic burners lighting device with pilot flame.
- Cast iron pan supports.
- Minimum 0.8mm thick Drip tray in stainless steel.

The oven and door shall be double walled with fiber glass insulation, complete with: -

Stainless steel burner with automatic lighting device. Burner gas consumption shall be as specified.

Thermocouple controlled flame failure gas shut off device.

There shall be Chromium plated oven shelves with at least three levels for shelf setting.

Secondary drip tray below burners (in stainless steel)

Thermostatically controlled oven temp to range from 50°C to 350°C.

The unit shall be on adjustable stainless-steel feet, padded on the bottom to avoid scratching the floor.

The unit shall operate on L.P gas at 0.15 bar.

Its external dimensions shall be as specified.

### 3. STOCKPOT STAND

L.P. gas heated stockpot stand on a sturdy stainless-steel frame constructed as follows:

- Minimum 2mm thick exterior satin finish 18/10 stainless steel.
- Cast iron burner with Automatic lighting device and flame failure device.
- Stainless steel drip tray, minimum 0.8mm thick.
- Enameled cast iron pan supports.
- Adjustable stainless-steel feet.

The unit gas consumption and external dimensions shall be as specified.

### 4. GAS HEATED TILTING BRAT PAN

Directly heated L. P. gas tilting brat pan constructed as follows:

- Exterior surface finish 18/10 stainless steel, minimum 2mm thick 18/10 stainless steel counter balanced lid with helicoidal spring, shaped to assist in containing condensation within the pan.
- Lid shall have heat resistant handles
- Pan in 18/10 stainless steel with stainless steel thermal diffusion bottom and a shaped front side for easy discharge of oil.
- Robust Manual worm and wheel tilting mechanism with heat resistant handle
- A water spout with tap at front of appliance
- Stainless steel multi-pipe burners with automatic burner ignition device, flame failure protection device and thermostat to control cooking temperature (50° to 300°C)
- Safety device for switching off burner during lifting of pan
- High temperature limit thermostat with manual reset
- Adjustable stainless-steel feet

The unit gas consumption, pan capacity and external dimensions shall be as specified.

### 5. FIXED GAS HEATED BOILING PAN

Fixed Boiling pan constructed as above but mounted on adjustable stainless-steel feet to provide a clearance of 300mm above the floor.

## **6. ELECTRIC HEATED TILTING BRAT PAN**

Directly heated Electric tilting brat pan with pan capacity to be specified.

It shall be constructed as follows:

- Exterior surface finish 18/10 stainless steel, minimum 2mm thick 18/10 stainless steel counter balanced lid with helicoidal spring, shaped to assist in containing condensation within the pan.
- Lid shall have heat resistant handles
- Pan in 18/10 stainless steel with stainless steel thermal diffusion bottom and shaped front side for easy discharge of oil.
- Robust Manual worm and wheel tilting mechanism with heat resistant handle
- A water spout with tap at front of appliance
- Thermostatically controlled armoured stainless steel elements fixed on bottom of pan
- Safety device for switching off burner during lifting of pan
- High temperature limit thermostat with manual reset
- Signal lamps for indicating electricity ON.
- Adjustable stainless-steel feet

The total rating of unit shall be as specified and suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

Power shall be supplied through insulated heat resistant cables.

Its external dimensions shall be as specified.

## **7. FIXED ELECTRIC HEATED BOILING PAN**

Boiling pan constructed as above but mounted on a sturdy stainless-steel frame without manual worm gear and wheel tilting mechanism.

## **8. FIXED INDIRECTLY HEATED GAS HEATED BOILING PAN**

A cylindrical indirectly heated gas-boiling pan constructed as follows:

- Satin finished 18/10 stainless steel pan and cavity both 2mm thick.
- Satin finished 18/10 stainless steel spring balanced lid with heat resistant handle.
- 32mm pan outlet with tap for discharge.
- Removable vegetable basket.
- Cast iron ring burners with Automatic ignition device, pilot flame and flame failure protection device.
- High temperature limit thermostat with manual resetting
- Glass wool thermal insulation of combustion chamber.
- Water supply connections.
- Pressure relief valve to operate at 0.5 bar
- Cavity discharge tap, water inlet valve with level control and thermometer
- Adjustable stainless-steel feet to provide a clearance of 300mm above the floor.

The unit gas consumption, pan capacity and external dimensions shall be as specified

## **9. GAS HEATED DEEP FAT FRYER**

L.P gas heated pedestal deep fat fryer constructed as follows:

- Exterior satin finish in 18/10 stainless steel, minimum 2mm thick.
- Fryer wells shall be of 18/10 stainless steel with oil draw off tap.
- Stainless steel lid with heat resistant handles.
- Stainless steel oil collection bin.
- Stainless steel frying baskets with heat resistant handles.
- Deep cool zone for residual particles.
- Cast iron burners with automatic ignition device, flame failure protection device and oil temperature regulation thermostat ranging from 90°C to 270° C.
- Manually resettable high limit safety thermostat.
- Adjustable stainless-steel feet.

The number of wells and their oil capacity, gas consumption and external dimensions shall be as specified.

## **10. ELECTRIC HEATED DEEP FAT FRYER**

Electric heated deep fat fryer constructed as follows:

- Exterior satin finish 18/10 stainless steel 2mm thick.
- Fryer wells shall be of 18/10 stainless steel with oil draw off tap.
- Stainless steel lid with heat resistant handles.
- Stainless steel oil collection bin.
- Frying S. Steel baskets with heat resistant handles.
- Deep cool zone for residual particles.
- Armored electric heaters with oil temperature regulation thermostat ranging from 90°C to 270° C.
- Manually resettable high limit safety thermostat.
- Operation Status indicator light

The number of wells and their oil capacity shall be as specified.

The total power rating of unit shall be as specified and suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

Power shall be supplied through insulated heat resistant cables. Its external dimensions shall be as specified.

## **11. CHICKEN GRILL**

Rotary chicken grill of stainless-steel construction with tempered double pane hinged glass doors.

It shall have a robust removable rotor, splits, drip tray & stainless-steel bars.

It shall be electrically heated to cook by both convection and radiant heat & shall be equipped with thermostat, timer, overload protection and lighting.

The bird capacity dimensions and power rating shall be as specified.

It shall be operating on 240V, 50Hz power supply.

## 12. COMBI OVEN

A gas heated combination oven with both convective and steam heating constructed as follows:

- Paneling, oven door and control panel in 18/10 stainless steel cooking chamber with well rounded corners to facilitate cleaning.
- The chamber door shall double glazed heat tempered glass with a seal fitted all round to form an air tight enclosure. It shall open out at 180 ° to allow easy movement of the trays and shall have a heat resistant handle.
- It shall have racks in stainless steel.
- The position of the racks shall be adjustable within the chamber.
- The chamber temperature shall be thermostatically controlled for cooking at 50° to 270°C by convective heating.
- It shall also be equipped with heating elements a circulation fan, a timer, end of cooking acoustic signal, extract fan to eliminate vapors, a circulation fan, chamber lighting and condensation tray with drain.

It shall also cook by steam and shall therefore have stainless steel steam generator with pressure relief valve, water level controller, overheat safety cutout, and water supply connection with automatic level device and lime remover unit.

A microprocessor to control operations like lighting of burners for the chamber and boiler, boiling and cooking time, fan's control, and temperature control.

The oven dimensions, number of racks and power rating shall be as specified.

It shall be suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

## 13. MICROWAVE OVEN

Microwave Oven equipped with motor driven turn table.

It shall have a glass door for visual monitoring of cooking process.

It shall incorporate safety features such as a safety interlock system to shut off power when the door is opened or not properly closed.

It shall have simple electronic digital power and time control. It shall be complete with circulation fan for even cooking.

It shall operate on 240 V 50Hz power supply.

## 14. COFFEE/TEA URN

Electrically heated coffee/tea urn constructed from stainless steel casing with lift off cover.

The urn shall be complete with non-drip draw off tap and drain plug and water supply arm with control valve and drain plug.

It shall have a thermostatically controlled immersion electric element with selector switch and automatic safety cutout.

The capacity of the urn and power rating shall be as specified.

It shall operate on 240 V 50Hz power supply and shall be earthed.

## 15. MILK URN

Electrically heated stainless-steel milk urn with water jacket for indirect heating complete with stainless steel lift off cover.

It shall be complete with non-drip draw off tap, water drain plugs and water supply arm.

There shall be a gauge to indicate the water level in the water jacket.

It shall have a thermostatically controlled immersion electric element with selector switch and automatic safety cutout.

It shall operate on 240 V 50Hz power supply and shall be earthed.

The capacity of the urn and power rating shall be as specified.

## **16. COFFEE MAKING MACHINE**

Electrically heated, automatically regulated coffee making machine.

The outer casing, inner tank and brewing head with filter plates shall be made with stainless steel 18/10.

The machine shall be equipped with Teflon coated hot plates with cast-in heating elements.

It shall also have robust heat resistant glass bowls.

The output, number of hotplates/glass bowls and power rating shall be as specified.

It shall operate on 240 V 50Hz power supply and shall be earthed.

## **17. ELECTRIC HEATED BAIN MARIE/HOT CUPBOARD**

Electric heated upper half Bain Marie and lower half hot cupboard unit constructed from polished 16.s.w.g. Stainless steel sheet 18/10.

The Bain Marie shall be of the water well type complete with food serving pots and lids.

The Bain Marie top shall be divided into sections to carry Gastronome food container pots of minimum 200mm deep and to be drawn from polished 16.s.w.g. Stainless steel sheet.

The water well shall be thermostatically controlled from 30°C to 80°C.

There shall be a 15 mm chrome plated water supply valve and 25mm drain with a chrome plated valve.

The hot cupboard shall be equipped with stainless steel sliding doors and fitted with two stainless steel shelves.

The doors, side panels, top and underside shall be double cased and insulated. The door handles to be strong and heat resistant.

The unit shall be fitted with amoured heating elements with pilot lights and thermostats to separately control temperature in the water well and oven from 30°C to 80°C.

The whole unit shall be constructed in stainless steel on a strong angular framework with stainless steel adjustable feet.

The dimensions, number of pots and gas consumption of the unit shall be as specified.

The total power rating of unit shall be as specified and suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

Power shall be supplied through insulated heat resistant cables.

## **18. GAS BAIN MARIE/HOT CUPBOARD**

Gas heated upper half Bain Marie and lower half hot cupboard unit constructed from polished 16.s.w.g. Stainless steel sheet 18/10.

The Bain Marie shall be of the water well type complete with food serving pots and lids.

The Bain Marie top shall be divided into sections to carry Gastronome food container pots of minimum 200mm deep and to be drawn from polished 16.s.w.g. Stainless steel sheet.

The water well shall be thermostatically controlled from 30°C to 80°C.

There shall be a 15 mm chrome plated water supply valve and 25mm drain with a chrome plated valve.

The hot cupboard shall be equipped with stainless steel sliding doors and fitted with two stainless steel shelves.

The doors, side panels, top and underside shall be double cased and insulated. The door handles to be strong and heat resistant.

The unit shall be fitted with chrome plated gas isolating cocks.

There shall be Cast iron burners with automatic ignition device, flame failure protection device and thermostats to separately control temperature in the water well and oven from 30°C to 80°C

The whole unit shall be constructed in stainless steel on a strong angular framework with stainless steel adjustable feet.

The dimensions, number of pots and gas consumption of the unit shall be as specified.

## **19. STAINLESS STEEL HOT CUPBOARD GAS HEATED.**

Gas heated hot cupboard as above constructed with polished stainless-steel sheet of 14 SWG for the top and 16 S.W.G stainless steel sheet for the other parts.

The whole unit shall be constructed on a strong stainless-steel angular framework on stainless steel adjustable feet.

The dimensions and gas consumption of the unit shall be as specified.

## **20. POTATO PEELER.**

Heavy duty floor mounted potato peeler with body, drum and peeling plate constructed in Aluminum alloy casting.

The plate shall be sea wave shaped.

The drum interior and the plate shall be coated with abrasive embedded in epoxy resin and both shall be replaceable.

It shall also have suitable water inlet and drainage hose connections. It shall be equipped with a **peel trap** unit.

The door shall have a positive cam latch door with a safety switch to isolate power when the door opens.

Electrically run, it shall have a continuously rated motor with overload protection and suitable



for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

All electrical components shall be adequately insulated and shall be splash proof.

The peeling capacity shall be as specified.

## **21. ELECTRIC POTATO CHIPPER**

Heavy duty rotary action electrically operated, bench mounted potato chipper capable of producing various sizes of chips.

The body and the bulk feed hopper shall be in stainless steel. The rotary feed and chipping unit shall be in Aluminium alloy casting or stainless steel. The motor, gearbox and bearings shall be factory lubricated for maintenance free operation.

It shall have an inbuilt switch which breaks power supply to the motor when it's opened. The motor shall also have inbuilt overload protection. There shall also be a device wired such that it prevents the machine starting should power be interrupted and then restored.

The unit shall be suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

The power rating, chipping capacity and chips sizes shall be as specified.

## **22. MANUAL POTATO CHIPPER**

Heavy duty manually operated and bench mounted potato chipper. It shall be constructed from a cast iron body and equipped with replaceable stainless steel knives. The operating handle shall be spring loaded to ensure it remains in open position. The knife shall be positioned that the chips can be conveniently taken out.

## **23. MEAT SLICING MACHINE**

Gravity feed meat-slicing machine constructed of anodized aluminium body and a hardened chrome steel knife. It shall be equipped with a built-in self setting knife sharpening unit and a stainless steel carriage guard. It shall also have a mechanism to control the thickness of the cut products.

There shall be a safety switch to isolate power when the guard is opened. There shall also be a pilot lamp to indicate that the knife is running. Additional safety feature shall be a system to ensure that the machine can only be restarted manually from the start button when power is restored after a power failure.

The power rating, knife size and maximum size of material it can cut shall be as specified.

The unit shall be suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

## **24. UNIVERSAL MIXING MACHINE**

Electrically driven mixing and general-purpose machine complete with a stainless steel bowl, bowl guard, beater, whisk and spiral dough hook. It shall have a spindle for attachment of a meat mincer and vegetable preparation machine.

It shall be constructed from a rigid one piece Aluminium alloy casting with a belt drive motor system equipped with belt tensioner and factory lubricated and sealed components. The motor shall have a thermal overload protection switch.

The bowl, cradle and bowl guard shall be interlocked such that the machine shall only operate with the bowl, guard and cradle in the operating position. It shall have a system to ensure that the machine can only be restarted manually from the start button when power is restored after a power failure.

It shall be capable of operating at different speeds to suite the various operations. There shall be a variable timer on the control panel and an emergency stop button.

The power rating and bowl capacity shall be as specified.

The unit shall be suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

## **25. WEIGHT SCALE**

Electronic weight scale of capacity 150kg with 50g graduations. It shall have a weighing platform in stainless steel. There shall be a programmable digital indicator system with LCD display mounted on a rigid frame. It shall indicate measurements in Kgs only.

## **26. DIAL INDICATOR BENCH SCALE**

Bench type dial indicator scale (0-25Kg) with 50G graduations. The unit shall be constructed in enameled steel and the weighing platform to be finished in polished stainless steel suitable for weighting wet foodstuffs during preparation.

## **27. CHEST TYPE FREEZER CABINET**

A chest type cabinet freezer constructed from stainless steel body and have a one piece toughened plastic interior with insulation in between. The freezer shall have an insulated hinged lid with a magnetic seal. There shall be adequate protection of the insulation against ingress of moisture. There shall be a drainage port for use when cleaning or defrosting.

It shall have a hermetic compressor with thermal overload protection, condenser fan and evaporator fan. The system shall utilize R 134a refrigerant or any other CFC free refrigerant.

There shall be a thermostat for setting of storage temperature up to – 18°C. The unit shall have a green “power on” indicator light and a red to go off when pre-set temperature is achieved. It shall have a digital VISUAL temperature display panel. There shall also be a heat pump defrosting system to operate both manually and automatically.

The whole unit shall be on a strong framework with stainless steel adjustable feet.

The power rating and volume capacity shall be as specified.

The unit shall be suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing. It shall also be provided with a power protection unit to protect against voltage fluctuations.

## **28. UPRIGHT REFRIGERATOR**

An upright refrigerator constructed from stainless steel body and has a one piece toughened plastic interior with insulation in between. There shall be adequate protection of the insulation against ingress of moisture. The fridge shall have a hinged tempered glass door with a magnetic seal. It shall also have adjustable stainless steel shelves in the compartment.

It shall have a hermetic compressor with thermal overload protection, condenser fan and evaporator fan. The system shall utilize R 134a refrigerant or any other CFC free refrigerant.

There shall be a thermostat for setting of storage temperature up to +2°C. The unit shall have a green “power on” indicator light and a red to go off when pre-set temperature is achieved. It shall have a digital VISUAL temperature display panel. The whole unit shall be on a strong framework with stainless steel adjustable feet.

The power rating and volume capacity shall be as specified.

The unit shall be suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing. It shall also be provided with a power protection unit to protect against voltage fluctuations.

## **29. DISH WASHER**

Electrically heated conveyor dish washing machine capable of washing and rinsing dishes using standard 500x500mm standard trays. The chassis, housing guides and legs shall all be in 18/10 stainless steel. It shall have the following features Stainless steel washing and rinsing water heaters each with thermostatically controlled armored heating elements. The water supply to the tanks shall incorporate filters. Each heater shall have water level and pressure regulation valves. There shall also be separate washing and rinsing pumps in the system.

Doors with safety devices to cut off power when they open.

Separator curtains between different sections of the washing tunnel.

Acid and water resistant conveyor protected against traction and compression loads.

Device to stop machine when there are no washing baskets on the conveyor.

Indicator lights to show the stages of various operating process.

The machine shall have easily accessible and splash proof controls. The unit shall be suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

The production capacity in baskets per hour and the power rating shall be specified.

## **30. MEAT CHOPPING BLOCK.**

Chopping block on a stainless steel stand with adjustable stainless steel feet. The block shall be made from food grade Teflon block or equal and approved.

It shall be securely mounted on a stand such that the top surface of the block is roughly 800mm above the finished floor. The size of the chopping block shall be as specified.

## **31. INSECTOCUTOR**

Insectocutor with a protected high-tension grid operating at a voltage of about 16000 volts. It shall have a facility to emit ultra – violet light to attract insects to the high voltage grid. It shall be constructed of stainless steel housing with powder coated safety grille, removable plastic tray and wall mounting brackets.

The unit shall be suitable for 415V, 50 HZ or 240V 50Hz supply with proper earthing.

## **32. DOUBLE BOWL DOUBLE DRAINER SINK ON STAND**

Double Bowl Double Drainer (DBDD) stainless steel Sink with 2No. bowls size

600x450x300mm deep each centrally placed with a 50mm backsplash.

It shall have a stainless steel grid under shelf and a 250mm stainless steel skirting below the sink rim covering all sides of the sink.

The top and sink shall be of 16 s.w.g. Stainless steel 18\10. The bowls shall be pressed in a single piece with rounded corners. Each bowl shall be fitted with a perforated removable corner strainer in full own height, a 40 mm waster outlet with stand overflow outlet fitting and a pillar type heavy duty hot/cold water sink mixer with over arm swivel outlet.

Unit frame shall be 32mm R.H.S. stainless steel and each leg to be equipped with a stainless steel adjustable sanitary foot to maintain a sink height of 850mm from the floor. The feet/stand shall have a spacing of maximum 1000mm.

The length and width of the sink shall be as specified.

### **33. SINGLE BOWL DOUBLE DRAINER SINK ON STAND**

Sink constructed as above but with one bowl. The length and width of the sink shall be as specified.

### **34. STAINLESS STEEL WORKTOP**

Stainless steel table with a stainless steel grid shelf. The top shall be of 16 s.w.g. Stainless steel sheet 18\10 backed with 4 mm thick mild steel for reinforcement.

The unit frame to be 32mm stainless steel square tube. Stainless steel and each leg to be equipped with a stainless steel adjustable sanitary foot to maintain a sink height of 850mm from the floor. The table top shall have turned down edges in front and ends to strengthen and give stability. The top shall be strengthened with the frame such that it takes heavy loads without sagging.

The length and width of the table shall be as specified.

### **35. LOUVRED PLATE STACKING RACK**

Louvered Stainless steel plate stacking rack. Each shelf shall be constructed in 16 s.w.g stainless steel sheet 18\10 with a 100mm up stand all round. It shall have stainless steel grill constructed from 6mm rods at 25mm centre to centre designed such that it can hold 150mm and 250 mm diameter earthenware plates in an almost upright position.

The clearance from one shelf to the other shall be about 450mm. The whole unit shall be substantially constructed such that each shelf can accommodate its full capacity of 250mm diameter earthenware plates without deflection.

The unit frame shall be 32mm stainless steel square tube, with stainless steel adjustable sanitary feet.

The number of trays, length, depth and height of the rack shall be as specified.

### **36. PLATE STACKING RACK**

Stainless steel plate stacking rack. Each shelf shall be constructed in 16 s.w.g stainless steel sheet 18\10 with a 100mm up stand all round. The whole unit shall be substantially constructed such that each shelf can accommodate at least 150 No. 9-inch diameter earthenware plates without deflection. The clearance from one shelf to the other shall not be less than 450mm. The unit

frame shall be 32mm stainless steel square tube, with stainless steel adjustable sanitary feet. The number of trays, length, depth and height of the rack shall be as specified.

### **37. GLASS STACKING RACK**

Rack constructed as above with 10mm diameter perforated holes all over the shelf surface. The number of trays, length, depth and height of the rack shall be as specified.

### **38. POT STACKING RACK**

Stainless steel pot stacking rack. Each shelf shall be constructed in 16 s.w.g stainless steel sheet 18\10 with a 100mm up stand all round. The whole unit shall be constructed such that the clearance from one shelf to the other shall not be less than 600mm. The unit frame shall be 32mm stainless steel square tube, with stainless steel adjustable sanitary feet.

The number of trays, length, depth and height of the rack shall be as specified.

### **39. GENERAL PURPOSE TROLLEY**

General-purpose Stainless steel mobile trolley constructed sturdily with made of 16 s.w.g. Stainless steel sheet 18\10 backed with plywood for rigidity and noise/shock absorption. The unit to run on 4No.150mm diameter heavy-duty castors (2 fixed, 2 swivel). It shall be equipped with a stainless steel holding bar.

The number of trays, length, depth and height of the trolley shall be as specified.

### **40. TRAY SLIDE**

1.2mm thick by 300mm wide stainless steel tray slide with reinforced construction fixed at approx. 700mm high. It shall have stainless steel tubular supports of 32mm diameter at approximately 1500mm centers. Overall length shall be specified.

### **41. FACTORY VISIT**

The Engineer and Client reserves the right to inspect and test or witness all manufactured plant equipment and materials.

The Contractor shall give a three weeks' notice to the Engineer of his intention to carry out any inspection or tests and the Engineer or his representative shall be entitled to witness such tests and inspections.

Six copies of all test certificates and performance curves shall be submitted as soon as possible after the completion of such tests, to the Engineer for his approval.

Plant or equipment which is shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the Contractor's own risk and should the test certificate not be approved new tests may be ordered by the Engineer at the Contractor's expense.

The foregoing provisions as to factory visit are to be provided by the contractor.

# **PARTICULAR SPECIFICATION FOR L.P. GAS INSTALLATIONS**

## **GENERAL SPECIFICATIONS FOR LIQUEFIED PETROLEUM GAS INSTALLATIONS**

### **1. GENERAL**

The specification covers the storage and transmission of liquefied petroleum gas (L.P.G) which refers to either butane or propane or a mixture of both stored in liquid form under pressure. When mixed with air at atmospheric pressure, the gas requires a concentration of 2% of the vapour for ignition to take place. The percentage fill in the storage vessel is about 85%.

### **2. REGULATIONS AND STANDARDS**

Material, equipment, installations and workmanship shall comply with the requirements of the latest Editions of the following:

Kenya Government By-laws.

Relevant standards published by the Kenya Bureau of Standards.

Relevant British Standards, Specifications & Codes of Practice; referred to as B.S. & B.S.C. P respectively in this document.

Requirements of the clients proposed local L.P Gas Supplier.

This specification and the contract drawings.

### **3. L.P.GAS BULK STORAGE TANKS**

The L.P Gas bulk storage tank shall be of either vertical or horizontal cylindrical mild steel construction manufactured from rolled carbon steel plate, welded together in compliance with the requirements of KS 200:2002 and BS 5500 or ASME (American Society of mechanical Engineers) Codes. The tank shall be earthed to protect against accumulation of static electricity.

The storage tank shall have the following minimum pressure requirements: -

Test Pressure:                      25 bars

Working pressure:                9 bars at 20° c

A test certificate shall be provided with the tank. It shall contain details such as the standards to which the tank has been manufactured, tests done, results of such tests, etc.

The tank shall be supplied complete with:

Filling valve, take off connection with first stage regulator, Pressure relief valve, Pressure gauge and magnetic float gauge, all housed under a lockable-hinged cover, forming integral part of the tank.

Drain plug.

Main isolating Valve.

Lifting lugs welded at both ends of the tank

Mounting feet welded to the base of tank. These shall be used to bolt the tank to a concrete base to secure it.

The tank shall be pickled and primed on the outside and painted with two coats of weather resistant paint.

It shall also have a stamp showing the supplier, test pressure and the date of testing.

The tanks are manufactured in various sizes but the following are the standard sizes

used in commercial kitchen applications.

Tank capacity 0.5 Ton	1000mm diameter	2000mm long
Tank capacity 1.0 Ton	1000mm diameter	3000mm long
Tank capacity 2.0 Ton	1220mm diameter	4100mm long
Tank capacity 5.0 Ton	1600mm diameter	5370mm long

Apart from the above minimum specification for the bulk L.P.G storage tank, any additional requirements may be specified by the L.P. Gas supplier.

The vertical cylinder shall be fitted with a discharge isolation valve, pressure relief valve. Where there is a multiple cylinder bank installation, an automatic change-over valve with a regulator to reduce pressure to 37 mbar shall be incorporated.

Tank sizes are determined by the LPG dealers and they are available in various sizes. Each tank shall be identified with the following minimum information, permanently marked on the tank shell or imprinted on a stainless-steel name plate affixed to the tank in a position normally accessible through the inspection chamber:

- The name of the Vendor
- The construction standard to which the tank is built
- A reference number unique to the tank
- The date of manufacture
- The tank capacity

#### 4. PIPEWORK

Pipes and gas manifolds for L.P.G gas installations shall be galvanized mild steel tubing to B.S. 1387: Class C with Pipe threads to B.S. 21 or copper pipes to B.S 2871 with compression fittings to B.S 864.

Only P.T.F.E tape or jointing compound specifically made for LPG shall be used. Use of hemp shall not be allowed.

The L.P. Gas pipe work installation shall comply with the requirements of B.S.C.P. 331: Part 3.

Pipe fittings shall be either welded or seamless wrought steel pipe fittings to B.S. 1740: Class C. A union shall be provided on all straight runs of pipe work at a maximum interval of six meters.

Pipe work laid under ground shall be wrapped with pipe wrapping material having vapour permeability of less than 0.11g/m<sup>2</sup>/d at 25<sup>o</sup>C and 75% relative humidity. The pipe wrapping material shall have high resistance to mineral acids, alkalis and salts and shall be on non-cracking and non-hardening characteristics.

Underground L.P.G gas distribution pipe work shall be laid to a slope of 1 in 200. Gas service pipes, from the gas distribution pipes to the parts of building they service, shall be laid to rise from the distribution pipe at a slope of 1 in 200. All pipes under the ground shall rest throughout their length on a 150mm deep, flue sand topping, followed by an approved backfilling.

Where the pipe passes through the building fabric, it shall be located within a pipe sleeve, one diameter larger than the pipe passing through it. The void between the pipe and the sleeve shall be packed with bitumen or approved equal material.

Horizontal and vertical pipes within the building shall be fixed off the walls with brass-built brackets or spacer type steel pipe clips. The pipe supports spacing intervals for both the

horizontal and vertical pipe runs shall be as follows:

Pipe nominal diameter:	15mm	Interval:	1.82 metres
	: 20 & 25mm		: 2.44 metres
	: 32 & 40mm		: 2.75 metres
	: 50mm		: 3.00 metres
	: 65mm		: 3.65 metres

The pipe work underneath the tables worktops to which shall be connected the gas outlets shall be made from gas quality copper.

Pipework shall be bonded in accordance with I.E.E regulations.

## 5. GAS ISOLATION VALVES

The L.P. Gas isolation valves shall be quarter turn; lever operated ball valve of brass or stainless-steel construction.

The valve shall have “open” and “closed” positions clearly marked on the valve body.

## 6. TANK SITING AND SAFETY

### i) SITING

The position of the tank shall not be less than 7meters away from adjacent buildings. It shall be the responsibility of others to construct a concrete plinth constructed to structural engineer’s specifications to support the tank.

The tank should not be sited in a location known to be susceptible to flooding.

### ii) SAFETY

A 1.8m high fence with lockable gates around the cylinders to protect them shall be provided. The fence shall be at least 1.5 m away from the tank.

A crash barrier shall also be erected at 2 meters from the fence to stop any vehicles from the access road crashing into the facility.

Two approved **NON-SMOKING OR NAKED LIGHTS** notices in red background shall be fixed on the surrounding fence. They shall be of such a size that can be read from a distance of 20 meters.

A portable carbon dioxide fire extinguisher and shall comply with B.S. EN 3/BS 1449 and B.S. 1004. shall be mounted on the fence next to the entrance.

## 7. TESTING AND COMISSIONING

The whole pipe work system shall be pressure tested using compressed air. The test pressure shall be 7.0 bars. When this pressure is achieved, the pipework shall be uniformly coated with a soap solution. Particular attention should be paid to all connection points. Leaks shall be detected by the presence of bubbles. If bubbles are found around fittings, the fittings should be checked for tightness and repaired as necessary.

The pressure test on pipe work shall be made before any part of the pipe work is concealed in any manner.

The test pressure shall be maintained for a period of six hours. If the pressure drops during this period, leaks in the pipe work shall be made good and the pressure test repeated for a further



six hours.

The bulk gas storage tank shall be pressure tested using compressed air and soap solution. Test pressure of 25 bars shall be applied and soap solution applied uniformly on the entire surface of the tank. If leaks are detected in seams or the shell, notify the tank Vendor.

After completion of pressure tests and installation, the L.P. Gas installations shall be balanced to give the required gas flows at each gas user's point.

# PARTICULAR SPECIFICATIONS FOR PLUMBING AND DRAINAGE

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### 3.1 **GENERAL**

This section specifies the general requirements for plant, equipment and materials forming part of the plumbing and drainage installations.

### 3.2 **MATERIALS AND STANDARDS**

#### 3.2.1 **Pipework and Fittings**

Pipework materials are to be used as follows:

##### a) **Galvanized Steel Pipework**

Galvanized steel pipe work up to 65mm nominal bore shall be manufactured in accordance with B.S. 1387 Medium Grade, with tapered pipe threads in accordance with B.S. 21. All fittings shall be malleable iron and manufactured in accordance with B.S. 143.

Pipe joints shall be screwed and socketed and sufficient coupling unions shall be allowed so that fittings can be disconnected without cutting the pipe. Running nipples and long screws shall not be permitted unless exceptionally approved by the Engineer.

Galvanized steel pipe work, 80mm nominal bore up to 150mm nominal bore shall be manufactured to comply in all respects with the specification for 65mm pipe, except that screwed and bolted flanges shall replace unions and couplings for the jointing of pipes to valves and other items of plant. All flanges shall comply with the requirements of B.S. 10 to the relevant classifications contained hereinafter under Section 'C' of the Specification.

Galvanizing shall be carried out in accordance with the requirements of B.S. 1387 and B.S. 143 respectively.

##### b) **Copper Tubing**

All copper tubing shall be manufactured in accordance with B.S. 2871 from C.160 'Phosphorous De-oxidized Non-Arsenical Copper' in accordance with B.S. 1172.

Pipe joints shall be made with soldered capillary fittings and connections to equipment shall be with compression fittings manufactured in accordance with B.S. 864.

Short copper connection tubes between galvanized pipe work and sanitary fittings shall not be used because of the risk of galvanic action.

If, as may occur in certain circumstances, it is not possible to make the connection in any way than the use of copper tubing, then a brass straight connector shall be positioned between the galvanized pipe and the copper tube in order to prevent direct contact.

##### c) **P.V.C. (Hard) Pressure Pipes and Fittings**

All P.V.C. pipes and fittings shall be manufactured in accordance with B.S. 3505: 1968.

### Joining

The method of joining to be employed shall be that of solvent welding, using the pipe and manufacturer's approved cement. Seal ring joint shall be introduced where it is necessary to accommodate thermal expansion.

### Testing

Pipelines shall be tested in sections under an internal water pressure normally one and a half times the maximum allowable working pressure of the class of pipe used. Testing shall be carried out as soon as practical after laying and when the pipeline is adequately anchored. Precautions shall be taken to eliminate all air from the test section and to fill the pipe slowly to avoid risk of damage due to surge.

#### d) A.B.S. Waste System

Where indicated on the Drawings and Schedules, the Sub-contractor shall supply and fix A.B.S. waste pipes and fittings.

The pipes, traps and fittings shall be in accordance with the relevant British Standards, including B.S. 3943, and fixed generally in accordance with manufacturer's instructions and B.S. 5572: 1978.

Joining of pipes shall be carried out by means of solvent welding, the manufacturer's instructions and B.S. 5572: 1978.

Joining of pipes shall be carried out by means of solvent welding. The manufacturer's recommended method of joint preparation and fixing shall be followed.

Standard brackets, as supplied for use with this system, shall be used wherever possible. Where the building structure renders this impracticable the contractor shall provide purpose made supports, centers of which shall not exceed one meter.

Expansion joints shall be provided as indicated. Supporting brackets and pipe clips shall be fixed on each side of these joints.

#### e) PVC Soil System

The contractor shall supply and fix PVC soil pipes and fittings as indicated on the Drawings and Schedules.

Pipes and fittings shall be in accordance with relevant British Standards, including B.S. 4514 and fixed to the manufacturer's instructions and B.S. 5572.

The soil system shall incorporate synthetic rubber gaskets as provided by the manufacturer whose fixing instructions shall be strictly adhere to.

Connections to WC pans shall be effected by the use of a WC connector, gasket and cover, fixed to suit pan outlet.

Suitable supporting brackets and pipe clips shall be provided at maximum of one metre centres.

The contractor shall be responsible for the joint into the Gully Trap on Drain as

indicated on the Drawings.

### 3.2.2 Valves

#### a) Draw-off Taps and Stop Valves (Up to 50mm Nominal Bore)

Draw-off taps and valves up to 50mm nominal bore, unless otherwise stated or specified for attachment or connection to sanitary fitment shall be manufactured in accordance with the requirements of B.S.1010.

#### b) Gate Valves

All gate valves 80mm nominal bore and above, other than those required for fitting to buried water mains shall be of cast iron construction, in accordance with the requirements of B.S. 3464. All gate valves required for fitting to buried water mains shall be of cast iron construction in accordance with the requirements of B.S.1218.

All gate valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S. 1952.

The pressure classification of all valves shall depend upon the pressure conditions pertaining to the site of works.

#### c) Globe Valves

All globe valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S.3061.

The pressure classification of all globe valves shall depend upon the pressure conditions pertaining to the site of works.

### 3.2.3 Waste Fitment Traps

#### a) Standard and Deep Seal P & S Traps

Where standard or deep seal traps are specified they shall be manufactured in suitable non-ferrous materials in accordance with the full requirements of B.S. 1184.

In certain circumstances, cast iron traps may be required for cast iron baths and in these instances bath traps shall be provided which are manufactured in accordance with the full requirements of B.S.1291.

#### b) Anti-Syphon Traps

Where anti-syphon traps are specified, these shall be similar or equal to the range of traps manufactured by Greenwood and Hughes Limited, Deacon Works Littlehampton, Sussex, England.

The trade name for traps manufactured by this company is 'Grevak'.

### 3.2.4 Pipe Supports

#### a) General

This sub-clause deals with pipe supports securing pipes to the structure of buildings for above ground application.

The variety and type of support shall be kept to a minimum and their design shall be

such as to facilitate quick and secure fixings to metal, concrete, masonry or wood.

Consideration shall be given, when designing supports, to the maintenance of desired pipe falls and the restraining of pipe movements to a longitudinal axial direction only. The Sub-contractor shall supply and install all steelwork forming part of the pipe support assemblies and shall be responsible for making good damage to builders work associated with the pipe support installation.

The Sub-contractor shall submit all his proposals for pipe supports to the Engineer for approval before any erection works commence.

b) Steel and Copper Pipes and Tubes

Pipe runs shall be secured by clips connected to pipe angles, wall brackets, or trapeze type supports. 'U' bolts shall not be used as a substitute for pipe clips without the prior approval of the Engineer.

An approximate guide to the maximum permissible supports spacing in metres for steel and copper pipe and tube is given in the following table for horizontal runs.

Size Nominal Bores	Copper Tube to B.S. 659	Steel Tube to B.S. 1387
15mm	1.25m	2.0m
20mm	2.0m	2.5m
25mm	2.0m	2.5m
32mm	2.5m	3.0m
40mm	2.5m	3.0m
50mm	2.5m	3.0m
65mm	3.0m	3.5m
80mm	3.0m	3.5m
100mm	3.0m	4.0m
125mm	3.0m	4.5m
150mm	3.5m	4.5m

The support spacing for vertical runs shall not exceed one and a half times the distances given for horizontal runs.

c) Expansion Joints and Anchors

Where practicable, cold pipework systems shall be arranged with sufficient bends and changes of direction to absorb pipe expansion providing that the pipe stresses are contained within the working limits prescribed in the relevant B.S. specification.

Where piping anchors are supplied, they shall be fixed to the main structure only. Details of all anchor design proposals shall be submitted to the Engineer for approval before erection commences.

The contractor when arranging his piping shall ensure that no expansion movements are transmitted directly to connections and flanges on pumps or other items of plant.

The contractor shall supply flexible joints to prevent vibrations and other movements being transmitted from pumps to piping systems or vice versa.

### 3.2.5 Sanitary Appliances

All sanitary appliances supplied and installed as part of the Sub-contract works shall comply with the general requirements of B.S. Code of Practice 305 and the particular requirements of the latest B.S. Specifications.

### 3.2.6 Pipe Sleeves

Main runs of pipework are to be fitted with sleeves where they pass through walls and floors. Generally the sleeves shall be of P.V.C. except where they pass through the structure, where they shall be mild steel. The sleeves shall have 6mm – 12mm clearance all around the pipe or for insulated pipework all around the installation. The sleeve will then be packed with slag wool or similar.

## 3.3 INSTALLATION

### 3.3.1 General

Installation of all pipework, valves, fittings and equipment shall be carried out under adequate supervision from skilled staff to the relevant codes and standards as specified herein. The Sub-contractor shall be responsible to the Main Contractor for ensuring that all builders work associated with his piping installation is carried out in a satisfactory manner to the approval of the Engineer.

### 3.3.2 Above Ground Installation

#### a) Water Services

Before any joint is made, the pipes shall be hung in their supports and adjusted to ensure that the joining faces are parallel and any falls which shall be required are achieved without springing the pipe.

Where falls are not shown on the Contract Drawings or stated elsewhere in the Specification, pipework shall be installed parallel to the lines of the buildings and as close to the walls, ceilings, columns, etc., as is practicable.

All water systems shall be provided with sufficient drain points and automatic air vents to enable them to function correctly.

Valves and other user equipment shall be installed with adequate access for operation and maintenance. Where valves and other operational equipment are unavoidably installed beyond normal reach or in such position as to be difficult to reach from a small step ladder, extension spindles with floor or wall pedestals shall be provided.

Screwed piping shall be installed with sufficient number of unions to facilitate easy removal of valves and fittings, and to enable alterations of pipework to be carried out without the need to cut the pipe.

Full allowances shall be made for the expansion and contraction of pipework, precautions being taken to ensure that any force produced by the pipe movements are not transmitted to valves, equipment or plant.

All screwed joints to piping and fittings shall be made with P.T.F.E. tape.

The test pressure shall be maintained by the pump for about one hour and if there is any leakage, it shall be measured by the quantity of water pumped into the main in that time. A general leakage of 4.5 litres per 25mm of diameter, per 1.6 kilometres per 24 hours per 30 metres head, may be considered reasonable but any visible individual leak shall be repaired.

b) Sanitary Services

Soil, waste and vent pipe system shall be installed in accordance with the best standard of modern practice as described in B.S. 5572 to the approval of the Engineer.

The contractor shall be responsible for ensuring that all ground waste fittings are discharged to a gully trap before passing to the sewer via a manhole.

The contractor shall provide all necessary rodding and inspection facilities within the draining system in positions where easy accessibility is available.

Where a branch requires rodding facilities in a position to which normal access is unobtainable, then that branch shall be extended so as to provide a suitable purpose made rodding eye in the nearest adjacent wall or floor to which easy access is available.

The vent stacks shall terminate above roof level and where stack passes through roof, a weather skirt shall be provided. The Sub-contractor shall be responsible for sealing the roof after installation of the stacks.

The open end of each stack shall be fitted with a plastic coated or galvanised steel wire guard.

Access for rodding and testing shall be provided at the foot of each stack.

c) Sanitary Appliances

All sanitary appliances associated with the Sub-contract works shall be installed in accordance with the best standard of modern practice as described in C.P. 305 to the approval of the Engineer.

### 3.4 TESTING AND INSPECTION

#### 3.4.1 Site Tests – Pipework Systems



a) Above Ground Internal Water Services Installation

All water service pipe system installed above ground shall be tested hydraulically for a period of one hour to not less than one and half times to design working pressure.

If preferred, the contractor may test the pipelines in sections. Any such section found to be satisfactory need not be the subject of a further test when system has been completed, unless specifically requested by the Engineer.

During the test, each branch and joint shall be examined carefully for leaks and any defects revealed shall be made good by the Sub-contractor and the section re-tested.

The contractor shall take all necessary precautions to prevent damage occurring to special valves and fittings during the tests. Any item damaged shall be repaired or replaced at the Sub-contractor's expenses.

b) Above Ground Soil Waste and Ventilation System

All soil, waste and ventilating pipe system forming part of the above ground installation, shall be given appropriate test procedures as described in B.S. 5572, 1972.

Smoke tests on above ground soil, waste and ventilating pipe system shall not be permitted.

Pressure tests shall be carried out before any work which is to be concealed is finally enclosed.

In all respects, tests shall comply with the requirements of B.S. 5572.

3.4.2 Site Test – Performance

Following satisfactory pressure test on the pipework system operational tests shall be carried out in accordance with the relevant B. S. Code of practice on the systems as a whole to establish that special valves, gauges, control, fittings, equipment and plant are functioning correctly to the satisfaction of the Engineer.

All hot water pipework shall be installed with pre-formed fibre glass lagging to a thickness of 25mm where the pipe runs above a false ceiling or in areas where the ambient temperature is higher than normal with the result that pipe "sweating", due to condensation will cause nuisance.

All lagged pipes which run in a visible position after erection shall be given a canvas cover and prepared for painting as follows:

- i) Apply a coating of suitable filler until the canvas weave disappears and allow to dry.
- ii) Apply two coats of an approved paint and finish in suitable gloss enamel to colors approved by the Engineer.

All lagging for cold and hot water pipes erected in crawlways, ducts and above false ceiling which after erection are not visible from the corridors of rooms, shall be covered with a reinforced aluminium foil finish banded in colours to be approved by the Engineer.

In all respects, unless otherwise stated, the hot and cold water installation shall be carried out in accordance with the best standard of modern practice and described in C.P.342 and C.P.310 respectively to the approval of the Engineer.

The test pressure shall be applied by means of a manually operated test pump or, in the case of long main or mains of large diameter, by a power driven test pump which shall not be left unattended. In either case precaution shall be taken to ensure that the required pressure is not exceeded.

Pressure gauges should be recalibrated before the tests.

The contractor shall be deemed to have included in his price for all test pumps, and other equipment required under this specification.

The test pressure shall be one and a half times the maximum working pressure except where a pipe is manufactured from a material for which the relevant B.S. specification designates a maximum test pressure.

### 3.5 STERILISATION OF COLD WATER SYSTEM

All water distribution system shall be thoroughly sterilised and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilisation procedures shall be carried out by the contractor in accordance with the requirements of B.S. Code of Practice 301, Clause 409 and to the approval of the Engineer.

**Detailed manufacturer's Brochures** detailing Technical Literature and specifications on the above items **MUST** be attached and Items to be supplied highlighted (Model and Make)

## SECTION VII - DRAWINGS

**Note** A list of drawings should be inserted here. The actual drawings including Site plans should be annexed in a separate booklet.

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**PART III - THE CONDITIONS OF  
CONTRACT AND CONTRACT**

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## SECTION VIII - GENERAL CONDITIONS OF CONTRACT (GCC)

### THE KENYA UTALII COLLEGE

PROPOSED CONSTRUCTION OF INDIVIDUAL TRAINING KITCHEN AT KENYA UTALII COLLEGE

VOLUME 1 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF KITCHEN EQUIPMENT AND LIQUIFIED PETROLEUM GAS INSTALLATION WORKS

VOLUME 2 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF COLD STORAGE ROOMS & REFRIGERATION INSTALLATION WORKS

VOLUME 3 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF WATER HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING INSTALLATION WORKS

The Works Secretary,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100  
**NAIROBI.**

### General Conditions of Contract

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#### 1. GENERAL PROVISIONS

##### 1.1 Definitions

In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated below. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

**“Accepted Contract Amount”** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

**“Base Date”** means a date 30 day prior to the submission of tenders.

**“Bill of Quantities”** means the priced and completed Bill of Quantities forming

part of the tender. **“Completion Date”** means the date of completion of the

Works as certified by the Engineer.

**“Contract Price”** means the price defined in the contract and thereafter as adjusted in accordance with the provisions of the Contract.

**“Contract”** means the agreement entered into between the Procuring Entity and the Contractor as recorded in the Agreement Form and signed by the parties including all attachments and appendices thereto and all documents incorporated by reference therein to execute, complete, and maintain the Works.

**“Contractor's Documents”** means the calculations, computer programs and other software, progress reports, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

**“Contractor's Equipment”** means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Procuring Entity's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

**“Contractor's Personnel”** means the Contractor's Representative and all personnel whom the Contractor utilizes on Site, who may include the staff, labor and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

**“Contractor's Representative”** means the person named by the Contractor in the Contract appointed from time to time by the Contractor who acts on behalf of the Contractor.

**“Contractor”** means the person(s) named as contractor in the Form of Tender accepted by the Procuring Entity.

**“Cost”** means expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

**“Day”** means a calendar day and **“year”** means 365 days.

**“Dayworks”** means Work inputs subject to payment on a time basis for labour and the associated materials and plant.

**“Defect”** means any part of the Works not completed in accordance with the Contract.

**“Defects Liability Certificate”** means the certificate issued by Architect upon correction of defects by the Contractor.

**“Defects Liability Period”** means the period named in the Special Conditions of Contract and calculated from the Completion Date, within which the contractor is liable for any defects that may develop in the handed over works.

**“Defects Notification Period”** means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], which extends over the days stated in the Special Conditions of Contract.

**“Drawings”** means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract.

**“Final Payment Certificate”** means the payment certificate issued under Sub-Clause 14.13 [Issue of Final Payment Certificate].

**“Final Statement”** means the statement defined in Sub-Clause 14.11 [Application for Final Payment Certificate]. **“Force Majeure”** is defined in Clause 19 [Force Majeure].

**“Foreign Currency”** means a currency of another country (not Kenya) in which part (or all) of the Contract Price is payable, but not the Local Currency.

**“Goods”** means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

**“Interim Payment Certificate”** means a payment certificate issued under Clause 14 [Contract Price and Payment], other than the Final Payment Certificate.

**“Laws”** means all national legislation, statutes, ordinances, and regulations and by-laws of any legally constituted public authority.

**“Letter of Acceptance”** means the letter of formal acceptance of a tender, signed by Procuring Entity, including any annexed memoranda comprising agreements between and signed by both Parties.

**“Local Currency”** means the currency of Kenya.

**“Materials”** means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

**“Notice of Dissatisfaction”** means the notice given by either Party to the other under Sub-Clause 20.3 indicating its dissatisfaction and intention to commence arbitration.

**“Special Conditions of Contract”** means the pages completed by the Procuring Entity entitled Special Conditions of Contract which constitute Part A of the Special Conditions.

**“Party”** means the Procuring Entity or the Contractor, as the context requires.

**“Payment Certificate”** means a payment certificate issued under Clause 14 [Contract Price and Payment]. **“Performance Certificate”** means the certificate issued under Sub-Clause 11.9

[Performance Certificate]. **“Performance Security”** means the security (or securities, if any)

under Sub-Clause 4.2 [Performance Security]. **“Permanent Works”** means the permanent works to be executed by the Contractor under the Contract.

**“Plant”** means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Procuring Entity and relating to the construction or operation of the Works.

**“Procuring Entity's Equipment”** means the apparatus, machinery and vehicles (if any) made available by the Procuring Entity for the use of the Contract or in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Procuring Entity.

**“Procuring Entity's Personnel”** means the Engineer, the Engineer, the assistants and all other staff, labor and other employees of the Architect and of the Procuring Entity; and any other personnel notified to the Contractor, by the Procuring Entity or the Engineer, as Procuring Entity's Personnel.

**“Procuring Entity”** means the Entity named in the Special Conditions of Contract.

**“Engineer”** is the person named in the Appendix to Conditions of Contract (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Engineer) who is responsible for supervising the execution of the Works and administering the Contract and shall be an “Architect” or a “Quantity Surveyor” registered under the Architects and Quantity Surveyors Act Cap 525 or an “Engineer” registered under Engineers Registration Act Cap 530.

**“Engineer”** means the person appointed by the Procuring Entity to act as the Architect for the purposes of the Contract and named in the Special Conditions of Contract, or other person appointed from time to time by the Procuring Entity and notified to the Contractor

**“Provisional Sum”** means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [Provisional Sums].

**“Retention Money”** means the accumulated retention moneys which the Procuring Entity retains under Sub-Clause 14.3 [Application for Interim Payment Certificates] and pays under Sub-Clause 14.9 [Payment of Retention Money].

**“Schedules”** means the document(s) entitled schedules, completed by the Contractor and submitted with the Form of Tender, as included in the Contract.

**“Section”** means a part of the Works specified in the Special Conditions of Contract as a Section (if any)

**“Site Investigation Reports”** are those reports that may be included in the tendering documents which are a reflection and interpretative about the surface and sub-surface condition at the Site.

**“Site”** means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.

**“Specification”** means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

**“Start Date” or “Commencement Date”** is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with the Site possession date(s).

**“Statement”** means a statement submitted by the Contractor as part of an application, under Clause 14 [Contract Price and Payment], for a payment certificate.

**“Subcontractor”** means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works.

**“Taking-Over Certificate”** means a certificate issued under Clause 10 [Procuring Entity's Taking Over].

**“Temporary Works”** means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.



**“Temporary works”** means works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

**“Tender”** means the Form of Tender and all other documents which the Contractor submitted with the Form of Tender, as included in the Contract.

**“Tests after Completion”** means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Procuring Entity.

**“Tests on Completion”** means the tests which are specified in the Contract agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [Tests on Completion] before the Works or a Section (as the case may be) are taken over by the Procuring Entity.

**“Time for Completion”** means the time for completing the Works or a Section (as the case may be) as stated in the Special Conditions of Contract (with any extension calculated from the Commencement Date.

**“Unforeseeable”** means not reasonably foreseeable by an experienced contractor by the Base Date.

**“Variation”** means any change to the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].

**“Works”** means the items the Procuring Entity requires the Contractor to undertake as defined in the Appendix to Conditions of Contract. **“Works” may** also mean the Permanent Works and the Temporary Works, or either of them as appropriate.

## 1.2 Interpretation

In the Contract, except where the context requires otherwise:

- a) Words indicating one gender include all genders;
- b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
- d) “written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

## 1.3 Communications

13.1 Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- a) In writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Special Conditions of Contract; and
- b) delivered, sent or transmitted to the address of the recipient's communications as stated in the Special Conditions of Contract. However:
  - i) if the recipient gives notice of another address, communications shall

- thereafter be delivered accordingly; and
- ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

1.3.2 Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Architect or the other Party, as the case may be.

#### **1.4 Law and Language**

1.4.1 The Contract shall be governed by the laws of **Kenya**.

1.4.2 The ruling language of the Contract shall be **English**.

#### **1.5 Priority of Documents**

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- a) The Contract Agreement,
- b) The Letter of Acceptance,
- c) The Special Conditions – Part A,
- d) the Special Conditions – Part B
- e) the General Conditions of Contract
- f) the Form of Tender,
- g) the Specifications and Bills of Quantities
- h) the Drawings, and
- i) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Architect shall issue any necessary clarification or instruction.

#### **1.6 Contract Agreement**

The Parties shall enter into a Contract Agreement within 14 days after the Contractor receives the Contract Agreement, unless the Special Conditions establish otherwise. The Contract Agreement shall be based upon the form annexed to the Special Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Procuring Entity.

#### **1.7 Assignment**

The Contractor shall not assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, the contractor:

- a) May assign the whole or any part with the prior consent of the Procuring Entity, and
- b) may, as security in favor of a bank or financial institution, assign its right to moneys due, or to become due, under the Contract.

#### **1.8 Care and Supply of Documents**

1.8.1 The Specifications and Drawings shall be in the custody and care of the Procuring

Entity. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawings and Bills of Quantities shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.

- 1.82 Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Procuring Entity. Unless otherwise stated in the Contract, the Contractor shall supply to the Architect two copies of each of the Contractor's Documents.
- 1.83 The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Procuring Entity's Personnel shall have the right of access to all these documents at all reasonable times.
- 1.84 If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

### **1.9 Timely provision of Drawings or Instructions**

- 1.91 The Contractor shall give notice to the Architect whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.
- 1.92 If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Architect to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
  - a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - b) payment of any other associated costs accrued, which shall be included in the Contract Price.
- 1.93 After receiving this further notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 1.94 However, if and to the extent that the Architect failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, or costs accrued.

### **1.10 Procuring Entity's Use of Contractor's Documents**

- 1.10.1 As agreed between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.
- 1.10.2 The Contractor shall be deemed (by signing the Contract) to give to the Procuring Entity a non-terminable transferable non-exclusive royalty-free license to copy, use

and communicate the Contractor's Documents, including making and using modifications of them. This license shall:

- a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
- b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and
- c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.

1.103 The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Procuring Entity for purposes other than those permitted under Sub-Clause 1.10.2.

### **1.11 Contractor's Use of Procuring Entity's Documents**

As agreed between the Parties, the Procuring Entity shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Procuring Entity. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not, without the Procuring Entity's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

### **1.12 Confidential Details**

1.121 The Contractor's and the Procuring Entity's Personnel shall ensure confidentiality at all times. The confidentiality shall survive termination or completion of the contract. They shall disclose all such confidential and other information as may be reasonably required in order to verify compliance with the Contract and allow its proper implementation.

1.122 The Contractor's and the Procuring Entity's Personnel shall also treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.

### **1.13 Compliance with Laws**

The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Special Conditions of Contract:

- a) The Procuring Entity shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions described in the Specifications as having been (or to be) obtained by the Procuring Entity; and the Procuring Entity shall indemnify and hold the Contractor harmless against and from the consequences of any

failure to do so; and

- b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licenses and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Procuring Entity harmless against and from the consequences of any failure to do so, unless the Contractor is impeded to accomplish these actions and shows evidence of its diligence.

#### **1.14 Joint and Several Liability**

If the Contractor constitutes (under applicable Laws) a joint venture, consortium or other unincorporated grouping of two or more persons:

- a) These persons shall be deemed to be jointly and severally liable to the Procuring Entity for the performance of the Contract;
- b) these persons shall notify the Procuring Entity of their leader who shall have authority to bind the Contractor and each of these persons; and
- c) the Contractor shall not alter its composition or legal status without the prior consent of the Procuring Entity.

#### **1.15 Inspections and Audit by the Procuring Entity**

Pursuant to paragraph 2.2(e). of Appendix B to the General Conditions, the Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Public Procurement Regulatory Authority, Procuring Entity and/or persons appointed or designated by the Government of Kenya to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Procuring Entity if requested by the Procuring Entity. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 15.6 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Procuring Entity's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of in eligibility pursuant to the Procuring Entity's prevailing sanctions procedures).

## **2 THE PROCURING ENTITY**

### **2.1 Right of Access to the Site**

- 2.1.1 The Procuring Entity shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the **Special Conditions of Contract**. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Procuring Entity is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Procuring Entity shall do so in the time and manner stated in the Specification. However, the Procuring Entity may withhold any such right or possession until the Performance Security has been received.
- 2.1.2 If no such time is stated in the Special Conditions of Contract, the Procuring Entity shall give the Contractor right of access to, and possession of, the Site within such times as required to enable the Contractor to proceed without disruption in accordance with the programme submitted under Sub-Clause 8.3 [Programme].

- 2.13 If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Procuring Entity to give any such right or possession within such time, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - b) payment of any such Cost-plus profit, which shall be included in the Contract Price.
- 2.14 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 2.15 However, if and to the extent that the Procuring Entity's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

## **2.2 Permits, Licenses or Approvals**

- 2.21 The Procuring Entity shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:
- a) Copies of the Laws of Kenya which are relevant to the Contract but are not readily available, and
  - b) any permits, licenses or approvals required by the Laws of Kenya:
    - i) which the Contractor is required to obtain under Sub-Clause 1.13 [Compliance with Laws],
    - ii) for the delivery of Goods, including clearance through customs, and
    - iii) for the export of Contractor's Equipment when it is removed from the Site.

## **2.3 Procuring Entity's Personnel**

The Procuring Entity shall be responsible for ensuring that the Procuring Entity's Personnel and the Procuring Entity's other contractor son the Site:

- a) co-operate with the Contractor's efforts under Sub-Clause 4.6 [Co-operation], and
- b) take action similar to those which the Contractor is required to take under sub-paragraphs (a), (b) and (c) of Sub-Clause 4.8 [Safety Procedures] and under Sub-Clause 4.18 [Protection of the Environment].

## **2.4 Procuring Entity's Financial Arrangements**

The Procuring Entity shall make and maintain all necessary financial arrangements which will enable the Procuring Entity to pay the Contract Price punctually (as estimated at that time) in accordance with Clause 14 [Contract Price and Payment].

# **3 THE ENGINEER**

## **3.1 Architect Duties and Authority**

- 3.1.1 The Procuring Entity shall appoint the Architect who shall carry out the duties as signed to him in the Contract. The Architect staff shall include suitably qualified Assistants and other professionals who are competent to carry out these duties. The Architect Name and Address shall be provided in the **Special Conditions of Contract**.
- 3.1.2 The Architect shall have no authority to amend the Contract.
- 3.1.3 The Architect May exercise the authority attributable to the Architect as specified in or necessarily to be implied from the Contract. If the Architect is required to obtain the approval of the Procuring Entity before exercising a specified authority, the requirements shall be as stated in the **Special Conditions of Contract**. The Procuring Entity shall promptly inform the Contractor of any change to the authority attributed to the Engineer.
- 3.1.4 However, whenever the Architect exercises a specified authority for which the Procuring Entity's approval is required, then (for the purposes of the Contract) the contractor shall require the Architect to provide evidence of such approval before complying with the instruction.
- 3.1.5 Except as otherwise stated in these Conditions:
- a) Whenever carrying out duties or exercising authority, specified in or implied by the Contract, the Architect shall be deemed to act for the Procuring Entity;
  - b) the Architect has no authority to relieve either Party of any duties, obligations or responsibilities under the Contract;
  - c) any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the Architect (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances; and
  - d) any act by the Architect in response to a Contractor's request shall be notified in writing to the Contractor within 14 days of receipt.
- 3.1.6 The following provisions shall apply:
- The Architect shall obtain the specific approval of the Procuring Entity before taking action under the following Sub-Clauses of these Conditions:
- a) Sub-Clause 4.12: agreeing or determining an extension of time and/or additional cost.
  - b) Sub-Clause 13.1: instructing a Variation, except;
    - i) In an emergency situation as determined by the Engineer, or
    - ii) If such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the **Special Conditions of Contract**.
  - c) Sub-Clause 13.3: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 or 13.2.
  - d) Sub-Clause 13.4: Specifying the amount payable in each of the applicable three currencies.
- 3.1.7 Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the

Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forth with comply, despite the absence of approval of the Procuring Entity, with any such instruction of the Engineer. The Architect shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Procuring Entity.

### **3.2 Delegation by the Engineer**

- 3.2.1 The Architect may from time to time assign duties and delegate authority to assistants and may also revoke such assignment or delegation. These assistants may include a resident Engineer, and/or independent inspectors appointed to inspect and/ or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties. However, unless otherwise agreed by both Parties, the Architect shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [Determinations].
- 3.2.2 Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorized to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:
- a) Any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Architect to reject the work, Plant or Materials;
  - b) If the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

### **3.3 Instructions of the Engineer**

- 3.3.1 The Architect may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under Clause 3.2.1.
- 3.3.2 The Contractor shall comply with the instructions given by the Architect or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Architect or a delegated assistant:
- a) Gives an oral instruction,
  - b) receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction, and
  - c) does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation,

Then the confirmation shall constitute the written instruction of the Architect or



delegated assistant (as the case may be).

### **3.4 Replacement of the Engineer**

If the Procuring Entity intends to replace the Engineer, the Procuring Entity shall, in not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended person to replace the Engineer.

### **3.5 Determinations**

3.5.1 Whenever these Conditions provide that the Architect shall proceed in accordance with this Sub-Clause 3.5 to agree or determine any matter, the Architect shall consult with each Party in an endeavor to reach agreement. If agreement is not achieved, the Architect shall make a fair determination in accordance with the Contract, taking due regard of all relevant circumstances.

3.5.1 The Architect shall give notice to both Parties of each agreement or determination, with supporting particulars, within 30 days from the receipt of the corresponding claim or request except when otherwise specified. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [Claims, Disputes and Arbitration].

## **4 THE CONTRACTOR**

### **4.1 Contractor's General Obligations**

4.1.1 The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Architect instructions, and shall remedy any defects in the Works.

4.1.2 The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.

4.1.3 All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country.

4.1.4 The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent specified in the Contract, the Contractor (i) shall be responsible for all Contractor's Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the design or specification of the Permanent Works.

4.1.5 The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.

4.1.6 If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Special Conditions:

- a) The Contractor shall submit to the Architect the Contractor's Documents for this part in accordance with the procedures specified in the Contract;

- b) these Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [Law and Language], and shall include additional information required by the Architect to add to the Drawings for co-ordination of each Party's designs;
- c) the Contractor shall be responsible for this part and it shall, when the Works are completed, befit for such purposes for which the part is intended as are specified in the Contract; and
- d) prior to the commencement of the Tests on Completion, the Contractor shall submit to the Architect the "as-built" documents and, if applicable, operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Procuring Entity to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

## 4.2 Performance Security

- 4.2.1 The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount stated in the **Special Conditions of Contract** and denominated in the currency (ies) of the Contract or in a freely convertible currency acceptable to the Procuring Entity. If an amount is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.
- 4.2.2 The Contractor shall deliver the Performance Security to the Procuring Entity within 30 days after receiving the Notification of Award and shall send a copy to the Engineer. The Performance Security shall be issued by a reputable bank selected by the Contractor and shall be in the form annexed to the Special Conditions, as stipulated by the Procuring Entity in the Special Conditions of Contract, or in another form approved by the Procuring Entity.
- 4.2.3 The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects. If the terms of the Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been completed and any defects have been remedied.
- 4.2.4 The Procuring Entity shall not make a claim under the Performance Security, except for amounts to which the Procuring Entity is entitled under the Contract.
- 4.2.5 The Procuring Entity shall indemnify and hold the Contractor harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from a claim under the Performance Security to the extent to which the Procuring Entity was not entitled to make the claim.
- 4.2.6 The Procuring Entity shall return the Performance Security to the Contractor within 14 days after receiving a copy of the Taking-Over Certificate.
- 4.2.7 Without limitation to the provisions of the rest of this Sub-Clause, whenever the Architect determines an addition or a reduction to the Contract Price as a result of a change in cost and/ or legislation, or as a result of a Variation, amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency,

the Contractor shall at the Architect request promptly increase, or may decrease, as the case may be, the value of the Performance Security in that currency by an equal percentage.

### **4.3 Contractor's Representative**

4.3.1 The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary to act on the Contractor's behalf under the Contract. The Contractor's Representative's Name and Address shall be provided in the **Special Conditions of Contract**.

4.3.2 Unless the Contractor's Representative is **named in the Contract**, the Contractor shall, prior to the Commencement Date, submit to the Architect for consent the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked in terms of Sub-Clause 6.9 [Contractor's Personnel], or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

4.3.3 The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.

4.3.4 The whole time of the Contractor's Representative shall be given to directing the Contractor's performance of the Contract. If the Contractor's Representative is to be temporarily absent from the Site during the execution of the Works, a suitable replacement person shall be appointed, subject to the Architect prior consent, and the Architect shall be notified accordingly.

4.3.5 The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [Instructions of the Engineer].

4.3.6 The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Architect has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

4.3.7 The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

### **4.4 Sub-contractors**

4.4.1 The Contractor shall not subcontract the whole of the Works. The contractor may however subcontract the works as provided in Clause 34.2.

4.4.2 The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor. Unless otherwise stated in the Special Conditions:

- a) The Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract;
- b) The prior consent of the Procuring Entity shall be obtained to other proposed Subcontractors;

- c) the Contractor shall give the Procuring Entity not less than 14 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site; and
  - d) each subcontract shall include provisions which would entitle the Procuring Entity to require the subcontract to be assigned to the Procuring Entity under Sub-Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [Termination by Procuring Entity].
- 443 The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [Confidential Details] apply equally to each Subcontractor.
- 444 Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from Kenya to be appointed as Subcontractors.

#### **4.5 Assignment of Benefit of Subcontract**

If a Subcontractor's obligations extend beyond the expiry date of the relevant Defects Notification Period and the Engineer, prior to this date, instructs the Contractor to assign the benefit of such obligations to the Procuring Entity, then the Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability to the Procuring Entity for the work carried out by the Subcontractor after the assignment takes effect.

#### **4.6 Co-operation**

- 4.6.1 The Contractor shall, as specified in the Contract or as instructed by the Engineer, allow appropriate opportunities for carrying out work to:
- a) The Procuring Entity's Personnel,
  - b) Any other contractors employed by the Procuring Entity, and
  - c) The personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.
- 4.6.2 Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to suffer delays and/or to incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.
- 4.6.3 If, under the Contract, the Procuring Entity is required to give to the Contractor possession of any foundation, structure, plant or means of access in accordance with Contractor's Documents, the Contractor shall submit such documents to the Architect in the time and manner stated in the Specification.

#### **4.7 Setting Out of the Works**

- 4.7.1 The Contractor shall set out the Works in relation to original points, lines and levels of reference specified in the Contractor notified by the Engineer. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the Works.
- 4.7.2 The Procuring Entity shall be responsible for any errors in these specified or notified

items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.

4.73 If the Contractor suffers delay and/or incurs Cost from executing work which was necessitated by an error in these items of reference, and an experienced contractor could not reasonably have discovered such error and avoided this delay and/ or Cost, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such costs accrued, which shall be included in the Contract Price.

4.7.4 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent the error could not reasonably have been discovered, and (ii) the matters described in sub-paragraphs (a) and (b) above related to these.

#### **48 Safety Procedures**

The Contractor shall:

- a) Comply with all applicable safety regulations,
- b) Take care for the safety of all persons entitled to be on the Site,
- c) Use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons,
- d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 [Procuring Entity's Taking Over], and
- e) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

#### **49 Quality Assurance**

49.1 The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Architect shall be entitled to audit any aspect of the system.

49.2 Details of all procedures and compliance documents shall be submitted to the Architect for information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor itself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.

#### **4.10 Site Data**

4.10.1 The Procuring Entity shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Procuring Entity's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Procuring Entity shall similarly make available to the

Contractor all such data which come into the Procuring Entity's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

- 4.102 To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):
- a) The form and nature of the Site, including sub-surface conditions,
  - b) the hydrological and climatic conditions,
  - c) the extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects,
  - d) the Laws, procedures and labour practices of Kenya, and
  - e) the Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

#### **4.11 Sufficiency of the Accepted Contract Amount**

- 4.11.1 The Contractor shall be deemed to:
- a) Have satisfied itself as to the correctness and sufficiency of the Accepted Contract Amount, and
  - b) have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 [Site Data].
- 4.11.2 Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.

#### **4.12 Unforeseeable Physical Conditions**

- 4.12.1 In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.
- 4.12.2 If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Architect as soon as practicable.
- 4.12.3 This notice shall describe the physical conditions, so that they can be inspected by the Architect and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Architect may give. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.
- 4.12.4 If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these

conditions, the Contractor shall be entitled subject to notice under Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost, which shall be included in the Contract Price.

4.125 Upon receiving such notice and inspecting and/or investigating these physical conditions, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

4.126 However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Architect may also review whether other physical conditions in similar parts of the Works (if any) were more favorable than could reasonably have been foreseen when the Contractor submitted the Tender. If and to the extent that these more favorable conditions were encountered, the Architect may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

4.127 The Architect shall take account of any evidence of the physical conditions foreseen by the Contractor when submitting the Tender, which shall be made available by the Contractor, but shall not be bound by the Contractor's interpretation of any such evidence.

#### **4.13 Rights of Way and Facilities**

Unless otherwise specified in the Contract the Procuring Entity shall provide effective access to and possession of the Site including special and/or temporary rights-of-way which are necessary for the Works. The Contractor shall obtain, at his risk and cost, any additional rights of way or facilities outside the Site which he may require for the purposes of the Works.

#### **4.14 Avoidance of Interference**

4.14.1 The Contractor shall not interfere unnecessarily or improperly with:

- a) The convenience of the public, or
- b) The access to and use and occupation of all roads and foot paths, irrespective of whether they are public or in the possession of the Procuring Entity or of others.

4.14.2 The Contractor shall indemnify and hold the Procuring Entity harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

#### **4.15 Access Route**

4.15.1 The Contractor shall be deemed to have been satisfied as to the suitability and

availability of access routes to the Site at Base Date. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.

4.152 Except as otherwise stated in these Conditions:

- a) The Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;
- b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
- c) the Procuring Entity shall not be responsible for any claims which may arise from the use or otherwise of any access route;
- d) the Procuring Entity does not guarantee the suitability or availability of particular access routes; and
- e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

#### **4.16 Transport of Goods**

Unless otherwise stated in the Special Conditions:

- a) the Contractor shall give the Architect not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;
- b) the Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and
- c) the Contractor shall indemnify and hold the Procuring Entity harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods and shall negotiate and pay all claims arising from their transport.

#### **4.17 Contractor's Equipment**

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

#### **4.18 Protection of the Environment**

4.18.1 The contractor shall comply with the applicable environmental laws, regulations and policies.

4.18.2 The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

4.18.3 The Contractors shall ensure that emissions, surfaced is charges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.



#### **4.19 Electricity, Water and Gas**

- 4.19.1 The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require for his construction activities and to the extent defined in the Specifications, for the tests.
- 4.19.2 The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specifications. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed.
- 4.19.3 The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Architect in accordance with Sub-Clause 2.5 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.

#### **4.20 Procuring Entity's Equipment and Free-Issue Materials**

- 4.20.1 The Procuring Entity shall make the Procuring Entity's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:
- a) The Procuring Entity shall be responsible for the Procuring Entity's Equipment, except that
  - b) the Contractor shall be responsible for each item of Procuring Entity's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.
- 4.20.1 The appropriate quantities and the amounts due (at such stated prices) for the use of Procuring Entity's Equipment shall be agreed or determined by the Architect in accordance with Sub-Clause 2.5 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.
- 4.20.2 The Procuring Entity shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Procuring Entity shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them and shall promptly give notice to the Architect of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Procuring Entity shall immediately rectify the notified shortage, defect or default.
- 4.20.3 After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Procuring Entity of liability for any shortage, defect or default not apparent from a visual inspection.

#### **4.21 Progress Reports**

- 4.21.1 Unless otherwise stated in the Special Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Architect in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted

monthly thereafter, each within 7 days after the last day of the period to which it relates.

- 4.21.2 Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works. Each report shall include:
- a) charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
  - b) photographs showing the status of manufacture and of progress on the Site;
  - c) for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
    - i) commencement of manufacture,
    - ii) Contractor's inspections,
    - iii) tests, and
    - iv) shipment and arrival at the Site;
  - d) the details described in Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment];
  - e) copies of quality assurance documents, test results and certificates of Materials;
  - f) list of notices given under Sub-Clause 2.5 [Procuring Entity's Claims] and notices given under Sub- Clause 20.1 [Contractor's Claims];
  - g) safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
  - h) comparison so factual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

#### **4.22 Security of the Site**

Unless otherwise stated in the Special Conditions:

- a) The Contractor shall be responsible for keeping unauthorized persons off the Site, and
- b) authorized persons shall be limited to the Contractor's Personnel and the Procuring Entity's Personnel; and to any other personnel notified to the Contractor, by the Procuring Entity or the Engineer, as authorized personnel of the Procuring Entity's other contractors on the Site.

#### **4.23 Contractor's Operations on Site**

- 4.23.1 The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Architect as additional working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.
- 4.23.2 During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction and shall store or dispose of any Contractor's

Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.

- 4.23.3 Upon the issue of a Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which the Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave that part of the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, during the Defects Notification Period, such Goods as are required for the Contractor to fulfil obligations under the Contract.

#### **4.24 Fossils**

- 4.24.1 All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Procuring Entity. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.
- 4.24.2 The Contractor shall, upon discovery of any such finding, promptly give notice to the Engineer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub- Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - b) payment of any such Cost, which shall be included in the Contract Price. After receiving this further notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

### **5 NOMINATED SUBCONTRACTORS**

#### **5.1 Definition of "nominated Subcontractor"**

In this Contract, "nominated Subcontractor" means a Subcontractor:

- a) Who is nominated by the Procuring Entity, or
- b) Contractor has nominated as a Subcontractor subject to Sub-Clause 5.2 [Objection to Notification].

#### **5.2 Objection to Nomination**

The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Procuring Entity as soon as practicable, with supporting particulars. An objection shall be deemed reasonable if it arises from (among other things) any of the following matters, unless the Procuring Entity agrees in writing to indemnify the Contractor against and from the consequences of the matter:

- a) there are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;
- b) the nominated Subcontractor does not accept to indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and employees; or
- c) the nominated Subcontractor does not accept to enter into a subcontract which specifies that, for the subcontracted work (including design, if any),

the nominated Subcontractor shall:

- i) undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract;
- ii) indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities, and
- iii) be paid only if and when the Contractor has received from the Procuring Entity payments for sums due under the Subcontract referred to under Sub-Clause 5.3 [Payment to nominated Subcontractors].

### **5.3 Payments to nominated Subcontractors**

The Contractor shall pay to the nominated Subcontractor the amounts shown on the nominated Subcontractor's invoices approved by the Contractor which the Architect certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with subparagraph (b) of Sub-Clause 13.5 [Provisional Sums], except as stated in Sub-Clause 5.4 [Evidence of Payments].

### **5.4 Evidence of Payments**

5.4.1 Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Architect may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- (a) Submits this reasonable evidence to the Engineer, or
- (b)
  - i) Satisfies the Architect in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
  - ii) Submits to the Architect reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement, then the Procuring Entity may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Procuring Entity, the amount which the nominated Subcontractor was directly paid by the Procuring Entity.

## **6 STAFF AND LABOR**

### **6.1 Engagement of Staff and Labor**

Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, feeding, transport, and, when appropriate, housing. The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within Kenya.

### **6.2 Rates of Wages and Conditions of Labor**

6.2.1 The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by Procuring Entity's whose trade or industry is similar to that of the Contractor.

6.2.2 The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in Kenya in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the Laws of Kenya for the time being in force, and the Contractor shall perform such duties in regard to such deductions there of as may be imposed on him by such Laws.

### **6.3 Persons in the Service of Procuring Entity**

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Procuring Entity's Personnel.

### **6.4 Labour Laws**

The Contractor shall comply with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, employment of children, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights. The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

### **6.5 Working Hours**

No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the **Special Conditions of Contract**, unless:

- a) Otherwise stated in the Contract,
- b) The Architect gives consent, or
- c) The work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer, provided that work done outside the normal working hours shall be considered and paid for as overtime.

### **6.6 Facilities for Staff and Labor**

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities on site for the Contractor's Personnel. The Contractor shall also provide facilities for the Procuring Entity's Personnel as stated in the Specifications. The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

### **6.7 Health and Safety**

6.7.1 The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Procuring Entity's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for

the prevention of epidemics.

- 6.72 The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.
- 6.73 The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Architect may reasonably require.
- 6.74 The Contractor shall conduct an awareness programme on HIV and other sexually transmitted diseases via an approved service provider and shall undertake such other measures taken to reduce the risk of the transfer of these diseases between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

#### **6.8 Contractor's Superintendence**

- 6.8.1 Throughout the execution of the Works, and as long thereafter as is necessary to fulfill the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.
- 6.8.2 Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4 [Law and Language]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

#### **6.9 Contractor's Personnel**

- 6.9.1 The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractor's Key personnel shall be named in the Special Conditions of Contract. The Architect may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:
- a) Persists in any misconduct or lack of care,
  - b) Carries out duties in competently or negligently,
  - c) fails to conform with any provisions of the Contract,
  - d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment, or
  - e) based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Works.
- 6.9.2 If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

#### **6.10 Records of Contractor's Personnel and Equipment**

The Contractor shall submit, to the Engineer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the

Site. Details shall be submitted each calendar month, in a form approved by the Engineer, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

#### **6.11 Disorderly Conduct**

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site.

#### **6.12 Foreign Personnel**

6.121 The Contractor shall not employ foreign personnel unless the contractor demonstrates that there are no Kenyans with the required skills.

6.122 The Contractor shall be responsible for the return of any foreign personnel to the place where they were recruited or to their domicile. In the event of the death in Kenya of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

#### **6.13 Supply of Water**

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

#### **6.14 Measures against Insect and Pest Nuisance**

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

#### **6.15 Alcoholic Liquor or Drugs**

The Contractor shall not, otherwise than in accordance with the Laws of Kenya, onsite, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereof by Contractor's Personnel.

#### **6.16 Prohibition of Forced or Compulsory Labour**

The Contractor shall not employ forced labor, which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements.

#### **6.17 Prohibition of Harmful Child Labor**

The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant labour laws of Kenya have provisions for employment of minors, the Contractor shall follow those laws applicable to the

Contractor. Children below the age of 18 years shall not be employed in dangerous work.

#### **6.18 Employment Records of Workers**

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment].

#### **6.19 Workers' Organizations**

The Contractor shall comply with the relevant labor laws that recognize workers' rights to form and to join workers' organizations of their choosing without interference.

#### **6.20 Non-Discrimination and Equal Opportunity**

The Contractor shall base the labour employment on the principle of equal opportunity and fair treatment and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employ mentor retirement, and discipline.

### **7. PLANT, MATERIALS AND WORKMANSHIP**

#### **7.1 Manner of Execution**

The Contractor shall carry out the manufacture/assemble of plant, the production and manufacture of Materials, and all other execution of the Works:

- a) In the manner (if any) specified in the Contract,
- b) in a proper workman like and careful manner, in accordance with recognized good practice, and
- c) with properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.

#### **7.2 Samples**

The Contractor shall submit the following samples of Materials, and relevant information, to the Architect for consent prior to using the Material sin or for the Works:

- a) manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost, and
- b) additional samples instructed by the Architect as a Variation.

Each sample shall be labeled as to origin and intended use in the Works.

#### **7.3 Inspection**

7.3.1 The Procuring Entity's Personnel shall at all reasonable times:

- a) Have full access to all parts of the Site and to all places from which natural Materials are being obtained, and



- b) during production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials.
- 7.3.2 The Contractor shall give the Procuring Entity's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.
- 7.3.3 The Contractor shall give notice to the Architect whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Architect shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Architect does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and there after reinstate and make good, all at the Contractor's cost.
- 7.4 Testing**
- 7.4.1 This Sub-Clause shall apply to all tests specified in the Contract.
- 7.4.2 Except as otherwise specified in the Contract, the Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labor, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.
- 7.4.3 The Architect may, under Clause 13 [Variations and Adjustments], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.
- 7.4.4 The Architect shall give the Contractor not less than 24 hours' notice of the Architect intention to attend the tests. If the Architect does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Architect presence.
- 7.4.5 If the Contractor suffers delay and/ or incurs Cost from complying with these instructions or as a result of a delay for which the Procuring Entity is responsible, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - b) payment of any such Cost-plus profit, which shall be included in the Contract Price.
- 7.4.6 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 7.4.7 The Contractor shall promptly forward to the Architect duly certified reports of the

tests. When the specified tests have been passed, the Architect shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Architect has not attended the tests, he shall be deemed to have accepted the readings as accurate.

## **7.5 Rejection**

7.5.1 If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Architect may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.

7.5.2 If the Architect requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Procuring Entity to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay these costs to the Procuring Entity.

## **7.6 Remedial Work**

7.6.1 Notwithstanding any previous test or certification, the Architect may instruct the Contractor to:

- a) Remove from the Site and replace any Plant or Materials which is not in accordance with the Contract,
- b) remove and re-execute any other work which is not in accordance with the Contract, and
- c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseen able event or otherwise.

7.6.2 The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under sub-paragraph (c).

7.6.3 If the Contractor fails to comply with the instruction, the Procuring Entity shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay to the Procuring Entity all costs arising from this failure.

7.6.4 If the contractor repeatedly delivers defective work, the Procuring Entity may consider termination in accordance with Clause 15.

## **7.7 Ownership of Plant and Materials**

Except as otherwise provided in the Contract, each item of Plant and Materials shall become the property of the Procuring Entity at whichever is the earlier of the following times, free from liens and other encumbrances:

- a) When it is incorporated in the Works;
- b) when the Contractor is paid the corresponding value of the Plant and Materials under Sub-Clause 8.10 [Payment for Plant and Materials in Event of Suspension].

## **7.8 Royalties**

Unless otherwise stated in the Specification, the Contractor shall pay all royalties, rents and other payments for:

- a) Natural materials obtained from outside the Site, and
- b) the disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal are as within the Site are specified in the Contract.

## **8 COMMENCEMENT, DELAYS AND SUSPENSION**

### **8.1 Commencement of Works**

8.1.1 Except as otherwise specified in the Special Conditions of Contract, the Commencement Date shall be the date at which the following precedent condition shall have all been fulfilled and the Architect notification recording the agreement of both Parties on such fulfilment and instructing to commence the Work is received by the Contractor:

- a) Signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities of Kenya;
- b) except if otherwise specified in the Special Conditions of Contract, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [Compliance with Laws] as required for the commencement of the Works.
- c) Receipt by the Contractor of the Advance Payment under Sub-Clause 14.2 [Advance Payment] provided that the corresponding bank guarantee has been delivered by the Contractor.

8.1.2 If the said Architect instruction is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract under Sub-Clause 6.2 [Termination by Contractor].

8.1.3 The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date and shall then proceed with the Works with due expedition and without delay.

### **8.2 Time for Completion**

The Contractor shall complete the whole of the Works, and each Section (if any), within the Time for Completion for the Works or Section (as the case may be), including:

- a) Achieving the passing of the tests on Completion, and
- b) completing all work which is stated in the Contract as being required for the Works or Section to be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections].

### **8.3 Programme**

8.3.1 The Contractor shall submit a detailed time programme to the Architect within 14 days after receiving the notice under Sub-Clause 8.1 [Commencement of Works]. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:

- a) The order in which the Contractor intends to carry out the Works, including

the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing,

- b) each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
- c) the sequence and timing of inspections and tests specified in the Contract, and
- d) a supporting report which includes:

- i) a general description of the methods which the Contractor intends to adopt, and of the major stages, in execution of the Works, and
  - ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.
- 8.3.2 Unless the Engineer, within 14 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Procuring Entity's Personnel shall be entitled to rely upon the programme when planning their activities.
- 8.3.3 The Contractor shall promptly give notice to the Architect of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works.
- 8.3.4 If, at any time, the Architect gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contractor to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Architect in accordance with this Sub-Clause.

#### **8.4 Extension of Time for Completion**

- 8.4.1 The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 10.1 [Taking Over of the Works and Sections] is or will be delayed by any of the following causes:
  - a) a Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.3 [Variation Procedure]) or other substantial change in the quantity of an item of work included in the Contract,
  - b) a cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions,
  - c) exceptionally adverse climatic conditions,
  - d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions, or
  - e) any delay, impediment or prevention caused by or attributable to the Procuring Entity, the Procuring Entity's Personnel, or the Procuring Entity's other contractors.
- 8.4.2 If the Contractor considers itself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Architect in accordance with Sub-Clause 20.1 [Contractor's Claims]. When determining each extension of time under Sub-Clause 20.1, the Architect shall review previous determinations and may increase, but shall not decrease, the total extension of time.

#### **8.5 Delays Caused by Authorities**

If the following conditions apply, namely:

- a) The Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in Kenya,
- b) These authorities delay or disrupt the Contractor's work, and
- c) the delay or disruption was Unforeseeable, then this delay or disruption will

be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 [Extension of Time for Completion].

## **8.6 Rate of Progress**

- 8.6.1 If, at any time:
- a) Actual progress is too slow to complete within the Time for Completion, and/or
  - b) Progress has fallen (or will fall) behind the current programme under Sub-Clause 8.3 [Programme], other than as a result of a cause listed in Sub-Clause 8.4 [Extension of Time for Completion], then the Architect may instruct the Contractor to submit, under Sub-Clause 8.3 [Programme], a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion.
- 8.6.2 Unless the Architect notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Procuring Entity to incur additional costs, the Contractor shall subject to notice under Sub-Clause 2.5 [Procuring Entity's Claims] pay these costs to the Procuring Entity, in addition to delay damages (if any) under Sub-Clause 8.7 below.
- 8.6.3 Additional costs of revised methods including acceleration measures, instructed by the Architect to reduce delays resulting from causes listed under Sub-Clause 8.4 [Extension of Time for Completion] shall be paid by the Procuring Entity, without generating, however, any other additional payment benefit to the Contractor.

## **8.7 Delay Damages**

- 8.7.1 If the Contractor fails to comply with Sub-Clause 8.2 [Time for Completion], the Contractor shall subject to notice under Sub-Clause 2.5 [Procuring Entity's Claims] pay delay damages to the Procuring Entity for this default. These delay damages shall be the sum stated in the **Special Conditions of Contract**, which shall be paid for everyday which shall elapse between the relevant Time for Completion and the date stated in the taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the Special Conditions of Contract.
- 8.7.2 These delay damages shall be the only damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 15.2 [Termination by Procuring Entity] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Contract.

## **8.8 Suspension of Work**

- 8.8.1 The Architect may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.
- 8.8.2 The Architect may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 8.9, 8.10 and 8.11 shall not apply.

## **8.9 Consequences of Suspension**

- 89.1 If the Contractor suffers delay and/or incurs Cost from complying with the Architect instructions under Sub- Clause 8.8 [Suspension of Work] and/or from resuming the work, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - b) Payment of any such Cost, which shall be included in the Contract Price.
- 892 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 893 The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with Sub-Clause 8.8 [Suspension of Work].

## **8.10 Payment for Plant and Materials in Event of Suspension**

The Contractor shall be entitled to payment of the value (as at the date of suspension) of Plant and/ or Materials which have not been delivered to Site, if:

- a) The work on Plant or delivery of Plant and/ or Materials has been suspended for more than 30 days, and
- b) the Contractor has marked the Plant and/or Materials as the Procuring Entity's property in accordance with the Architect instructions.

## **8.11 Prolonged Suspension**

If the suspension under Sub-Clause 8.8 [Suspension of Work] has continued for more than 84 days, the Contractor may request the Architect permission to proceed. If the Architect does not give permission within 30 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [Variations and Adjustments] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [Termination by Contractor].

## **8.12 Resumption of Work**

After the permission or instruction to proceed is given, the Contractor and the Architect shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension after receiving from the Architect an instruction to this effect under Clause 13 [Variations and Adjustments].

# **9. TESTS ON COMPLETION**

## **9.1 Contractor's Obligations**

- 9.1.1 The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [Testing], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [Contractor's General Obligations].

- 9.1.2 The Contractor shall give to the Architect not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Architect shall instruct.
- 9.1.3 In considering the results of the Tests on Completion, the Architect shall make allowances for the effect of any use of the Works by the Procuring Entity on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

## **9.2 Delayed Tests**

- 9.2.1 If the Tests on Completion are being unduly delayed by the Procuring Entity, Sub-Clause 7.4 [Testing] (fifth paragraph) and/ or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.
- 9.2.2 If the Tests on Completion are being unduly delayed by the Contractor, the Architect may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.
- 9.2.3 If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Procuring Entity's Personnel may proceed with the Test at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

## **9.3 Retesting of related works**

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [Rejection] shall apply, and the Architect or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

## **9.4 Failure to Pass Tests on Completion**

- 9.4.1 If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the Architect shall be entitled to:
- a) Order further repetition of Tests on Completion under Sub-Clause 9.3; or
  - b) if the failure deprives the Procuring Entity of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Procuring Entity shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 1.4 [Failure to Remedy Defects].

## **10. PROCURING ENTITY'S TAKING OVER**

### **10.1 Taking Over of the Works and Sections**

- 10.1.1 Except as stated in Sub-Clause 9.4 [Failure to Pass Tests on Completion], the Works shall be taken over by the Procuring Entity when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been



issued in accordance with this Sub-Clause.

- 10.12 The Contractor may apply by notice to the Architect for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.
- 10.13 The Architect shall, within 30 days after receiving the Contractor's application:
- a) Issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or
  - b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.
- 10.14 If the Architect fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 30 days, and if the Works or Section (as the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

## **10.2 Taking Over of Parts of the Works**

- 10.21 The Architect may, at the sole discretion of the Procuring Entity, issue a Taking-Over Certificate for any part of the Permanent Works.
- 10.22 The Procuring Entity shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Architect has issued a Taking-Over Certificate for this part. However, if the Procuring Entity does use any part of the Works before the Taking-Over Certificate is issued:
- a) The part which is used shall be deemed to have been taken over as from the date on which it is used,
  - b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Procuring Entity, and
  - c) if requested by the Contractor, the Architect shall issue a Taking-Over Certificate for this part.
- 10.23 After the Architect has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be necessary to carry out any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.
- 10.24 If the Contractor incurs Cost as a result of the Procuring Entity taking over and/or using a part of the Works, other than such use as is specified in the Contract agreed by the Contractor, the Contractor shall (i) give notice to the Architect and (ii) be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to payment of any such accrued costs, which shall be included in the Contract Price. After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this accrued cost.

1025 If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages thereafter for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 8.7 [Delay Damages] and shall not affect the maximum amount of these damages.

### **10.3 Interference with Tests on Completion**

1031 If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Procuring Entity is responsible, the Procuring Entity shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.

1032 The Architect shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Architect shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.

1033 If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such accrued costs, which shall be included in the Contract Price.

1034 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

### **10.4 Surfaces Requiring Reinstatement**

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

## **11. DEFECTS LIABILITY**

### **11.1 Completion of Outstanding Work and Remedying Defects**

11.1.1 In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:

- a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer, and
- b) execute all work required to remedy defects or damage, as may be notified by

(or on behalf of) the Procuring Entity on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).

- 11.1.2 If a defect appears or damage occurs, the Contractor shall be notified accordingly by the Engineer.

## **11.2 Cost of Remedying Defects**

- 11.2.1 All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:
- a) Any design for which the Contractor is responsible,
  - b) Plant, Materials or workmanship not being in accordance with the Contract, or
  - c) Failure by the Contractor to comply with any other obligation.
- 11.2.2 If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Procuring Entity, and Sub-Clause 13.3 [Variation Procedure] shall apply.

## **11.3 Extension of Defects Notification Period**

- 11.3.1 The Procuring Entity shall be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or by reason of damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.
- 11.3.2 If delivery and/ or erection of Plant and/ or Materials was suspended under Sub-Clause 8.8 [Suspension of Work] or Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/ or Materials would otherwise have expired.

## **11.4 Failure to Remedy Defects**

- 11.4.1 If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by the Engineer, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.
- 11.4.2 If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Procuring Entity may (at his option):
- (a) Carry out the work itself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay to the Procuring Entity the costs reasonably incurred by the Procuring Entity in remedying the defect or damage;
  - (b) Require the Architect to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [Determinations]; or
  - (c) if the defect or damage deprives the Procuring Entity of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to

the intended use. Without prejudice to any other rights, under the Contractor otherwise, the Procuring Entity shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

#### **11.5 Removal of Defective Work**

If the defector damage cannot be remedied expeditiously on the Site and the Procuring Entity gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.

#### **11.6 Further Tests**

11.6.1 If the work of remedying of any defector damage may affect the performance of the Works, the Architect may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 14 days after the defect or damage is remedied.

11.6.2 These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [Cost of Remedying Defects], for the cost of the remedial work.

#### **11.7 Right of Access**

Until the Completion Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Procuring Entity's reasonable security restrictions.

#### **11.8 Contractor to Search**

The Contractor shall, if required by the Engineer, search for the cause of any defect on parts of the works that have already accepted, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Cost of the search plus profit shall be agreed or determined by the Architect in accordance with Sub-Clause 3.5 [Determinations] and shall be included in the Contract Price.

#### **11.9 Completion Certificate**

11.9.1 Performance of the Contractor's obligations shall not be considered to have been completed until the Architect has issued the Completion Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.

11.9.2 The Architect shall issue the Completion Certificate within 30days after the latest of the expiry dates of the Defects Liability Period, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects. A copy of the Completion Certificate shall be issued to the Procuring Entity.

11.93 Only the Completion Certificate shall be deemed to constitute acceptance of the Works.

#### **11.10 Unfulfilled Obligations**

After the Completion Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

#### **11.11 Clearance of Site**

11.11.1 Upon receiving the Completion Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

11.11.2 If all these items have not been removed within 30 days after receipt by the Contractor of the Completion Certificate, the Procuring Entity may sell or otherwise dispose of any remaining items. The Procuring Entity shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

11.11.3 Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Procuring Entity's costs, the Contractor shall pay the outstanding balance to the Procuring Entity.

### **12 MEASUREMENT AN DEVALUATION**

#### **12.1 Works to be Measured**

12.1.1 The Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement on Completion] and 14.11 [Application for Final Payment Certificate] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract.

12.1.2 Whenever the Architect requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:

- a) promptly either attend or send another qualified representative to assist the Architect in making the measurement, and
- b) supply any particulars requested by the Engineer.

12.1.3 If the Contractor fails to attend or send a representative, the measurement made by the Architect shall be accepted as accurate.

12.1.4 Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

12.1.5 If the Contractor examines and disagrees the records, and/ or does not sign them as agreed, then the Contractor shall give notice to the Architect of the respects in

which the records are asserted to be inaccurate. After receiving this notice, the Architect shall review the records and either confirm or vary them and certify the payment of the undisputed part. If the Contractor does not so give notice to the Architect within 14 days after being requested to examine the records, they shall be accepted as accurate.

## **12.2 Method of Measurement**

Except as otherwise stated in the Contract:

- a) Measurement shall be made of the net actual quantity of each item of the Permanent Works, and
- b) the method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

## **12.3 Evaluation**

- 12.3.1 Except as otherwise stated in the Contract, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of work done by evaluating each item of work, applying the measurement agreed or determined in accordance with the above Sub-Clauses 12.1 and 12.2 and the appropriate rate or price for the item.
- 12.3.2 For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contractor, if there is no such item, specified for similar work.
- 12.3.3 Any item of work included in the Bill of Quantities for which no rate or price was specified shall be considered as included in other rates and prices in the Bill of Quantities and will not be paid for separately.
- 12.3.4 However, for a new item of work, a new rate or price shall be appropriate for such item of work if:
- a) The work is instructed under Clause 13 [Variations and Adjustments],
  - b) no rate or price is specified in the Contract for this item, and
  - c) no specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.
- 12.3.5 Each new rate or price shall be derived from any relevant rates or prices in the Contract. If no rates or prices are relevant for the new item of work, it shall be derived from the reasonable Cost of executing such work, prevailing market rates, together with profit, taking account of any other relevant matters.
- 12.3.6 Until such time as an appropriate rate or price is agreed or determined, the Architect shall determine a provisional rate or price for the purposes of Interim Payment Certificates as soon as the concerned work commences.
- 12.3.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (*which would be the tender price*), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: *(corrected tender price – tender price) / tender price X 100*.

## **12.4 Omissions**

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

- a) The Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;
- b) The omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and
- c) this cost is not deemed to be included in the evaluation of any substituted work; then the Contractor shall give notice to the Architect accordingly, with supporting particulars. Upon receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this cost, which shall be included in the Contract Price.

## **13. VARIATIONS AND ADJUSTMENTS**

### **13.1 Right to Vary**

13.1.1 Variations may be initiated by the Architect at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal. No Variation instructed by the Architect under this Clause shall in any way vitiate or invalidate the Contract.

13.1.2 The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Architect stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, or (ii) such Variation triggers a substantial change in the sequence or progress of the Works. Upon receiving this notice, the Architect shall cancel, confirm or vary the instruction.

13.1.3 Each Variation may include:

- a) changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation),
- b) changes to the quality and other characteristics of any item of work,
- c) changes to the levels, positions and/ or dimensions of any part of the Works,
- d) omission of any work unless it is to be carried out by others,
- e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
- f) changes to the sequence or timing of the execution of the Works.

13.1.4 The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Architect instructs after obtaining approval of the Procuring Entity.

### **13.2 Variation Order Procedure**

13.2.1 Prior to any Variation Order under Sub-Clause 13.1.4 the Architect shall notify the Contractor of the nature and form of such variation. As soon as possible after having received such notice, the Contractor shall submit to the Engineer:

- a) A description of work, if any, to be performed and a programme for its execution, and
- b) the Contractor's proposals for any necessary modifications to the Programme according to Sub-Clause 8.3 or to any of the Contractor's obligations under the Contract, and

- c) the Contractor's proposals for adjustment to the Contract Price.

Following the receipt of the Contractor's submission the Architect shall, after due consultation with the Employer and the Contractor, decide as soon as possible whether or not the variation shall be carried out. If the Architect decides that the variation shall be carried out, he shall issue a Variation Order clearly identified as such in accordance with the Contractor's submission or as modified by agreement.

If the Architect and the Contractor are unable to agree the adjustment of the Contract Price, the provisions of Sub-Clause 13.2.2 shall apply.

### **1322 Disagreement on Adjustment of the Contract Price**

If the Contractor and the Architecture unable to agree on the adjustment of the Contract Price, the adjustment shall be determined in accordance with the rates specified in the Bills of Quantities or Schedule of Daywork Prices. If the rates contained in the Bills of Quantities or Dayworks Prices are not directly applicable to the specific work in question, suitable rates shall be established by the Architect reflecting the level of pricing in the Dayworks Prices. Where rates are not contained in the said Prices, the amount shall be such as is in all the circumstances reasonable, reflecting a market price. Due account shall be taken of any over-or under-recovery of overheads by the Contractor in consequence of the variation. The Contractor shall also be entitled to be paid:

- a) The cost of any partial execution of the Works rendered useless by any such variation,
- b) The cost of making necessary alterations to Plant already manufactured or in the course of manufacture or of any work done that has to be altered in consequence of such a variation,
- c) any additional costs incurred by the Contractor by the disruption of the progress of the Works as detailed in the Programme, and
- d) the net effect of the Contractor's finance costs, including interest, caused by the variation.

The Architect shall on this basis determine the rates or prices to enable on-account payment to be included in certificates of payment.

### **1323 Contractor to Proceed**

On receipt of a Variation Order, the Contractor shall forth with proceed to carry out the variation and be bound to these Conditions in so doing as if such variation was stated in the Contract. The work shall not be delayed pending the granting of an extension of the Time for Completion or an adjustment to the Contract Price under Sub-Clause 31.3.

### **133 Value Engineering**

133.1 The Contractor may, at any time, submit to the Architect written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Procuring Entity of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Procuring Entity of the completed Works, or (iv) otherwise be of benefit to the Procuring Entity.

133.2 The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 [Variation Procedure].



- 13.2.3 If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:
- a) The Contractor shall design this part,
  - b) sub-paragraphs (a) to (d) of Sub-Clause 4.1 [Contractor's General Obligations] shall apply, and
  - c) if this change results in a reduction in the contract value of this part, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be half (50%) of the difference between the following amounts:
    - i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 13.8 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost], and
    - ii) the reduction (if any) in the value to the Procuring Entity of the varied works, taking account of any improvement in quality, anticipated life or operational efficiencies.

13.3.4 However, if the amount established in item 13.2.3 (c) (i) is less than amount established in item 13.2.3 (c) (ii), there shall not be a fee. However, if the amount established in item 13.2.3 (c) (i) is more than amount established in item 13.2.3 (c) (ii), it shall result in a price variation to the Procuring Entity.

#### **134 Variation Procedure for Value Engineering proposal**

- 13.4.1 If the Architect requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:
- a) A description of the proposed work to be performed and a programme for its execution,
  - b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 [Programme] and to the Time for Completion, and
  - c) the Contractor's proposal for evaluation of the Variation.
- 13.4.2 The Architect shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [Value Project Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.
- 13.4.3 Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Architect to the Contractor, who shall acknowledge receipt.
- 13.4.4 Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Architect instructs or approves otherwise in accordance with this Clause.

#### **135 Payment in Applicable Currencies**

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

### **136 Provisional Sums**

- 13.6.1 Each Provisional Sum shall only be used, in whole or in part, in accordance with the Architect instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Architect shall have instructed. For each Provisional Sum, the Architect May instruct:
- a) Work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 13.3 [Variation Procedure]; and/or
  - b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]) or otherwise; and for which there shall be included in the Contract Price:
    - i) The actual amounts paid (or due to be paid) by the Contractor, and
    - ii) a sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in **the Special Conditions of Contract** shall be applied.
- 13.6.2 The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

### **137 Dayworks**

- 13.7.1 For work of a minor or incidental nature, the Architect may instruct that a Variation shall be executed on a daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.
- 13.7.2 Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.
- 13.7.3 Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Architect accurate statements induplicate which shall include the following details of the resources used in executing the previous day's work:
- a) The names, occupations and time of Contractor's Personnel,
  - b) the identification, type and time of Contractor's Equipment and Temporary Works, and
  - c) the quantities and types of Plant and Materials used.
- 13.7.4 One copy of each statement will, if correct, or when agreed, be signed by the Architect and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [Application for Interim Payment Certificates].

### **138 Adjustments for Changes in Legislation**

- 13.8.1 The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of Kenya (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or

official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

- 13.8.2 If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - b) payment of any such Cost, which shall be included in the Contract Price.
- 13.8.3 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.
- 13.8.4 Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause 13.8 [Adjustments for Changes in Cost].

### **13.9 Adjustments for Changes in Cost**

- 13.9.1 In this Sub-Clause, "table of adjustment data" means the completed table of adjustment data for local and foreign currencies included in the Schedules. If there is no such table of adjustment data, this Sub-Clause shall not apply.
- 13.9.2 If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labor, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.
- 13.9.3 The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

## Price Adjustment Formula

Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the SCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies:

$$P = A + B I_m/I_o$$

Where:

**P** is the adjustment factor for the portion of the Contract Price payable.

**A** and **B** are coefficients **specified in the SCC**, representing then on adjustable and adjustable portions, respectively, of the Contract Price payable and

**I<sub>m</sub>** is the index prevailing at the end of the month being invoiced and **I<sub>o</sub>** is the index prevailing 30 days before Bid opening for inputs payable.

**NOTE:** The sum of the two coefficients A and B should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the non adjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency are added to the Contract Price.

- 1394 The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. Forth is purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.
- 1395 In cases where the “currency of index” is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the Central Bank of Kenya, of this relevant currency on the above date for which the index is required to be applicable.
- 1396 Until such time as each current cost index is available, the Architect shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.
- 1397 If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices there after shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price, whichever is more favorable to the Procuring Entity.
- 1398 The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or in applicable, as a result of Variations.

## 14 CONTRACT PRICE AND PAYMENT

### 14.1 The Contract Price

- 14.1.1 Unless otherwise stated in the Special Conditions:
- a) The value of the payment certificate shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract;
  - b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation];
  - c) any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:
    - i) of the Works which the Contractor is required to execute, or
    - ii) for the purposes of Clause 12 [Measurement and Evaluation]; and
  - d) the Contractor shall submit to the Engineer, within 30 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules. The Architect may take account of the break down when preparing Payment Certificates but shall not be bound by it.
- 14.1.2 Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts there for, imported by the Contractor for the sole purpose of executing the Contract shall not be exempt from the payment of import duties and taxes upon importation.

## **14.2 Advance Payment**

- 14.2.1 The Procuring Entity shall make an advance payment, as an interest-free loan for mobilization and cashflow support, when the Contractor submits a guarantee in accordance with this Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the **Special Conditions of Contract**.
- 14.2.2 Unless and until the Procuring Entity receives this guarantee, or if the total advance payment is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.
- 14.2.3 The Architect shall deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate for the advance payment or its first instalment after receiving a Statement (under Sub-Clause 14.3 [Application for Interim Payment Certificates]) and after the Procuring Entity receives (i) the Performance Security in accordance with Sub-Clause 4.2 [Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by a reputable bank or financial institutions elected by the Contractor and shall be in the form annexed to the Special Conditions or in another form approved by the Procuring Entity.
- 14.2.4 The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

- 1425 Unless stated otherwise in **the Special Conditions of Contract**, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Architect in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates], as follows:
- a) Deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds 30 percent (30%) of the Accepted Contract Amount less Provisional Sums; and
  - b) deductions shall be made at the amortization rate stated in the **Special Conditions of Contract** of the amount of each Interim Payment Certificate (excluding the advance payment and deductions for its repayments as well as deductions for retention money) in the currencies and proportions of the advance payment until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.
- 1426 If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [Termination by Procuring Entity], Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [Termination by Procuring Entity], except for Sub-Clause 14.2.7 [Procuring Entity's Entitlement to Termination for Convenience], payable by the Contractor to the Procuring Entity.

### 14.3 Application for Interim Payment Certificates

- 143.1 The Contractor shall submit a Statement (in number of copies indicated in the **Special Conditions of Contract**) to the Architect after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers itself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].
- 143.2 The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:
- a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
  - b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost];
  - c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in **the Special Conditions of Contract** to the total of the above amounts, until the amount so retained by the Procuring Entity reaches the limit of Retention Money (if any) stated in **the Special Conditions of Contract**;
  - d) any amounts to be added for the advance payment and (if more than one instalment) and to be deducted for its repayments in accordance with Sub-

Clause 14.2 [Advance Payment];

- e) any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [Plant and Materials intended for the Works];
- f) any other additions or deductions which may have become due under the Contractor otherwise, including those under Clause 20 [Claims, Disputes and Arbitration]; and
- g) the deduction of amounts certified in all previous Payment Certificates.

#### **14.4 Schedule of Payments**

14.4.1 If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

- a) The instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates];
- b) Sub-Clause 14.5 [Plant and Materials intended for the Works] shall not apply; and
- c) If these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less or more than that on which this schedule of payments was based, then the Architect may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine revised instalments, which shall take account of the extent to which progress is less or more than that on which the instalments were previously based.

14.4.2 If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

#### **14.5 Plant and Materials intended for the Works**

14.5.1 If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3, (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates].

14.5.2 If the lists referred to in sub-paragraphs (b)(i) or (c)(i) below are not included in the Schedules, this Sub-Clause shall not apply.

14.5.3 The Architect shall determine and certify each addition if the following conditions are satisfied:

- a) The Contractor has:
  - i) kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection, and
  - ii) submitted statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;

and either:

- b) the relevant Plant and Materials:

- i) are those listed in the Schedules for payment when shipped,
  - ii) have been shipped to Kenya, en route to the Site, in accordance with the Contract; and
  - iii) are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Architect together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Procuring Entity in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration; or
- c) the relevant Plant and Materials:
- i) are those listed in the Schedules for payment when delivered to the Site, and
  - ii) have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration and appear to be in accordance with the Contract.

14.54 The additional amount to be certified shall be the equivalent of eighty percent (80%) of the Architect determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

14.55 The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

#### **14.6 Issue of Interim Payment Certificates**

14.61 No amount will be certified or paid until the Procuring Entity has received and approved the Performance Security. Thereafter, the Architect shall, within 30 days after receiving a Statement and supporting documents, deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate which shall state the amount which the Architect fairly determines to be due, with all supporting particulars for any reduction or withholding made by the Architect on the Statement if any.

14.62 However, prior to issuing the Taking-Over Certificate for the Works, the Architect shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated **in the Special Conditions of Contract**. In this event, the Architect shall give notice to the Contractor accordingly.

14.63 An Interim Payment Certificate shall not be withheld for any other reason, although:

- a) if anything supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or
- b) if the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the



value of this work or obligation may be withheld until the work or obligation has been performed.

4.6.4 The Architect may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Architect acceptance, approval, consent or satisfaction.

#### **14.7 Payment**

14.7.1 The Procuring Entity shall pay to the Contractor:

- a) The advance payment shall be paid within 60 days after signing of the contract by both parties or within 60 days after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub- Clause 14.2 [Advance Payment], whichever is later;
- b) The amount certified in each Interim Payment Certificate within 60 days after the Architect Issues Interim Payment Certificate; and
- c) the amount certified in the Final Payment Certificate within 60 days after the Procuring Entity Issues Interim Payment Certificate; or after determination of any disputed amount shown in the Final Statement in accordance with Sub-Clause 16.2 [Termination by Contractor].

14.7.2 Payment of the amount due in each currency shall be made into the bank account, nominated by the Contractor, in the payment country (forth is currency) specified in the Contract.

#### **14.8 Delayed Payment**

14.8.1 If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to receive financing charges (simple interest) monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [Payment], irrespective (in the case of its sub-paragraph (b) of the date on which any Interim Payment Certificate is issued.

14.8.2 These financing charges shall be calculated at the annual rate of three percentage points above the mean rate of the Central Bank in Kenya of the currency of payment, or if not available, the interbank offered rate, and shall be paid in such currency.

14.8.3 The Contractor shall be entitled to this payment without formal notice and certification, and without prejudice to any other right or remedy.

#### **14.9 Payment of Retention Money**

14.9.1 When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Architect for payment to the Contractor. If a Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall behalf (50%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.

14.9.2 Promptly after the latest of the expiry dates of the Defects Liability Periods, the outstanding balance of the Retention Money shall be certified by the Architect for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a proportion of the second half of the Retention Money shall be certified and paid

promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.

- 14.93 However, if any work remains to be executed under Clause 11 [Defects Liability], the Architects shall be entitled to withhold certification of the estimated cost of this work until it has been executed.
- 14.94 When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost].
- 14.95 Unless otherwise stated in the Special Conditions, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a Retention Money Security guarantee, in the form annexed to the Special Conditions or in another form approved by the Procuring Entity and issued by a reputable bank or financial institution selected by the Contractor, for the second half of the Retention Money.
- 14.96 The Procuring Entity shall return the Retention Money Security guarantee to the Contractor within 14 days after receiving a copy of the Completion Certificate.

#### **14.10 Statement at Completion**

- 14.10.1 Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Architect three copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [Application for Interim Payment Certificates], showing:
  - a) the value of all work done in accordance with the Contract up to the date stated in the Taking-Over Certificate for the Works,
  - b) any further sums which the Contractor considers to be due, and
  - c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.
- 14.10.2 The Architect shall then certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates].

#### **14.11 Application for Final Payment Certificate**

- 14.11.1 Within 60 days after receiving the Completion Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:
  - a) The value of all work done in accordance with the Contract, and
  - b) Any further sums which the Contractor considers to be due to him under the Contract otherwise.
- 14.11.2 If the Architect disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Architect may reasonably require within 30 days from receipt of said draft and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Architect the final statement as agreed. This agreed statement is referred to in these Conditions as the "Final Statement".

14.11.3 However, if, following discussions between the Architect and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Architect shall deliver to the Procuring Entity (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 [Obtaining Dispute Board's Decision] or Sub-Clause 20.5 [Amicable Settlement], the Contractor shall then prepare and submit to the Procuring Entity (with a copy to the Engineer) a Final Statement.

#### **14.12 Discharge**

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

#### **14.13 Issue of Final Payment Certificate**

14.13.1 Within 30 days after receiving the Final Statement and discharge in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Architect shall deliver, to the Procuring Entity and to the Contractor, the Final Payment Certificate which shall state:

- a) The amount which he fairly determines is finally due, and
- b) After giving credit to the Procuring Entity for all amounts previously paid by the Procuring Entity and for all sums to which the Procuring Entity is entitled, the balance (if any) due from the Procuring Entity to the Contractor or from the Contractor to the Procuring Entity, as the case may be.

14.13.2 If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Architect shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 30 days, the Architect shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

#### **14.14 Cessation of Procuring Entity's Liability**

14.14.1 The Procuring Entity shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- a) in the Final Statement and also,
- b) (except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [Statement at Completion].

14.14.2 However, this Sub-Clause shall not limit the Procuring Entity's liability under his indemnification obligations, or the Procuring Entity's liability in any case of fraud, deliberate default or reckless misconduct by the Procuring Entity.

#### **14.15 Currencies of Payment**

The Contract Price shall be paid in the currency or currencies named in the Schedule of Payment Currencies. If more than one currency is so named,

payments shall be made as follows:

- a) If the Accepted Contract Amount was expressed in Local Currency only:
  - i) the proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Schedule of Payment Currencies, except as otherwise agreed by both Parties;
  - ii) payments and deductions under Sub-Clause 13.5 [Provisional Sums] and Sub-Clause 13.7 [Adjustments for Changes in Legislation] shall be made in the applicable currencies and proportions; and
  - iii) other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [Application for Interim Payment Certificates] shall be made in the currencies and proportions specified in sub-paragraph (a) (i) above;
- b) payment of the damages specified in the Special Conditions of Contract, shall be made in the currencies and proportions specified in the Schedule of Payment Currencies;
- c) other payments to the Procuring Entity by the Contractor shall be made in the currency in which the sum was expended by the Procuring Entity, or in such currency as may be agreed by both Parties;
- d) if any amount payable by the Contractor to the Procuring Entity in a particular currency exceeds the sum payable by the Procuring Entity to the Contractor in that currency, the Procuring Entity may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and
- e) if no rates of exchange are stated in the Schedule of Payment Currencies, they shall be those prevailing on the Base Date and determined by the Central Bank of Kenya.

## **15 TERMINATION BY PROCURING ENTITY**

### **15.1 Notice to correct any defects or failures**

If the Contractor fails to carry out any obligation under the Contract, the Architect may by notice require the Contractor to make good the failure and to remedy it within 30 days.

### **15.2 Termination by Procuring Entity**

- 15.2.1 The Procuring Entity shall be entitled to terminate the Contract if the Contractor breaches the contract based on following circumstances which shall include but not limited to:
- a) fails to comply with Sub-Clause 4.2 [Performance Security] or with a notice under Sub-Clause 15.1 [Notice to Correct],
  - b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,
  - c) without reasonable excuse fails:
    - i) to proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension], or
    - ii) to comply with a notice issued under Sub-Clause 7.5 [Rejection] or Sub-Clause 7.6 [Remedial Work], within 30 days after receiving it,
  - d) subcontracts the major part or whole of the Works or assigns the Contract without the consent of the Procuring Entity,
  - e) becomes bankrupt or insolvent, goes into liquidation, has a receiving or

administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or

- f) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an induce mentor reward:
  - i) for doing or for bearing to do any action in relation to the Contract, or
  - ii) for showing or for bearing to show favor or disfavor to any person in relation to the Contract, or
  - iii) if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such induce mentor reward as is described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination, or
- g) If the contract or repeatedly fails to remedy delivers defective work,
- h) based on reasonable evidence, has engaged in Fraud and Corruption as defined in paragraph 2.2 of the Appendix B to these General Conditions, in competing for or in executing the Contract.

1522 In any of these events or circumstances, the Procuring Entity may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub- paragraph (e) or (f) or (g) or (h), the Procuring Entity may by notice terminate the Contract immediately.

1523 The Procuring Entity's election to terminate the Contract shall not prejudice any other rights of the Procuring Entity, under the Contractor otherwise.

1524 The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

1525 After termination, the Procuring Entity may complete the Works and/ or arrange for any other entities to do so. The Procuring Entity and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

1526 The Procuring Entity shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Procuring Entity, these items may be sold by the Procuring Entity in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

### **15.3 Valuation at Date of Termination**

As soon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract.

## **15.4 Payment after Termination**

After a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the Procuring Entity may:

- a) Proceed in accordance with Sub-Clause 2.5 [Procuring Entity's Claims],
- b) withhold further payments to the Contractor until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Procuring Entity, have been established, and/ or
- c) recover from the Contractor any losses and damages incurred by the Procuring Entity and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 [Valuation at Date of Termination]. After recovering any such losses, damages and extra costs, the Procuring Entity shall pay any balance to the Contractor.

## **15.5 Procuring Entity's Entitlement to Termination for Convenience**

The Procuring Entity shall be entitled to terminate the Contract, at any time at the Procuring Entity's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 30 days after the later of the dates on which the Contractor receives this notice or the Procuring Entity returns the Performance Security. The Procuring Entity shall not terminate the Contract under this Sub-Clause in order to execute the Works itself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor under Clause 16.2 [Termination by Contractor]. After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid in accordance with Sub-Clause 16.4 [Payment on Termination].

## **15.6 Fraud and Corruption**

The Contractor shall ensure compliance with the Kenya Government's Anti-Corruption Laws and its prevailing sanctions.

## **15.7 Corrupt gifts and payments of commission**

15.7.1 The Contractor shall not:

- a) Offer or give or agree to give to any person in the service of the Procuring Entity any gift or consideration of any kind as an inducement or reward for doing or for bearing to do or for bearing to do any act in relation to the obtaining or execution of this or any other Contract for the Procuring Entity or for showing or for bearing to show favor or disfavor to any person in relation to this or any other contract for the Procuring Entity.
- b) Enter into this or any other contract with the Procuring Entity in connection with which commission has been paid or agreed to be paid by him or on his behalf or to his knowledge, unless before the Contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the Procuring Entity.

15.7.2 Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the provisions of the Public Procurement and Asset Disposal Act (2015) and the Anti-Corruption and Economic Crimes Act (2003) of the Laws of Kenya.

## **16 SUSPENSION AND TERMINATION BY CONTRACTOR**

### **16.1 Contractor's Entitlement to Suspend Work**

- 16.1.1 If the Architect fails to certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates] or Sub-Clause 14.7 [Payment], or not receiving instructions that would enable the contractor to proceed with the works in accordance with the program, the Contractor may, after giving not less than 30 days' notice to the Procuring Entity, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case maybe and as described in the notice.
- 16.1.2 The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 [Delayed Payment] and to termination under Sub-Clause 16.2 [Termination by Contractor].
- 16.1.3 If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.
- 16.1.4 If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - b) payment of any such Cost-plus profit, which shall be included in the Contract Price.
- 16.2 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

### **16.3 Termination by Contractor**

- 16.3.1 The Contractor shall be entitled to terminate the Contract if:
- a) the Architect fails, within 60 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate,
  - b) the Contractor does not receive the amount due under an Interim Payment Certificate within 90 days after the expiry of the time stated in Sub-Clause 14.7 [Payment] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 [Procuring Entity's Claims]),
  - c) the Procuring Entity substantially fails to perform his obligations under the Contract in such manner as to materially and adversely affect the economic balance of the Contract and/or the ability of the Contractor to perform the Contract,
  - d) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [Prolonged Suspension], or
  - e) the Procuring Entity becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events.

- f) the Contractor does not receive the Architect instruction recording the agreement of both Parties on the fulfilment of the conditions for the Commencement of Works under Sub-Clause 8.1 [Commencement of Works].

1632 In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Procuring Entity, terminate the Contract. However, in the case of subparagraph (f) or (g), the Contractor may by notice terminate the Contract immediately.

1633 The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract otherwise.

#### **164 Cessation of Work and Removal of Contractor's Equipment**

After a notice of termination under Sub-Clause 15.5 [Procuring Entity's Entitlement to Termination for Convenience], Sub-Clause 16.2 [Termination by Contractor] or Sub-Clause 19.6 [Optional Termination, Payment and Release] has taken effect, the Contractor shall promptly:

- a) cease all further work, except for such work as may have been instructed by the Architect for the protection of life or property or for the safety of the Works,
- b) hand over Contractor's Documents, Plant, Materials and other work, for which the Contractor has received payment, and
- c) remove all other Goods from the Site, except as necessary for safety, and leave the Site.

#### **165 Payment on Termination**

After a notice of termination under Sub-Clause 16.2 [Termination by Contractor] has taken effect, the Procuring Entity shall promptly:

- a) Return the Performance Security to the Contractor,
- b) pay the Contractor in accordance with Sub-Clause 19.6 [Optional Termination, Payment and Release], and
- c) pay to the Contractor the amount of any loss or damage sustained by the Contractor as a result of this termination.

### **17. RISK AND RESPONSIBILITY**

#### **17.1 Indemnities**

17.1.1 The Contractor shall indemnify and hold harmless the Procuring Entity, the Procuring Entity's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

- a) Bodily injury, sickness, disease or death, of any person what so ever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, willful actor breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, or any of their respective agents, and
- b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of



the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

- 17.12 The Procuring Entity shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [Insurance Against Injury to Persons and Damage to Property], unless and to the extent that any such damage or loss is attributable to any negligence, willful actor breach of the Contract by the contractor, the contractor's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

## **17.2 Contractor's Care of the Works**

- 17.21 The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [Taking Over of the Works and Sections]) for the Works, when responsibility for the care of the Works shall pass to the Procuring Entity. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Procuring Entity.
- 17.22 After responsibility has accordingly passed to the Procuring Entity, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.
- 17.23 If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.
- 17.24 The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

## **17.3 Procuring Entity's Risks**

The risks referred to in Sub-Clause 17.4 [Consequences of Procuring Entity's Risks] below, in so far as they directly affect the execution of the Works in Kenya, are:

- a) War hostilities (whether war be declared or not),
- b) rebellion, riot, commotion or disorder, terrorism, sabotage by persons other than the Contractor's Personnel,
- c) explosive materials, ionizing gradiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such explosives, radiation or radio-activity,

- d) pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds,
- e) use or occupation by the Procuring Entity of any part of the Permanent Works, except as may be specified in the Contract,
- f) design of any part of the Works by the Procuring Entity's Personnel or by others for whom the Procuring Entity is responsible, and
- g) any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventive precautions.

#### **17.4 Consequences of Procuring Entity's Risks**

- 17.4.1 If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Architect and shall rectify this loss or damage to the extent required by the Engineer.
- 17.4.2 If the Contractor suffers delay and/ or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Architect and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- (a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - (b) Payment of any such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (e) and (g) of Sub-Clause 17.3 [Procuring Entity's Risks], Accrued Costs shall be payable.
- 17.4.3 After receiving this further notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

#### **17.5 Intellectual and Industrial Property Rights**

- 17.5.1 In this Sub-Clause, "infringement" shall refer to an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and "claim" shall refer to a claim (or proceedings pursuing a claim) alleging an infringement.
- 17.5.2 Whenever a Party does not give notice to the other Party of any claim within 30 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.
- 17.5.3 The Procuring Entity shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:
- a) An unavoidable result of the Contractor's compliance with the Contract, or
  - b) A result of any Works being used by the Procuring Entity:
    - i) for a purpose other than that indicated by, or reasonably to be inferred from, the Contract, or
    - ii) In conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.
- 17.5.4 The Contractor shall indemnify and hold the Procuring Entity harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use,

sale or import of any Goods, or (ii) any design for which the Contractor is responsible.

- 17.5.5 If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.
- 17.5.6 For operation and maintenance of any plant or equipment installed, the contractor shall grant a non-exclusive and non-transferable license to the Procuring Entity under the patent, utility models ,or other intellectual rights owned by the contractor or a third party from whom the contract or has received the rights to grant sub-licenses and shall also grant to the Procuring Entity a non-exclusive and non-transferable rights (without the rights to sub-license) to use the know-how and other technical information disclosed to the contract or under the contract. Nothing contained here-in shall be construed as transferring ownership of any patent, utility model, trademark, design, copy right, know-how or other intellectual rights from the contractor or any other third party to the Procuring Entity.

## **17.6 Limitation of Liability**

- 17.6.1 Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contractor for any in director consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than as specifically provided in Sub-Clause 8.7 [Delay Damages]; Sub-Clause 11.2 [Cost of Remedying Defects]; Sub-Clause 15.4 [Payment after Termination]; Sub-Clause 16.4 [Payment on Termination]; Sub-Clause 17.1 [Indemnities]; Sub-Clause 17.4(b) [Consequences of Procuring Entity's Risks] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights].
- 17.6.2 The total liability of the Contractor to the Procuring Entity, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Procuring Entity's Equipment and Free- Issue Materials], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in **the Special Conditions of Contract**, or (if such multiplier or other sum is not so stated) the Accepted Contract Amount.
- 17.6.3 This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

## **17.7 Use of Procuring Entity's Accommodation/Facilities**

- 17.7.1 The Contractor shall take full responsibility for the care of the Procuring Entity provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

17.7.2 If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Procuring Entity is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

## 18 INSURANCE

### 18.1 General Requirements for Insurances

18.1.1 In this Clause, “insuring Party” means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.

18.1.2 Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Procuring Entity. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

18.1.3 Wherever the Procuring Entity is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Contractor. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

18.1.4 If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Procuring Entity shall act for Procuring Entity's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

18.1.5 Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

18.1.6 The relevant insuring Party shall, within the respective periods stated in **the Special Conditions of Contract** (calculated from the Commencement Date), submit to the other Party:

- a) Evidence that the insurances described in this Clause have been affected, and
- b) copies of the policies for the insurances described in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment] and Sub-Clause 18.3 [Insurance against Injury to Persons and Damage to Property].

18.1.7 When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

18.1.8 Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in

accordance with this Clause.

- 18.1.9 Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or at attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.
- 18.1.10 If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contractor fails to provide satisfactory evidence and copies of policies in accordance with this Sub- Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.
- 18.1.11 Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Procuring Entity, under the other terms of the Contractor otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Procuring Entity.
- 18.1.12 Procuring Entity in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.
- 18.1.13 Payments by one Party to the other Party shall be subject to Sub-Clause 2.5 [Procuring Entity's Claims] or Sub- Clause 20.1 [Contractor's Claims], as applicable.
- 18.1.14 The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 18) with insurers from any eligible source country.

## **18.2 Insurance for Works and Contractor's Equipment**

- 18.2.1 The insuring Party shall insure the Works, Plant, Material and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under subparagraph (a) of Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.
- 18.2.2 The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).
- 18.2.3 The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

- 1824 Unless otherwise stated in the Special Conditions, insurances under this Sub-Clause:
- a) Shall be effected and maintained by the Contractor as insuring Party,
  - b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated to the Party actually bearing the costs of rectifying the loss or damage,
  - c) shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks],
  - d) shall also cover, to the extent specifically required in the tendering documents of the Contract, loss or damage to a part of the Works which is attributable to the use or occupation by the Procuring Entity of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [Procuring Entity's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated **in the Special Conditions of Contract** (if an amount is not so stated this sub-paragraph (d) shall not apply), and
  - e) may however exclude loss of, damage to, and reinstatement of:
    - i) a part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),
    - ii) apart of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,
    - iii) apart of the Works which has been taken over by the Procuring Entity, except to the extent that the Contractor is liable for the loss or damage, and
    - iv) Goods while they are not in Kenya, subject to Sub-Clause 14.5 [Plant and Materials intended for the Works].
- 1825 If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Procuring Entity, with supporting particulars. The Procuring Entity shall then (i) be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

### **18.3 Insurance against Injury to Persons and Damage to Property**

- 183.1 The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 18.4 [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.
- 183.2 This insurance shall be for a limit per occurrence of not less than the amount stated **in the Special Conditions of Contract**, with no limit on the number of occurrences. If an amount is not stated in the **Special Conditions of Contract**, this Sub-Clause shall not apply.

- 1833 Unless otherwise stated in the Special Conditions, the insurances specified in this Sub-Clause:
- a) Shall be effected and maintained by the Contractor as insuring Party,
  - b) shall be in the joint names of the Parties,
  - c) shall be extended to cover liability for all loss and damage to the Procuring Entity's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract, and
  - d) may however exclude liability to the extent that it arises from:
    - i) the Procuring Entity's right to have the Permanent Works executed on, over, under, in or
    - ii) through any land, and to occupy this land for the Permanent Works,
    - iii) damage which is an unavoidable result of the Contractor's obligations to execute the
    - iv) Works and remedy any defects, and
    - v) a cause listed in Sub-Clause 17.3 [Procuring Entity's Risks], except to the extent that cover is available at commercially reasonable terms.

#### **184 Insurance for Contractor's Personnel**

- 1841 The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.
- 1842 The insurance shall cover the Procuring Entity and the Architect against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Procuring Entity or of the Procuring Entity's Personnel.
- 1843 The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

### **19. FORCE MAJEURE**

#### **19.1 Definition of Force Majeure**

- 19.1.1 In this Clause, "Force Majeure" means an exceptional event or circumstance:
- a) Which is beyond a Party's control,
  - b) Which such Party could not reasonably have provided against before entering into the Contract,
  - c) which, having arisen, such Party could not reasonably have avoided or overcome, and
  - d) which is not substantially attributable to the other Party.
- 19.1.2 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:
- a) war, hostilities (whether war be declared or not), invasion, act of foreign

- enemies,
- b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,
- c) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,
- d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and
- e) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

## **19.2 Notice of Force Majeure**

- 19.2.1 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.
- 19.2.2 The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.
- 19.2.3 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

## **19.3 Duty to Minimize Delay**

Each Party shall at all times use all reasonable endeavors to minimize any delay in the performance of the Contract as a result of Force Majeure. A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

## **19.4 Consequences of Force Majeure**

- 19.4.1 If the Contractor is prevented from performing his substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], and suffers delay and/ or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:
- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
  - b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [Definition of Force Majeure] and, in sub-paragraphs (ii) to (iv), occurs in Kenya, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub- Clause18.2 [Insurance for Works and Contractor's Equipment].
- 19.4.2 After receiving this notice, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

## **19.5 Force Majeure Affecting Subcontractor**

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those



specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

## **19.6 Optional Termination, Payment and Release**

- 19.6.1 If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment].
- 19.6.2 Upon such termination, the Architect shall determine the value of the work done and issue a Payment Certificate which shall include:
- a) the amount payable for any work carried out for which a price is stated in the Contract;
  - b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Procuring Entity when paid for by the Procuring Entity, and the Contractor shall place the same at the Procuring Entity's disposal;
  - c) other Cost or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;
  - d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
  - e) the Cost of repatriation of the Contractor's staff and lab or employed wholly in connection with the Works at the date of termination.

## **19.7 Release from Performance**

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

- a) The Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and
- b) The sum payable by the Procuring Entity to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [Optional Termination, Payment and Release] if the Contract had been terminated under Sub-Clause 19.6.

## **20. SETTLEMENT OF CLAIMS AND DISPUTES**

### **20.1 Contractor's Claims**

- 20.1.1 If the Contractor considers itself to be entitled to any extension of the Time for

Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.

- 20.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.
- 20.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.
- 20.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Procuring Entity's liability, the Architect may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/ or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Architect to inspect all these records and shall (if instructed) submit copies to the Engineer.
- 20.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Architect fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/ or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:
- a) This fully detailed claim shall be considered as interim;
  - b) The Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/ or amount claimed, and such further particulars as the Architect may reasonably require; and
  - c) The Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.
- 20.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Architect and approved by the Contractor, the Architect shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars but shall nevertheless give his response on the principles of the claim within the above defined time period.
- 20.1.7 Within the above defined period of 42 days, the Architect shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.
- 20.1.8 Each Payment Certificate shall include such additional payment for any claim as has

been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

- 20.1.9 If the Architect does not respond within the time frame defined in this Clause, either Party may consider that the claim is rejected by the Architect and any of the Parties may refer the dispute for amicable settlement in accordance with Clause 20.3.
- 20.1.10 The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/ or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause 20.3.

## **20.2 Procuring Entity's Claims**

- 20.2.1 If the Procuring Entity considers itself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Contract, and/or to any extension of the Defects Notification Period, the Procuring Entity or the Architect shall give notice and particulars to the Contractor. However, notice is not required for payments due under Sub-Clause 4.19 [Electricity, Water and Gas], under Sub-Clause 4.20 [Procuring Entity's Equipment and Free-Issue Materials], or for other services requested by the Contractor.
- 20.2.2 The notice shall be given as soon as practicable and no longer than 30 days after the Procuring Entity became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.
- 20.2.3 The particulars shall specify the Clause or other basis of the claim and shall include substantiation of the amount and/or extension to which the Procuring Entity considers itself to be entitled in connection with the Contract. The Architect shall then proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the amount (if any) which the Procuring Entity is entitled to be paid by the Contractor, and/ or (ii) the extension (if any) of the Defects Notification Period in accordance with Sub-Clause 11.3 [Extension of Defects Notification Period].
- 20.2.4 This amount may be included as a deduction in the Contract Price and Payment Certificates. The Procuring Entity shall only be entitled to set off against or make any deduction from an amount certified in a Payment Certificate, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.

## **20.3 Amicable Settlement**

Where a notice of a claim has been given, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a notice of a claim in accordance with Sub-Clause 20.1 above should move to commence arbitration after 60 days from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

## **20.4 Matters that may be referred to arbitration**

Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:

- a) Whether or not the issue of an instruction by the Architect is empowered by these Conditions.
- b) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- c) Any dispute arising in respect risks arising from matters referred to in Clause 17.3 and Clause 19.
- e) All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Procuring Entity and the Contractor agree otherwise in writing.

## **20.5 Arbitration**

- 20.5.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 20.3 shall be finally settled by arbitration.
- 20.5.2 No arbitration proceedings shall be commenced on any claim or dispute where notice of a claim or dispute has not been given by the applying party within ninety days of the occurrence or discovery of the matter or issue giving rise to the dispute.
- 20.5.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.
- 20.5.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.
- 20.5.5 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision require mentor notice had been given.
- 20.5.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Architect from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.
- 20.5.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.
- 20.5.7 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Architect shall not be altered by reason of any arbitration being conducted during the progress of the Works.

2058 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

## **20.6 Arbitration with National Contractors**

20.6.1 If the Contract is with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;

- i) Architectural Association of Kenya
- ii) Institute of Quantity Surveyors of Kenya
- iii) Association of Consulting Engineers of Kenya
- iv) Chartered Institute of Arbitrators (Kenya Branch)
- v) Institution of Engineers of Kenya

20.6.2 The institution written to first by the aggrieved party shall take precedence over all other institutions.

## **20.7 Arbitration with Foreign Contractors**

20.7.1 Arbitration with foreign contractors shall be conducted in accordance with the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL); or with proceedings administered by the International Chamber of Commerce (ICC) and conducted under the ICC Rules of Arbitration; by one or more arbitrators appointed in accordance with said arbitration rules.

20.7.2 The place of arbitration shall be a location specified in the **SCC**; and the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.4 [Law and Language].

## **20.8 Alternative Arbitration Proceedings**

Alternatively, the Parties may refer the matter to the Nairobi Centre for International Arbitration (NCIA) which offers a neutral venue for the conduct of national and international arbitration with commitment to providing institutional support to the arbitral process.

## **20.9 Failure to Comply with Arbitrator's Decision**

20.9.1 The award of such Arbitrator shall be final and binding up on the parties.

20.9.2 In the event that a Party fails to comply with a final and binding Arbitrator's decision, then the other Party may, without prejudice to any other rights it may have, refer the matter to a competent court of law.

## **20.10 Contract operations to continue**

Notwithstanding any reference to arbitration herein,

- 1.1.1 the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- 1.1.2 the Procuring Entity shall pay the Contractor any monies due the Contractor.

## Section IX - Special Conditions of Contract

The following Special Conditions shall supplement the GCC. Whenever there is a conflict, the provisions here in shall prevail over those in the GCC.

Conditions	Sub-Clause	Data
<b>Part A - Contract Data</b>		
Procuring Entity's name and address	Heading	<i>Kenya Utalii College</i>
Name and Reference No. of the Contract	Heading and 1.1	
Engineers Name and address	Heading and 3.1.1	<i>Chief Engineer Mechanical (BS) P.O. BOX 30743-00100 State department for Public works</i>
Contractor's Representative's name	4.3.1	
Key Personnel names	6.9.1	
Time for Completion	1.1.	<i>As in the letter of acceptance</i>
Defects Notification Period	1.1	<i>The Defects Notification Period shall be Immediately. The Defects Liability period shall be 6 months upon issuance of the practical completion certificate.</i>
Sections	1.1	<i>Not Applicable</i>
Electronic transmission systems	1.3	
Time for the Parties entering into a Contract Agreement	1.6	<i>Within 30 days</i>
Commencement Date	8.1.1	<i>To be agreed with the project manager</i>
Time for access to the Site	2.1.1	No later than the Commencement Date, and not later than <b>14 days</b> after Commencement Date
Architect Duties and Authority	3.1.6 (b) (ii)	Variations resulting in an increase beyond the Accepted Contract Amount shall require approval of the Procuring Entity.
Performance Security	4.2.1	The performance security will be in the form of a performance bond in the amount(s) of <b>5 percent</b> of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount.
Normal working hours	6.5	<b>0800 - 1700 Hours</b>
Delay damages for the Works	8.7 & 14.15(b)	<b>0.005% per day</b>
Maximum amount of delay damages	8.7.1	<b>2%</b> of the final Contract Price.

Conditions	Sub-Clause	Data
Provisional Sums	13.6. (b)(ii)	<i>[If there are Provisional Sums, insert a percentage for adjustment of Provisional Sums]</i> N/A %
Adjustments for Changes in Cost	13.9	Period “n” applicable to the adjustment multiplier “Pn”: _____ <i>[Insert the period if different from one (1) month; if period “n” is one (1) month, insert “not applicable”]</i>
Total advance payment	14.2.1	<i>N/A</i>
Repayment amortization rate of advance payment	14.2.5 (b)	<i>N/A</i>
Percentage of Retention	14.3.2 (c)	<b>10%</b>
Limit of Retention Money	14.3.2 (c)	<b>5 %</b> of the Accepted Contract Amount
Plant and Materials	14.5.3(b)(i)	If Sub-Clause 14.5 applies: Plant and Materials for payment Free On-Board <i>N/A</i>
	14.5.3(c)(i)	Plant and Materials for payment when delivered to the Site <b><i>Plant and Materials to be Incorporated into Permanent Work</i></b>
Minimum Amount of Interim Payment Certificates	14.6.2	<b>3 %</b> of the Accepted Contract Amount.
Publishing source of commercial interest rates for financial charges in case of delayed payment	14.8	Specify <b>3%</b> rate per month of delayed payment.  <b><i>3 percentage points above the Central Bank of Kenya’s average rate for base lending prevailing as of the first day the payment becomes overdue</i></b>
Maximum total liability of the Contractor to the Procuring Entity	17.6.2	The product of <b>0.1</b> times the Accepted Contract Amount
Periods for submission of insurance: a. evidence of insurance. b. relevant policies	18.1.6	<b>14 days</b>
		<b>14 days</b>
Maximum amount of deductibles for insurance of the Procuring Entity's risks	18.2.4 (d)	NIL
Minimum amount of third-party insurance	18.3.2	
The place of arbitration	20.7.2	



**SECTION X - CONTRACT FORMS**

FORM No. 1 - NOTIFICATION OF INTENTION TO AWARD

FORM NO. 2 – REQUEST FOR REVIEW

FORM No. 3-LETTEROF AWARD

FORM No. 4 - CONTRACT AGREEMENT

FORM No. 5 - PERFORMANCE SECURITY [Option 1 - Unconditional Demand Bank  
Guarantee]

FORM No. 6- PERFORMANCE SECURITY [Option 2–  
Performance Bond] FORM No. 7 - ADVANCE PAYMENT  
SECURITY

FORM No. 8 - RETENTION MONEY SECURITY

## **FORM No 1: NOTIFICATION OF INTENTION TOAWARD OF CONTRACT**

This Notification of Award shall be sent to each Tenderer that submitted a Tender and was not successful. Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form on the format below.

### **FORMAT**

1. For the attention of Tenderer's Authorized Representative

- i) Name: *[insert Authorized Representative's name]*
- ii) Address: *[insert Authorized Representative's Address]*
- iii) Telephone: *[insert Authorized Representative's telephone/fax numbers]*
- iv) Email Address: *[insert Authorized Representative's email address]*

*[IMPORTANT: insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]*

2. Date of transmission: *[email]* on *[date]* (local time)

This Notification is sent by *(Name and designation)*

3. Notification of Award

- i) Procuring Entity: *[insert the name of the Procuring Entity]*
- ii) Project: *[insert name of project]*
- iii) Contract title: *[insert the name of the contract]*
- iv) ITT No: *[insert ITT reference number from Procurement Plan]*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

4. Request a debriefing in relation to the evaluation of your tender by submitting a Procurement-related Complaint in relation to the decision to award the contracts.

a) The successful tenderers

i) Name of successful Tender

ii) Address of the successful Tender

iii) Contract price of the successful Tender Kenya Shillings

(in word \_\_\_\_\_ )

- b) The reasons for your tender being unsuccessful are as follows:
- c) Other Tenderers

Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out.

SNo	Name of Tender	Tender Price as read out	Tender's evaluated price (Note a)	One Reason Why Not Evaluated
1				
2				
3				
4				
5				

*(Note a) State NE if not evaluated*

#### 5. How to request a debriefing

- a) **DEADLINE:** The dead line to request a debriefing expires at midnight on *[insert date] (local time)*.
- b) You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (5) Business Days of receipt of this Notification of Intention to Award.
- c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:
  - i) Attention: *[insert full name of person, if applicable]*
  - ii) Title/position: *[insert title/position]*
  - iii) Agency: *[insert name of Procuring Entity]*
  - iv) Email address: *[insert email address]*
- d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.
- e) The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.
- f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

#### 6. How to make a complaint

- a) Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [*insert date*] (local time).
- b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:
  - i) Attention: [*insert full name of person, if applicable*]
  - ii) Title/position: [*insert title/ position*]
  - iii) Agency: [*insert name of Procuring Entity*]
  - iv) Email address: [*insert email address*]
- c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.
- d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website [www.ppra.go.ke](http://www.ppra.go.ke).

You should read these documents before preparing and submitting your complaint.

- e) There are four essential requirements:
  - i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process and is the recipient of a Notification of Intention to Award.
  - ii) The complaint can only challenge the decision to award the contract.
  - iii) You must submit the complaint within the period stated above.
  - iv) You must include, in your complaint, all of the information required to support your complaint.

**7. Standstill Period**

- i) **DEADLINE:** The Standstill Period is due to end at midnight on [*insert date*] (local time).
- ii) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.
- iii) The Standstill Period may be extended as stated in paragraph Section 5(d) above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

**Signature:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Title/position:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

**FORM NO. 2- REQUEST FOR REVIEW**

**FORM FOR REVIEW (r.203(1))**

**PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD**

**APPLICATION NO.....OF.....20.....**

**BETWEEN**

.....**APPLICANT**

**AND**

.....**RESPONDENT (Procuring Entity)**

Request for review of the decision of the..... (Name of the Procuring Entity of .....dated the.....day of .....20.....in the matter of Tender No.....of .....20..... for ..... (Tender description).

**REQUEST FOR REVIEW**

I/We.....the above named Applicant(s), of address: Physical address.....P. O. Box No..... Tel. No.....Email ....., hereby request the Public Procurement Administrative Review Board to review the whole/part of the above mentioned decision on the following grounds , namely:

- 1.
- 2.

By this memorandum, the Applicant requests the Board for an order/orders that:

- 1.
- 2.

SIGNED .....(Applicant) Dated on.....day of ...../...20.....

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FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on.....day of .....20.....

**SIGNED**

**Board Secretary**

**FORM NO 3: LETTER OF AWARD**

*Letterhead paper of the Procuring Entity]*

*[date]*

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is here by accepted by.....*(name of Procuring Entity)*.

You are requested to furnish the Performance Security within in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section VIII, Contract Forms, of the Tender Document.

Authorized Signature: .....

Name and Title of Signatory: .....

Name of Procuring Entity: .....

Attachment: *Contract Agreement:* .....

**FORM NO 4: CONTRACT AGREEMENT**

THIS AGREEMENT made the day of..... 20.....,  
between.....of..... (hereinafter  
“the Procuring Entity”), of the one part, and \_\_\_\_ of \_\_\_\_ (hereinafter “the Contractor”), of  
the other part:

WHEREAS the Procuring Entity desires that the Works known as \_\_\_\_\_ should  
be executed by the Contractor, and has accepted a Tender by the Contractor for the  
execution and completion of these Works and the remedying of any defects there in,

The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are  
respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part  
of this Agreement. This Agreement shall prevail over all other Contract documents.
  - a) the Notification of Award
  - b) the Form of Tender
  - c) the addenda Nos \_\_\_\_\_ (if any)
  - d) the Special Conditions of Contract
  - e) the General Conditions of Contract;
  - f) the Specifications
  - g) the Drawings; and
  - h) the completed Schedules and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor  
as specified in this Agreement, the Contractor here by covenants with the Procuring  
Entity to execute the Works and to remedy defects therein in conformity in all respects  
with the provisions of the Contract.
4. The Procuring Entity here by covenants to pay the Contractor in consideration of the  
execution and completion of the Works and the remedying of defects there in, the  
Contract Price or such other sum as may become payable under the provisions of the  
Contract at the times and in the manner prescribed by the Contract.

IN WITNESS where of the parties here to have caused this Agreement to be executed  
in accordance with the Laws of Kenya on the day, month and year specified above.

Signed and sealed by \_\_\_\_\_ (for the  
Procuring Entity)

Signed and sealed by \_\_\_\_\_ (for the  
Contractor).

**FORM NO. 5 - PERFORMANCE SECURITY**

**[Option 1 - Unconditional Demand Bank Guarantee]**

*[Guarantor letterhead]*

**Beneficiary:** *[insert name and Address of Procuring Entity]*

**Date:** \_\_\_\_\_ *[Insert date of issue]*

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that \_\_\_\_\_ (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with *(name of Procuring Entity)* \_\_\_\_\_ (the Procuring Entity as the Beneficiary), for the execution of \_\_\_\_\_ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Contractor, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_ (*in words*), <sup>1</sup> such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.
4. This guarantee shall expire, no later than the.....Day of.....,2.....<sup>2</sup>, and any demand for payment under it must be received by us at the office indicated above on or before that date.
5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee." .....

*[Name of Authorized Official, signature(s) and seals/stamps]*

**Note:** *All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.*

---

<sup>1</sup> *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.*

<sup>2</sup> *Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*



**FORM No. 6- PERFORMANCE SECURITY**

**[Option 2– Performance Bond]**

*[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]*

*[Guarantor letterhead or SWIFT identifier code]*

**Beneficiary:** *[insert name and Address of*

Procuring Entity] **Date:** \_\_\_\_\_ *[Insert date of issue]*

**PERFORMANCE BOND No.** \_\_\_\_\_

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. By this Bond \_\_\_\_\_ as Principal (hereinafter called “the Contractor”) and \_\_\_\_\_] as Surety (hereinafter called “the Surety”), are held and firmly bound unto \_\_\_\_\_] as Obligee (hereinafter called “the Procuring Entity”) in the amount of \_\_\_\_\_ for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, \_\_\_\_\_ for \_\_\_\_\_ in accordance with the documents, plans, specifications, and amendments there to, which to the extent here in provided for, are by reference made part here of and are here in after referred to as the Contract.
3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations there under, the Surety may promptly remedy the default, or shall promptly:
  - a) Complete the Contract in accordance with its terms and conditions; or
  - b) Obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring

Entity to Contractor; or

- c) Pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.
- 4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.
- 5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named here in or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.
- 6. In testimony whereof, the Contractor has here unto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly at tested by the signature of his legal representative, this day \_\_\_ of \_\_\_ 20\_\_.

SIGNED ON \_\_\_\_\_ on behalf of  
\_\_\_\_\_

By \_\_\_\_\_ in the capacity of  
\_\_\_\_\_

In the presence of

SIGNED ON \_\_\_\_\_ on behalf of  
\_\_\_\_\_

By \_\_\_\_\_ in the capacity of  
\_\_\_\_\_

In the presence of

**FORM NO. 7 - ADVANCE PAYMENT SECURITY**

**[Demand Bank Guarantee]**

*[Guarantor letterhead]*

**Beneficiary:** \_\_\_\_\_ *[Insert name and Address of*

Procuring Entity] **Date:** \_\_\_\_\_ *[Insert date of issue]*

**ADVANCE PAYMENT GUARANTEE No.:** \_\_\_\_\_ *[Insert guarantee reference number]*

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that \_\_\_\_\_ (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with the Beneficiary, for the execution of \_\_\_\_\_ (hereinafter called "the Contract").
  2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum \_\_\_\_\_ (in words \_\_\_\_\_) is to be made against an advance payment guarantee.
  3. At the request of the Contractor, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ (in words \_\_\_\_\_) <sup>1</sup> upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
    - a) Has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
    - b) Has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.
  4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Contractor on its account number at \_\_\_\_\_.
  5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the \_\_\_\_\_ day of \_\_\_\_\_, 2 \_\_\_\_\_, <sup>2</sup> whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.
  6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.
-

*[Name of Authorized Official, signature(s) and seals/stamps]*

**Note:** *All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.*

---

<sup>1</sup>*The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.*

<sup>2</sup>*Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

**FORM NO. 8 – RETENTION MONEY SECURITY**

**[Demand Bank Guarantee]**

*[Guarantor letterhead]*

**Beneficiary:** \_\_\_\_\_ *[Insert name and Address of Procuring Entity]*

**Date:** \_\_\_\_\_ *[Insert date of issue]*

**Advance payment guarantee no.** *[Insert guarantee reference number]*

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that \_\_\_\_\_ *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ *[insert reference number of the contract]* dated \_\_\_\_\_ with the Beneficiary, for the execution of \_\_\_\_\_ *[insert name of contract and brief description of Works]* (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, and payment of *[insert the second half of the Retention Money]* is to be made against a Retention Money guarantee.
3. At the request of the Contractor, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* \_\_\_\_\_ (*[insert amount in words* \_\_\_\_\_ *])*<sup>1</sup> upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified there in.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Contractor on its account number \_\_\_\_\_ at \_\_\_\_\_ *[insert name and address of Applicant's bank]*.
5. This guarantee shall expire no later than the.....Day of.....<sup>2</sup>, and any demand for payment under it must be received by us at the office indicated above on or before that date.
6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

---

*[Name of Authorized Official, signature(s) and seals/stamps]*

**Note:** All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

<sup>1</sup>The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.

<sup>2</sup>Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.

## FORM NO. 9 BENEFICIAL OWNERSHIP DISCLOSURE FORM

**INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM**

*This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful tenderer pursuant to Regulation 13 (2A) and 13 (6) of the Companies (Beneficial Ownership Information) Regulations, 2020. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.*

*For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.*

Tender Reference No.: \_\_\_\_\_ [insert identification no]

Name of the Assignment: \_\_\_\_\_ [insert name of the assignment] to: \_\_\_\_\_ [insert complete name of Procuring Entity]

In response to your notification of award dated \_\_\_\_\_ [insert date of notification of award] to furnish additional information on beneficial ownership: [select one option as applicable and delete the options that are not applicable]

I) We here by provide the following beneficial ownership information.

### Details of beneficial ownership

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights, a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
<b>1.</b>	Full Name		Directly---	Directly...	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer:  Yes ----No----	1. Exercises significant influence or control over the Company body of the Company (tenderer)  Yes ----No----
	National identity card number or Passport number		-----	.....		
	Personal Identification Number		% of shares	% of voting rights		
			Indirectly- -----	Indirectly--- -----% of		

Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights, a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
(where applicable)		% of shares	voting rights	2. Is this right held directly or indirectly?  Direct..... ...  Indirect..... .....	2. Is this influence or control exercised directly or indirectly?  Direct.....  Indirect.....
Nationality					
Date of birth [dd/mm/yyyy]					
Postal address					
Residential address					
Telephone number					
Email address					
Occupation or profession					
2.	Full Name	Directly--- -----  % of shares	Directly... ..... % of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer:  Yes ----No----	1. Exercises significant influence or control over the Company body of the Company (tenderer)  Yes ----No----
	National identity card number or Passport number				
	Personal Identification Number (where applicable)	Indirectly--- -----  % of shares	Indirectly--- -----% of voting rights	2. Is this right held directly or indirectly?  Direct..... ...  Indirect..... .....	1. Is this influence or control exercised directly or indirectly?  Direct.....  Indirect.....
	Nationality (ies)				
	Date of birth [dd/mm/yyyy]				
	Postal address				
	Residential address				
	Telephone number				
	Email address				



Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights, a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
Occupation or profession					
3.  e.t. c					

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 13(5) of the Companies (Beneficial Ownership Information) Regulations, 2020. (Notwithstanding this paragraph Personally Identifiable Information in line with the Data Protection Act shall not be published or made public). *Note that Personally Identifiable Information (PII) is defined as any information that can be used to distinguish one person from another and can be used to deanonymize previously anonymous data. This information includes National identity card number or Passport number, Personal Identification Number, Date of birth, Residential address, email address and Telephone number.*

III) In determining who meets the threshold of who a beneficial owner is, the Tenderer must consider a natural person who in relation to the company:

- (a) holds at least ten percent of the issued shares in the company either directly or indirectly;
- (b) exercises at least ten percent of the voting rights in the company either directly or indirectly;
- (c) holds a right, directly or indirectly, to appoint or remove a director of the company; or
- (d) exercises significant influence or control, directly or indirectly, over the company.

IV) What is stated to herein above is true to the best of my knowledge, information and belief.

*Name of the Tenderer: .....\*[insert complete name of the Tenderer]\_\_\_\_\_*

*Name of the person duly authorized to sign the Tender on behalf of the Tenderer: \*\*  
[insert complete name of person duly authorized to sign the Tender]*

*Designation of the person signing the Tender: ..... [insert complete title of the  
person signing the Tender]*

*Signature of the person named above: ..... [insert signature of person whose  
name and capacity are shown above]*

*Date this ..... [insert date of signing] day of..... [Insert month],  
[insert year]*

Bidder Official Stamp



# KENYA UTALII COLLEGE

## PROPOSED CONSTRUCTION OF INDIVIDUAL TRAINING KITCHEN AT KENYA UTALII COLLEGE

W.I.P ITEM NO. D117 NB/NB/1802 JOB NO. 10489A

### TENDER SPECIFICATIONS AND BILLS OF QUANTITIES FOR

VOLUME 1 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF KITCHEN  
EQUIPMENT AND LIQUIFIED PETROLEUM GAS INSTALLATION WORKS

VOLUME 2 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF COLD STORAGE  
ROOMS & REFRIGERATION INSTALLATION WORKS

VOLUME 3 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF WATER  
HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING  
INSTALLATION WORK

## VOLUME 2 OF 3

### CLIENT

The Principal & C.E.O,  
Kenya Utalii College  
P.O. Box 31052 – 00600

### NAIROBI

### PROJECT MANAGER

Works Secretary,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### QUANTITY SURVEYOR

Chief Quantity Surveyor,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### ELECTRICAL ENGINEER

Chief Electrical Engineer  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### ARCHITECT

Chief Architect,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### MECHANICAL ENGINEER (BS)

Chief Mechanical Engineer (BS),  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### STRUCTURAL ENGINEER

Chief Structural Engineer,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

MARCH 2023

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## **PART1: TENDERING PROCEDURES**

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## TENDER EVALUATION CRITERIA

**Note:** The tenderer who shall be domestic subcontractor to the Main Contractor upon award of the tender, must comply with the following conditions and instructions failure to which the tender shall be rejected.

After tender opening, the tenders will be evaluated in **2 stages**, namely:

1. Preliminary Evaluation;
2. Technical Evaluation;

### STAGE 1: PRELIMINARY EVALUATION

This stage of evaluation shall involve examination of the mandatory requirements as set out in the Tender Advertisement Notice or Letter of Invitation to Tender and any other conditions stated in the bid document.

These conditions shall include the following:

- i) Company Certificate of incorporation/registration;
- ii) Valid Tax Compliance Certificate;
- iii) Current Certificate of registration with National Construction Authority in Mechanical Engineering Works on Cold room Storage Refrigeration (NCA 3 and above);
- iv) Current and Valid NCA contractor's practicing license
- v) Duly Filled Form CR12 from the Registrar of Companies not older than 3 months.

**Note:**

*On compliance with Technical Specifications, bidders shall supply equipment /items which comply with the technical specifications set out in the bid document. In this regard, the bidder will be required to submit relevant technical brochure/catalogues with the tender document, highlighting (using a mark-pen or highlighter) the Catalogue Number/Model of the proposed items. Such brochure/catalogues should indicate comprehensive relevant data of the proposed equipment/items which should include but not limited to the following:*

- (i) Standards of manufacture;
- (ii) Performance ratings/characteristics;
- (iii) Material of manufacture;
- (iv) Electrical power ratings; and
- (v) Any other necessary requirements so as to comply with the bid technical specifications.

The bid will then be analyzed, using the information in the technical brochures, to determine compliance with key technical specifications for the works/items as indicated in the tender document. Bidders not complying with **any** of the key Technical Schedule specifications shall be **Non-Responsive** while those meeting all the key technical specifications shall be **Responsive** (evaluation committee may add more key requirements from the bid technical specifications).

The tenderer shall also fill in the Technical Schedule as Specified in the tender document for Equipment's and items indicating the Country of Origin, Model/Make/Manufacturer and catalogue numbers of the Items/ Equipment they propose to supply.

**The tenderers who do not satisfy any of the above mandatory requirements shall be considered Non-Responsive and their tenders will not be evaluated further.**

## **STAGE 2 TECHNICAL EVALUATION**

At this stage technical evaluation shall be done by comparing each tender to the technical requirements in the tender document

**TABLE 1: Assessment for Eligibility**

Item	Description	YES/NO
1.	<b>Compliance with Technical Specifications (Vol. 2 of 3 of the Tender Documents)</b> <i>(Note: Tender Evaluation Committee to carryout analysis showing how decision on this requirement has been arrived at)</i>	
2.	<b>Qualification and Experience of Key Personnel</b>	
	<b>Academic Qualification and Experience (Provide evidence in form copies of Academic Certificates)</b> <b>a) Director of the firm</b> <ul style="list-style-type: none"> <li>• Holder of at least a diploma with 10 years' experience in a relevant field</li> </ul>	
	<b>b) Project Manager</b> <ul style="list-style-type: none"> <li>• Holder of at least a degree with 5 years' experience in a relevant field</li> </ul>	
	<b>c) At least 3 No artisans</b> <ul style="list-style-type: none"> <li>• Holder of at least a certificate with 5 years' experience in relevant Engineering field</li> </ul>	
3.	<b>Experience of the firm in similar services: Cold Room Storage and Refrigeration Works</b> a) Provide Three (3No.) projects of similar nature, complexity or magnitude between the Period 2018 – 2022: <b>(Provide evidence in form of copies of Award letters, Completion Certificates, LSOs etc.)</b>	
4.	<b>Adequacy of tools and equipment (Provide evidence in form Log Books, Purchase Receipts, Lease Agreements etc.)</b> The tenderer <b><i>must</i></b> show proof of ownership or leasing of the following equipment: - a) <b>Relevant Transport (at least 3No.)</b> <ul style="list-style-type: none"> <li>• Means of transport</li> </ul> b) <b>Relevant Equipment (at least 3No.)</b> <ul style="list-style-type: none"> <li>• Has relevant equipment for work being tendered</li> </ul>	
	<b>QUALIFIED YES / NO</b>	

*Non compliance with the Technical Specifications will render the Tenderer Non responsive and therefore unqualified for further evaluation:*

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**PART II - WORKS REQUIREMENTS**

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## GENERAL MECHANICAL SPECIFICATIONS

## GENERAL MECHANICAL SPECIFICATION

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## GENERAL MECHANICAL SPECIFICATION

### 2.01 General

This section specifies the general requirement for plant, equipment and materials forming part of the Sub-contract Works and shall apply except where specifically stated elsewhere in the Specification or on the Contract Drawings.

### 2.02 Quality of Materials

All plant, equipment and materials supplied as part of the Sub-contract Works shall be new and of first-class commercial quality, shall be free from defects and imperfections and where indicated shall be of grades and classifications designated herein.

All products or materials not manufactured by the Sub-contractor shall be products of reputable manufacturers and so far as the provisions of the Specification is concerned shall be as if they had been manufactured by the Sub-contractor.

Materials and apparatus required for the complete installation as called for by the Specification and Contract Drawings shall be supplied by the Sub-contractor unless mention is made otherwise.

Materials and apparatus supplied by others for installation and connection by the Sub-contractor shall be carefully examined on receipt. Should any defects be noted, the Sub-contractor shall immediately notify the Engineer.

Defective equipment or that damaged in the course of installation or tests shall be replaced as required to the approval of the Engineer.

### 2.03 Regulations and Standards

The Sub-contract Works shall comply with the current editions of the following:

- a) The Kenya Government Regulations.
- a) The United Kingdom Institution of Electrical Engineers (IEE) Regulations for the Electrical Equipment of Buildings.
- b) The United Kingdom Chartered Institute of Building Services Engineers (CIBSE) Guides.
- c) British Standard and Codes of Practice as published by the British Standards Institution (BSI)
- e) The Local Council By-laws.
- f) The Electricity Supply Authority By-laws.
- g) Local Authority By-laws.
- h) The Kenya Building Code Regulations.
- i) The Kenya Bureau of Standards

#### **2.04 Electrical Requirements**

Plant and equipment supplied under this Sub-contract shall be complete with all necessary motor starters, control boards, and other control apparatus. Where control panels incorporating several starters are supplied, they shall be complete with a main isolator.

The supply power up to and including local isolators shall be provided and installed by the Electrical Sub-contractor. All other wiring and connections to equipment shall form part of this Sub-contract and be the responsibility of the Sub-contractor.

The Sub-contractor shall supply three copies of all schematic, cabling and wiring diagrams for the Engineer's approval.

The starting current of all electric motors and equipment shall not exceed the maximum permissible starting currents described in the Kenya Power and Lighting Company (KPLC) By-laws.

All electrical plant and equipment supplied by the Sub-contractor shall be rated for the supply voltage and frequency obtained in Kenya, that is 415 Volts, 50Hz, 3-Phase or 240Volts, 50Hz, 1-phase.

Any equipment that is not rated for the above voltages and frequencies shall be rejected by the Engineer.

#### **2.05 Transport and Storage**

All plant and equipment shall, during transportation be suitably packed, crated and protected to minimize the possibility of damage and to prevent corrosion or other deterioration.

On arrival at site all plant and equipment shall be examined and any damage to parts and protective priming coats made good before storage or installation.

Adequate measures shall be taken by the Sub-contractor to ensure that plant and equipment do not suffer any deterioration during storage.

Prior to installation all piping and equipment shall be thoroughly cleaned.

If, in the opinion of the Engineer any equipment has deteriorated or been damaged to such an extent that it is not suitable for installation, the Sub-contractor shall replace this equipment at his own cost.

#### **2.06 Site Supervision**

The Sub-contractor shall ensure that there is an English-speaking supervisor on the site at all times during normal working hours.

#### **2.07 Installation**

Installation of all special plant and equipment shall be carried out by the Sub-contractor under adequate supervision from skilled staff provided by the plant and equipment

manufacturer or his appointed agent in accordance with the best standards of modern practice and to the relevant regulations and standards described under Clause 2.03 of this Section.

## 2.08 **Testing**

### 2.08.1 General

The Sub-contractor's attention is drawn to Part 'C' Clause 1.38 of the "Preliminaries and General Conditions".

### 2.08.2 Material Tests

All material for plant and equipment to be installed under this Sub-contract shall be tested, unless otherwise directed, in accordance with the relevant B.S Specification concerned.

For materials where no B.S. Specification exists, tests are to be made in accordance with the best modern commercial methods to the approval of the Engineer, having regard to the particular type of the materials concerned.

The Sub-contractor shall prepare specimens and performance tests and analyses to demonstrate conformance of the various materials with the applicable standards.

If stock material, which has not been specially manufactured for the plant and equipment specified is used, then the Sub-contractor shall submit satisfactory evidence to the Engineer that such materials conform to the requirements stated herein in which case tests of material may be partially or completely waived.

Certified mill test reports of plates, piping and other materials shall be deemed acceptable.

### 2.08.3 Manufactured Plant and Equipment – Work Tests

The rights of the Engineer relating to the inspection, examination and testing of plant and equipment during manufacture shall be applicable to the Insurance Companies or Inspection Authorities so nominated by the Engineer.

The Sub-contractor shall give two weeks' notice to the Engineer of the manufacturer's intention to carry out such tests and inspections.

The Engineer or his representative shall be entitled to witness such tests and inspections.

The cost of such tests and inspections shall be borne by the Sub-contractor.

Six copies of all test and inspection certificates and performance graphs shall be submitted to the Engineer for his approval as soon as possible after the completion of such tests and inspections.

Plant and equipment which is shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the Sub-contractor's own risk and should

the test and inspection certificates not be approved; new tests may be ordered by the Engineer at the Sub-contractor's expense.

#### **2.08.4 Pressure Testing**

All pipe work installations shall be pressure tested in accordance with the requirements of the various sections of this Specification. The installations may be tested in sections to suit the progress of the works but all tests must be carried out before the work is buried or concealed behind building finishes. All tests must be witnessed by the Engineer or his representative and the Sub-contractor shall give 48 hours' notice to the Engineer of his intention to carry out such tests.

Any pipe work that is buried or concealed before witnessed pressure tests have been carried out shall be exposed at the expense of the Sub-contractor and the specified tests shall then be applied.

The Sub-contractor shall prepare test certificates for signature by the Engineer and shall keep a progressive and up-to-date record of the section of the work that has been tested.

#### **2.08.5 Shop drawings**

Before manufacture or Fabrication is commenced the contractor shall submit Two copies of detailed drawings of all water tanks, fire hose reel pump, water booster pump and any other equipment including their components showing all pertinent information including sizes, capacities, construction details, etc., as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

#### **2.09 Colour Coding**

Unless stated otherwise in the Particular Specification all pipe work shall be color coded in accordance with the latest edition of B.S 1710 and to the approval of the Engineer or Architect.

#### **2.10 Welding**

##### **2.10.1 Preparation**

Joints to be made by welding shall be accurately cut to size with edges sheared, flame cut or machined to suit the required type of joint. The prepared surface shall be free from all visible defects such as lamination, surface imperfection due to shearing or flame cutting operation, etc., and shall be free from rust scale, grease and other foreign matter.

##### **2.10.2 Method**

All welding shall be carried out by the electric arc processing using covered electrodes in accordance with B.S. 639.

Gas welding may be employed in certain circumstances provided that prior approval is

obtained from the Engineer.

#### 2.10.3 Welding Code and Construction

All welded joints shall be carried out in accordance with the following Specifications:

a) Pipe Welding

All pipe welds shall be carried out in accordance with the requirements of B.S.806.

b) General Welding

All welding of mild steel components other than pipework shall comply with the general requirements of B.S. 1856.

#### 2.10.4 Welders Qualifications

Any welder employed on this Sub-contractor shall have passed the trade tests as laid down by the Government of Kenya.

The Engineer may require to see the appropriate to see the appropriate certificate obtained by any welder and should it be proved that the welder does not have the necessary qualifications the Engineer may instruct the Sub- contractor to replace him by a qualified welder.

## **PARTICULAR SPECIFICATION FOR COLD ROOM INSTALLATIONS**

### **1.0 SCOPE OF WORK**

The work to be carried out comprises the supply, delivery, installation, testing and commissioning of kitchen cold room refrigeration equipment, a cold room door, wall, ceiling and floor insulation and control panel with auxiliary equipment and wall finishes in aluminum sheet. The works shall be carried out in National Youth Service Headquarter in Nairobi County.

### **1.1 DESIGN CONDITIONS**

Mean ambient temperature: 27°C DB

Storage temperature: +2° + -1°C

Storage humidity (minimum): 85%

Evaporator Cooling load: 56 KW

### **1.2 THE COLD ROOM**

The internal dimensions of the existing cold room are 3.6x 3.6 x 3.0m high., 7.2 x 3.6 x 3.0m high and 3.6x 3.6 x 3.0m high This shall have mechanically applied vapor barrier & insulation on concrete slab and roof and block walls.

### **1.3 VAPOUR BARRIER & WATER PROOFING**

Before the application of the insulation to the structure a vapour barrier shall be applied to the entire internal surface. This shall consist of an even layer of Flinkote type 3 or equal and approved applied to manufactures instructions. The top surface of the floor insulation shall be water proofed using an asphalt saturated and coated vapour barrier paper of not more than 0.3 perms permeance or other equal and approved, lapped at least 80mm and tacked in place. The vapor seal must be approved by the Engineer before insulation work.

### **1.4 INSULATION AND FINAL WALL FINISHES**

The insulating material shall be polystyrene (or equal and approved) with a conductivity of approximately 0.035 W/M°C and a density of approx. 25Kg/m<sup>3</sup> for the walls and ceiling and 40Kgs/m<sup>3</sup> for the floor. It shall be applied in two layers each 50 mm thick with the second layer breaking joints with the first layer.

Care must be taken to avoid breaking the vapor seal when fixing the insulation. Two more cotes of vapor seal shall then be applied after application of insulation

Hardwood battens shall be provided at regular intervals between insulation. Aluminum sheet (SWG 20) as specified on the drawing shall then be applied and secured on the hard wood. The main contractor shall then finish off the floor with 75 mm reinforced concrete and plaster under supervision of the sub-contractor.

### **1.5 INSULATED DOOR**

The door and frame shall be fabricated from heavy seasoned timber and insulated with two layers of 50mm thick polystyrene sand-witched between 10mm thick seasoned wood strips. It shall have a clear height of 1.85m being hinged on one side so that it opens outward. The door shall be completed with sufficient gaskets to ensure an air tight seal. The door shall be fitted with automatic plunger type switches for operating the fan motors and interior lights such that when it is open, the light shall go on and the fan shall stop, and when it is closed, the lights shall go off and the fan shall start.

The door shall be such that it can be padlocked from outside but with an inside release such that it can be opened from inside even when padlocked. All metal parts on the door shall be chrome plated.



## **1.6 EVAPORATOR**

The evaporator shall consist of a cooling coil, air-circulating fan, fan guard, defrost electric heater element and a thermostatic expansion valve. The valve shall be pressure equalized and manually adjustable. A timer unit shall be mounted in the control panel to control both the de-frosting intervals and defrosting period – both of which shall be variable. The evaporator shall be of cooling load capacity 14KW. It shall be ceiling type unit with a drip tray fitted with a drain pipe to the outside of the building. The unit shall be as KUBA or equal and approved.

## **1.7 CONDENSING UNIT**

The condensing unit shall be of capacity to cope with the evaporator-cooling load while using refrigerant R410a under specified conditions. The unit shall be air-cooled **semi hermetic** with automatic capacity control for evaporator demand.

It shall be provided with suitable anti-vibration mountings and an initial oil change in the compressor. The unit shall be complete with compressor, electric motor, air-cooled condenser of non-ferrous construction, liquid receiver, all mounted on a common base. The unit shall be as **BITZER** or equal and approved and shall be mounted in the adjoining compressor room.

## **1.8 REFRIGERATION PIPEWORK.**

Pipework shall be approved copper tubing and fitting and shall be properly fixed in conformity with 'TRANE REFRIGERATION MANUAL'. The suction line shall be insulated with at least 25mm thickness of Arm flex or other approved material, which shall not have insulating properties inferior to those of cork. The condensing unit shall be approximately 20 meters from evaporator unit.

## **1.9 REFRIGERATION COMPONENTS**

The system shall be provided with the following components all similar to or equal to those manufactured by DANFOSS

- Filter drier
- Sight glass with moisture indicator
- Solenoid valve
- HP/LP cut out
- Suction & delivery gauges
- Room thermostat
- 100mm diameter surface mounted dial thermometer in degree Celsius

## **1.10 CONTROL PANEL**

The control panel shall be fabricated from mild steel sheet of minimum SWG18 with a hinged door and then powder coated after manufacture. It shall be provided with an integral lock. It shall be complete with;

1. Isolator fitted on the door
2. Controlling thermostat with temp rang from -10°C to 30°C
3. 80mm dial thermometer with temp rang from -10°C to 30°C
4. Contactors for defrosting Coils
5. Motor starters & current overload relays
6. MCBs
7. Phase failure relay with over and under voltage protection
8. Timer switch for defrost control

9. Push buttons for start and stop
10. Audible and visual high temperature alarm with manual reset

The panel shall also have green light running indicators, red “door open” light and equipment circuit trip lights.

#### **1.11 ELECTRICAL INSTALLATION**

The electrical sub-contractor shall be responsible for providing power to the control panel and for providing a local Isolator and connecting power to it. The cold room sub-contractor shall be responsible for the final connections to the above equipment, all control wiring and for all wiring within the control panel.

#### **1.12 MEAT RAILS AND SHELVES**

The sub-contractor shall supply and fix 75 mm class C GMS tubing meat rails. All steel shall be hot dip galvanized. The sub-contractor shall also supply fully fabricated 3 tier stainless steel metal shelves and set them in the cold room as shown on the drawing. Shelf size to be 900 x 500 x 1350mm high.

#### **1.13 TESTING AND COMMISSIONING**

Before insulation of the suction pipe the refrigeration system shall be tested for pressure and leaks using the combined pressure and leaks testing method. The refrigeration system shall be charged with R410a refrigerant and entire system raised to test pressure using nitrogen or other inert gas. The test pressure shall be twice the working pressure for the system.

Leaks shall be checked using soap bubble followed by using of electronic leak detector. After system is proved leak proof, it shall be maintained under test pressure for 24 hours. If at the end of this time the gauge pressure has fallen, the complete system shall be re-tested. After the successful completion of the test, the system shall be evacuated using vacuum for 24 hours. If there is loss of vacuum the system shall be dehydrated again and left under vacuum for a further 24 hrs. until the system is effectively dehydrated.

After this the system shall be charged with the correct type and quantity of the refrigerant. The system shall then be set to work and adjusted to ensure that it operates correctly and design conditions are archived. It shall be left to operate for 72 Hrs. and room temperatures recorded for this period using an automatic room temperature sensor/recorder. The compressor shall be provided with identification plates stating the type of refrigerant used and the quantity required for the system

## BILLS OF QUANTITIES

**STATEMENT OF COMPLIANCE**

- a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.
  
- b) I confirm I have not made and will not make any payment to any person, which can be perceived as an inducement to win this tender.

Signed: ..... *for and on behalf of the Tenderer*

Date: .....

Official Rubber Stamp: .....

**A. Notes and Sample Items for Preparing a Bill of Quantities**

1. These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the Tender Documents. Priced Bills of Quantities shall be part and parcel of the Contract Documents.
2. The objectives and purpose of the Bills of Quantities are to provide sufficient information on the specifications, descriptions and quantities of Works to be performed to enable tenders to be prepared efficiently and accurately and when a contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed. In order to attain these objectives, Works should be itemized in the Bill of Quantities insufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and clear as possible.

**3. NOTES TO PREPARING PREAMBLES**

- 4.1 The Preambles should include only those items that constitute the cost of the works but would not be priced separately as they are expected to be included in the unit prices. Care should be taken to ensure that these items are not a part of the conditions of contract. The Preambles should indicate the inclusiveness of the unit prices and should state the methods of measurement that have been adopted in the preparation of the Bill of Quantities, that are to be used for the measurement of any part of the Works. The units of measurement and abbreviations should be defined and any mandatory national units defined and described. The methods of and procedure for re-measurement should be described in the Preambles.
- 4.4. The rates and prices tender in the priced Bills of Quantities shall, except in so far as it is otherwise provided under the Contract, include all Constructional Plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
- 4.5. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
- 4.6. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bills of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
- 4.7. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bills of Quantities. References to the relevant sections of the Contract documents shall be made before entering prices against each item in the priced Bills of Quantities.
- 4.9. Provisional Sums and contingency sums included and so designated in the Bills of Quantities shall be expended in whole or in part at the direction and discretion of the Architect in accordance with Sub-Clause 13.5 and Clause 13.6 of the General Conditions of contract.
- 4.10. In preparing the Bills of Quantities, notes should be removed as they are intended to guide the person preparing the Tender Documents. The Contractor must allow in

his rates for any costs associated with and complying with the requirements in the Preambles.

- 4.11 Should a tenderer/contractor not price any item in any section of the Bills of Quantities including Preliminary items, it will be assumed that he/she has spread its cost in other areas that he/she will have priced. Therefore, the item or items will be executed without any additional costs or without being treated like variations.

#### **4. NOTES ON PREPARING BILLS OF QUANTITIES**

- 5.1 The Preliminary Items should be limited to tangible items that should be priced by the tenderer, are identifiable and can be priced separately and included in the interim valuations precisely. Such items may include such items as site office, notice boards, and other temporary works, otherwise items such as security for the Works which are primarily part of the Contractor's obligations should be included in the Contractor's rates.
- 5.2 The work items in the Bills of Quantities should be grouped into sections to distinguish between those parts of the Works which by nature, location, access, timing, or any other special characteristics may give rise to different methods of construction, or phasing of the Works, or considerations of cost. Such groups could be ground excavations, structures, external works, services, etc. General items common to all parts of the Works may be grouped as a separate section in the Bill of Quantities.
- 5.3 Quantities should be computed net from the Drawings, unless directed otherwise in the Contract, and no allowance should be made for bulking, shrinkage or waste. Quantities should be rounded up where appropriate.
- 5.4 Where the measured items are redeemed not to be exact because of the likelihood that the scope can change during the execution of the works, such items could be subject to re-measurement, the word "**provisional**" should be used to identify such cases. Where whole sections of the work items fall in this class, for example foundations, they should be labelled "Provisional Quantities" or "Provisional Items" so that the Tenderer/Contractor is advised up front that such items are subject to re-measurement to be done before such work is cover-up.
- 5.5 All items that have not been measured and therefore not subject to tenders pricing should be listed in the Bills of Quantities as **Provisional Sums** for particular item or class of Work, which may be subject to a nominated subcontract or separate measurements at a later date during the execution of the works. For example, if it is deemed not possible to measure electrical works before going to tender because detail designs are not ready, a provisional sum can be allowed in the Bills of Quantities for "Installation of Electrical Works" to be executed later when actual design details are completed. To the extent not covered above, there should be in the Bills of Quantities a general provision for physical and financial contingencies made as a "Provisional Sum for Contingencies" and "Provisional Sum for Fluctuations".

## PREAMBLES

1. The method of measurement of completed work for payment shall be in accordance with *The Standard Method of Measurements for Building Works and Associated Civil Works for Eastern Africa (2<sup>nd</sup> edition) of 2008 prepared by The Architectural Association of Kenya (Quantity Surveyors Chapter)*
2. The Site is situated at **The Kenya Utalii College – Nairobi County**. It is approximately **within Nairobi City**. Access to the site shall be through **Thika Highway**. Which is an existing public road. Any damage caused to the surfaces of this road shall be made good at the Contractor's expense. The Contractor shall visit the site and acquaint itself with its nature and position, the nature of the ground, substrata and other local conditions, positions of existing power, water and other services, access roads or any other limitations that might affect his cost or progress. No claim for extras shall be considered on account of lack of knowledge in this respect.
3. The Contractor shall obtain the Architect's approval on the siting of all temporary buildings, spoil heaps, temporary access path, and storage of materials. The Contractor shall also obtain the Architect approval and direction regarding the use of any materials found on the Site.
4. The drawings used in the preparation of these Bills of Quantities can be inspected at the offices of the Procuring Entity or Procuring Entity's Representative during normal working hours. Two sets of the Working Drawings shall be provided to the contractor but additional copies shall be provided at a cost to be determined by the Engineer.
5. The Contractor shall allow for the payment of all bank charges in connection with the procurement of Bank Guarantees and stamp charges in connection with this contract Agreement.
6. The Contractor shall carry out the various sections of the Works in such an order as the Architect May direct. The Procuring Entity reserves the right to occupy the Works by sections on completion provided that such occupation is considered to be both practical and reasonable and will not interfere with the Works. The Contractor shall allow any costs associated with such occupation.
7. The main Contractor will be fully responsible for paying his Sub-Contractor but the Procuring Entity reserves the right in very exceptional circumstances to make such payments direct in the interests of the project where the completion thereof might be jeopardized by any dispute or vicariousness between the Contractor and the Sub-Contractor involve.
8. The Contractor shall complete and deliver the Works in the period inserted in the Form of Tender as his time for completion of the Works from the date for Possession, to be agreed with the Engineer. The Contract Period is presumed to have been calculated making due allowance for seasonal inclement weather conditions. No claim for extension of time due to the normal inclement weather for this area shall be entertained.
9. The Contractor shall, upon receiving instructions to proceed with the Works, draw up a Programme and Progress Chart setting out the order in which the Works are to be carried out, with the appropriate dates thereof. This Chart shall be agreed with the

Architect and no deviation from the order set out in it will be permitted without the written consent of the Engineer. The Contractor will be responsible for arranging the above programme with all his sub-Contractors and Specialties. The Contractor shall allow in his rates for carrying out this exercise, and for updating it as required.

10. The Contractor shall submit to the Architect on the first day of each week or such longer period as the Architect from time to time direct, a Progress Report and any information for the proceeding period, showing the progress during the period and the up-to-date cumulative progress on all important items of each section or portion of the Works.
11. The Contractor shall arrange for photographs of the Site to be taken by a professional photographer approved by the Engineer. The Photographs shall provide a record of the Site and adjacent areas as prior to the commencement of the Works and shall cover such portion of the works in progress and completion as the Architect shall direct. All prints shall be full plate size, unmounted, and marked on the reverse side with the date of exposure, identification reference and brief description. The copyright of all photographs shall be vested in the Procuring Entity. The negatives and four prints from each negative shall be delivered to the Architect within two weeks of exposure.
12. Figured dimensions are to be followed in preference to dimensions scaled from the Drawings, but whenever possible dimensions are to be taken on the Site or from the buildings. Before any work is commenced by Sub-Contractors or Specialist Firms, dimensions must be checked on the site comparable dimensions shown on the drawings. The Contractor shall be responsible for the accuracy of such dimensions.
13. Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any services shall be reported immediately to the Architect and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense. Where appropriate the Contractor shall open up the ground in advance of the main work by hand digging, if necessary, to locate precisely the position and details of the services which are likely to affect his operations.
14. The Contractor shall include in his prices for the transport of materials, workmen, etc./, to and from the site of the proposed works, at such hours and by such route as are permitted by the Authorities.
15. The Contractor will be required to make good, at his own expense and damage he may cause to the present road surface and pavements within or beyond the boundary of the Site, during the period of the works. All existing paths, storm water channels, etc., that may be destroyed or damaged during the progress of the Works shall be reinstated by the Contractor to the satisfaction of the Engineer.
16. The Contractor is to allow for complying with all instructions and regulations of the Police Authorities.
17. All water shall be fresh, clean and pure, free from earthly, vegetable or organic matter, acid or alkaline substance in solution. The Contractor shall provide at his own risk and cost all water for use in connection with the Works, (including works of sub-contractors). If need be, he shall make arrangements with the Local Water Authority for the installation of a separate meter for all water used by him throughout the Contract and pay all cost and fees in connection therewith. He shall also provide



temporary storage tanks and tubing, etc., as may be necessary, and clear away at completion.

18. The Contractor shall provide all artificial lighting and power for his own use on the Works, (including Sub – Contractor's) including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection there with.
19. 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 time to the superintendence of the works. (Including works of sub – contractors). Such Agent or Representative shall receive on behalf of the Contractor directions and instruction from the Engineer, and such directions and instructions shall be deemed to be given to the contractor in accordance with the Conditions of Contract. The Agent shall not be replaced without the specific approval of the Engineer.
20. The Contractor shall ensure that the safety of his work people and all authorized visitors to the site are protected at all times. In particular, there shall be the proper provision of guard-rails to scaffolding, protection against falling materials, tools on site, dust, nail and other sharp objects. The site shall be kept tidy and clear of dangerous rubbish. The Architect shall be empowered to suspend work on site should it be considered this condition is not being observed and no claim arising from such suspension will be allowed.
21. They are as available to the Contractor for work yards, offices and other facilities shall be directed by the Architect and any existing features to remain shall be protected from damage throughout the Contract Period and handed back in good condition when they are vacated at the end of the Contract. If additional areas are required, the contractor shall source then at own cost.
22. The Contractor shall give the Architect reasonable notice of the intention to set out or take levels for any part of the Works so that arrangements may be made for checking the work. The accuracy of setting out and leveling shall be within the tolerances specified in the Specifications or on the Drawings. The checking of setting out or leveling by the Architect shall not relieve the Contractor of his duties or responsibilities under the Contract.
23. The Contractor must take steps necessary to safe guard and shall beheld fully responsible for any damage caused to existing and adjacent property, including buildings that are not a subject of demolition. He shall make good at his own cost damage to persons and property caused there on, and he shall indemnify the Procuring Entity against any loss or claim that may arise.
24. The Contractor shall take such steps and exercise such care and diligence as to minimize nuisance arising from dust, noise or any other cause to the occupiers of the existing and adjacent property. He must provide such temporary and special screens and tarpaulins or gummy bags, hoarding, barriers, warning signs etc. as he considers necessary and sufficient for the protection of the existing and adjacent property and or prevention of nuisance etc. as directed by Engineer.
25. The Contractors attention is drawn to the standards levy order which was amended on 15<sup>th</sup> October 1998. Legal notice No.154 of 1998. The Contractor is required to pay a monthly level of 0.2% of his factory price of construction works with effect from

January 1999. Tenderer shall allow for this in the build-up his rates.

26. The Contractor shall provide temporary sheds, offices mess rooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.
27. Contractor shall provide/build labor camp sat areas to be agreed with the Engineer. Labor camps shall be complete with sanitary accommodation and fencing gates.
28. The Contractor must provide the necessary toilet facilities to the requirement and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.
29. The Contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, Plant and materials against damage and theft.
30. The Contractor shall provide all necessary hoists, tackle, plant, equipment, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove the same on completion. All such plant, tools and equipment shall comply with all regulations in force throughout the period of the Contract and shall be altered or adopted during the Contract period as may be necessary to comply with any amendments in or additions to such regulations.
31. Provide, erect and maintain all necessary scaffolding, sufficiently strong and efficient for the due performance of the works, including Sub-Contract Works, provide special scaffolding as required by Sub-Contractors, alter and adopt all scaffolding as and when required during the Works, and remove on completion. No scaffolding is measured here in after and the Contractor must allow in his rates for this.
32. The Contractor shall take all necessary precautions such as temporary fencing, hoarding fans, planked footways, guard-rails gantries screen, etc., for the safe custody of the Works, materials and public protection and adjacent properties.
33. Cover up all and protect from damage, including damage from inclement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Architect until the completion of the Contract.
34. The Contractor shall, after completion of the works, at his own expense, remove and clear away all surplus excavated demolition materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Engineer, sheds, camps, etc. Particular care shall be taken to leave clean all floors and windows and to remove all paint and cement all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection there with.
35. Concrete test cubes shall be prepared in a set of three, as described including testing fees, labor and materials, making molds, transport, handling, etc. Allow in your rates for making at least four cubes on each occasion, from different batches; the concrete being taken from the point of deposit.
36. The Contractors shall furnish at the earliest possible opportunity before work commences, and at his own cost, any samples of materials and workmanship that may be called for by the Architect for the approval or rejection, and any further samples in the case of rejection, until such samples are approved by the Engineer. Such samples,

when approved, shall be the minimum standard for the work to which they apply. The procedure for submitting samples of materials for testing or approval and the method of marking for identification shall be as laid down by the Engineer. The Contractor shall allow in his Tender for such samples and tests, including those in connection with his Sub-Contractors work.

37. The Contractor's attention is drawn to the Finance Bill of the year 2000/2001 on withholding tax on contractual payment section 35(7)(i)(ii) which became effective on 1<sup>st</sup> July 2000. A 3% withholding tax will be applicable to all interim payments exceeding Kshs..... for work done in respect of building or civil works. The contractor shall allow for any costs arising resulting therefrom in the build-up of rates.
38. Blasting will only be allowed with the express permission of the Architect in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost, in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Architect governing the use and storage of explosives.
39. The National Construction Authority is a state corporation established under the national construction authority Act No.14 of 2011. The broad Mandate of the Authority is to oversee the construction industry and coordinate its development. The National Construction Authority Regulations 2014 with an effective date of 6<sup>th</sup> June 2014, regulation 25, - Allow 0.5% of the tender sum/contract sum for construction levy.
40. The Contractor's attention is drawn to Finance Bill of 1993 where VAT was introduced in all contracts for construction services. The tenderer is also drawn to VAT Act Cap 476 clause 19(9). The tenderer must allow for VAT 1.19 as instructed elsewhere.
41. The contractor shall allow and pay for all insurance to cover risks and indemnities required Items 17 and 18 of the Conditions of contract and also specified in the Special Conditions of Contract.

**BILL NO. 2.10 - PRELIMINARY ITEMS**

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	<p>Discrepancies: The Contractor shall include all work either shown on the Contract Drawings or detailed in the specification. No claim or extra cost shall be considered for works which has been shown on the drawings or in the specification alone.</p> <p>Should the drawing and the specification appear to conflict, the Sub-contractor shall query the points at the time of tendering and satisfy himself that he has included for the work intended, as no claim for extra payment on this account shall be considered after the contract is awarded.</p>				
2	<p>Conditions of sub-contract Agreement: The Contractor shall be required to enter into a Sub-contract with the Main Contractor.</p>				
3	<p>Payments: Payment will be made through certificates to the Main Contractor, All payments will be less retention as specified in the Main Contract. No payment will become due until materials are delivered to site.</p>				
4	<p>Site location: The site of the Contract Works is situated in <b>Utalii College</b> along <b>Thika Highway, Nairobi County</b>. The tenderer is recommended to visit the site and shall be deemed to have satisfied himself with regard to access, possible conditions, the risk of injury or damage to property on/or adjacent to the site, and the conditions under which the sub-contract Works shall have to be carried out and no claims for extras will be considered on account of lack of knowledge in this respect.</p>				
<b>Sub-total carried forward to page ..... 321</b>					

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
5	<p>Scope of Contract Works: The contractor shall supply, deliver, unload, hoist, fix, test, commission and hand-over in satisfactory working order the complete installations specified hereinafter and/or as shown on the Contract Drawings attached hereto, including the provision of labour, transport and plant for unloading material and storage, and handling into position and fixing, also the supply of ladders, scaffolding the other mechanical devices to plant, installation, painting, testing, setting to work, the removal from site from time to time of all superfluous material and rubbish caused by the works.</p> <p>The contractor shall supply all accessories, whether of items or equipment supplied by the Sub-Contractor but to be fixed and commissioned under this contract.</p>				
6	<p>Extent of the Contractor's Duties: At the commencement of the works, the contractor shall investigate and report to the Engineer if all materials and equipment to be used in the work and not specified as supplied by the others are available locally. If these materials and equipment are not available locally, the contractor shall at this stage place orders for the materials in question and copy the orders to the Engineer.</p>				
7	<p>Firm price contract: Unless specifically stated in the documents or the invitation to tender, this is a firm-price Contract and the contractor must allow in his tender for the increase in the cost of labour and/or materials during the duration of the contract.</p>				
8	<p>Variation: No alteration to the Contract Works shall be carried out until receipt by the Contractor of written instructions from the Project Manager.</p>				
9	<p>Prime cost and provisional sum: A specialist Sub-contractor may be nominated by the Project Manager to supply and/or install any equipment covered by the Prime Cost or Provisional Sums contained within the Contract documents (insert profit and attendance which is a percentage of expended PC or provisional sum.)</p>				
<b>Sub-total carried forward to page ..... 321</b>					

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
10	Bond: The tenderer must submit with his tender the name of one Surety who must be an established Bank only who will be willing to be bound to the Government for an amount equal to 7½ % of the Contract amount				
11	Government Legislation and Regulations: The Contractor's attention is called to the provision of the Factory Act 1972 and subsequent amendments and revisions, and allowance must be made in his tender for compliance therewith, in so far as they are applicable. The Contractor must also make himself acquainted with current legislation and any Government regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc.				
12	Import Duty and Value Added Tax: The Sub-contractor will be required to pay full Import Duty and Value Added Tax on all items of equipment, fittings and plant, whether imported or locally manufactured. The tenderer shall make full allowance in his tender for all such taxes. (Note this clause applies for materials supplied only. VAT will also be paid by the sub-contractor as allowed in the summary page)				
13	Insurance company Fees: Attention is drawn to the tenderers to allow for all necessary fees, where known, that may be payable in respect of any fees imposed by Insurance Companies or statutory authorities for testing or inspection.				
14	Provision of services by the Main contractor: In accordance with Clause 1.08 of this Specification the Contractor shall make the following facilities available to the Sub-contractor: a) Attendance on the Sub-Contractor and the carrying out of all work affecting the structure of the building which may be necessary, including all chasing, cutting away and making good brickwork,				
<b>Sub-total carried forward to page .....</b>				<b>321</b>	

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>etc., except that all plugging for fixing, fittings, machinery, fan ducting, etc., and all drilling and tapping of steel work shall be the responsibility of the Sub-contractor. Any purpose made fixing brackets shall not constitute Builder's Work and shall be provided and installed by the Sub-contractor unless stated hereinafter otherwise.</p> <p>b) The provision of temporary water, lighting and power: the Contractor pay for all these services utilized.</p> <p>c) Fixing of anchorage and pipe supports in the shuttering, shall be supplied by the Contractor who shall also supply the Project Manager with fully dimensioned drawings detailing the exact locations.</p> <p>d) i) Provision of scaffolding, cranes, etc. It shall be the Contractor's responsibility to liaise with the Project Manager to ensure that there is maximum co-operation with other nominated Sub-contractors in the use of scaffolding, cranes, etc.</p> <p>ii) Any specialist scaffolding, cranes, etc. by the Contractor for his own exclusive use shall be paid for by the Sub-contractor.</p> <p>15 Samples and Materials Generally: The Contractor shall, when required, provide for approval at no extra cost, samples of all materials to be incorporated in the works. Such samples, when approved, shall be retained by the Engineer and shall form the standard for all such materials incorporated.</p> <p>16 Supplies: The Contractor shall submit names of any supplier for the materials to be incorporated, to the Engineer for approval. The information regarding the names of the suppliers may be submitted at different times, as may be convenient, but no sources of supply will be changed without prior approval. Each supplier must be willing to admit the Engineer or his representative to his premises during working hours for the purpose of examining or obtaining samples of the materials in question.</p>				
<b>Sub-total carried forward to page ..... 321</b>					

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
17	<p>Bills of Quantities: The Bills of Quantities have been prepared in accordance with the standard method of measurement of Building Works for East Africa, first Edition, Metric, 1970. All the Quantities are based on the Contract Drawings and are provisional and they shall not be held to gauge or to limit the amount or description of the work to be executed by the Contractor but the value thereof shall be deducted from the Contract Sum and the value of the work ordered by the Engineer and executed thereunder shall be measured and valued by the Engineer in accordance with the conditions of the Contract.</p>				
18	<p>Contractor's Office in Kenya: The Contractor shall maintain (after first establishing if necessary) in Kenya an office staffed with competent Engineer Manager and such supporting technical and clerical staff as necessary to control and coordinate the execution and completion of the Contract Works.</p>				
19	<p>Builder's Work: All chasing, cutting away and making good will be done by the Contractor. The Contractor shall mark out in advance and shall be responsible for accuracy of the size and position of all holes and chases required.</p> <p>The Contractor shall drill and plug holes in floors, walls, ceiling and roof for securing services and equipment requiring screw or bolt fixings.</p> <p>Any purpose made fixing brackets shall be provided and installed by the Contractor.</p>				
20	<p>Setting to work and Regulating system: The Contractor shall carry out such tests of the Contract Works as required by British Standard Specifications, or equal and approved codes as specified hereinafter and as customary.</p>				
<b>Sub-total carried forward to page ..... 321</b>					



ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>No testing or commissioning shall be undertaken except in the presence of and to the satisfaction of the Engineer unless otherwise stated by him (Contractor's own preliminary and proving tests excepted). It will be deemed that the Contractor has included in the Contract Sum for the costs of all fuel, power, water and the like, for testing and commissioning as required as part of the Contract Works. He shall submit for approval to the Engineer a suitable programme for testing and commissioning. The Engineer and Employer shall be given ample warning in writing, as to the date on which testing and commissioning will take place.</p> <p>21 Identification of plant components: The Contractor shall supply and fix identification labels to all plant, starters, switches and items of control equipment including valves, with white traffolyte or equal labels engraved in red lettering denoting its name, function and section controlled. The labels shall be mounted on equipment and in the most convenient positions. Care shall be taken to ensure the labels can be read without difficulty. This requirement shall apply also to major components of items of control equipment. Details of the lettering of the labels and the method of mounting or supporting shall be forwarded to the Engineer for approval prior to manufacture.</p> <p>22 Working Drawings: The Contractor shall prepare such Working Drawings as may be necessary. The Working Drawings shall be complete in such detail not only that the Contract Works can be executed on site but also that the Engineer can approve the Contractor's proposals, detailed designs and intentions in the execution of the Contract Works.</p>				
	<b>Sub-total carried forward to page ..... 321</b>				

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>If the Contractor requires any further instructions, details, Contract Drawings or information drawings to enable him to prepare his Working Drawings or proposals, the Contractor shall accept at his own cost, the risk that any work, commenced or which he intends to commence at site may be rejected.</p> <p>23 Record Drawings (As Installed) and Instructions: During the execution of the Contract Works the Contractor shall, in a manner approved by the Engineer record on Working or other Drawings at site all information necessary for preparing Record Drawings of the installed Contract Works. Marked-up Working or other Drawings and other documents shall be made available to the Engineer as he may require for inspection and checking. Record Drawings, may, subject to the approval of the Engineer, include approved Working Drawings adjusted as necessary and certified by the Contractor as a correct record of the installation of the Contract Works.</p> <p>24 Maintenance Manual: Upon Practical Completion of the Contract Works, the Contractor shall furnish the Engineer four copies of a Maintenance Manual relating to the installation forming part of all of the Contract Works.</p> <p>The manual shall be loose-leaf type, International A4 size with stiff covers and cloth bound. It may be in several volumes and shall be sub-divided into sections, each section covering one Engineering service system. It shall have a ready means of reference and a detailed index.</p> <p>There shall be a separate volume dealing with Air Conditioning and Mechanical Ventilation installation where such installations are included in the Contract Works.</p>				
	<b>Sub-total carried forward to page ..... 321</b>				

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
25	The manual is to be specially prepared for the Contract Works and manufacturer's standard descriptive literature and plant operating instruction cards will not be accepted for inclusion unless exceptionally approved by the Engineer. The Contractor shall, however, affix such cards, if suitable, adjacent to plant and apparatus. One spare set of all such cards shall be furnished to the Engineer.				
26	Hand over: The Contract Works shall be considered complete and the Maintenance and Defects Liability Period shall commence only when the Contract Works and supporting services have been tested, commissioned and operated to the satisfaction of the Engineer and officially approved and accepted by the Employer.				
27	Painting: It will be deemed that the Contractor allowed for all protective and finish painting in the Contract Sum for the Contract Works, including colour coding of service pipework to the approval of the Engineer. Any special requirements are described in the text of the Specifications				
28	Testing and Inspection – manufactured plant: The Engineer reserves the right to inspect and test or witness of all manufactured plant equipment and materials. The right of the Engineer relating to the inspection, examination and testing of plant during manufacture shall be applicable to Insurance companies and inspection authorities so nominated by the Engineer. The Contractor shall give two weeks' notice to the Engineer of his intention to carry out any inspection or tests and the Engineer or his representative shall be entitled to witness such tests and inspections.				
29	Testing and Inspection – Installation: Allow for testing each section of the Contract Works installation as described hereinafter to the satisfaction of the Engineer.				
<b>Sub-total carried forward to page .....</b>				<b>321</b>	

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
30	<p>Storage of Materials: The Contractor shall provide storerooms and workshop where required. He shall also provide space for storage to nominated sub-contractors who shall be responsible for these lock-up shades or stores provided.</p> <p>Nominated Sub-contractors are to be made liable for the cost of any storage accommodation provided specially for their use. No materials shall be stored or stacked on suspended slabs without the prior approval of the Project manager</p>				
31	<p>Initial Maintenance: The Contractor shall make routine maintenance once a month during the liability for the Defects Period and shall carry out all necessary adjustments and repairs, cleaning and oiling of moving parts. A monthly report of the inspection and any works done upon the installation shall be supplied to the Engineer.</p>				
32	<p>The Contractor shall also provide a 24 -hour break-down service to attend to faults on or malfunctioning of the installation between the routine visits of inspection.</p>				
33	<p>Attendance Upon Tradesmen, 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 the use of ordinary scaffolding. The contractor however, shall not be required to erect any special scaffolding for them.</p>				
34	<p>Temporary Works Where temporal works shall be deemed necessary, such as Temporary lighting, the contractor shall take precaution to prevent damage to such works.</p> <p>The contractor shall include for the cost of and make necessary arrangements with the Project Manager for such temporary works. For temporary lighting, electricity shall be metered and paid for by the contract</p>				
35	<p><b>Sub-total carried forward to page ..... 321</b></p>				

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>his programme and schedule of work. He shall ensure equipment. optimum presence and utilization of labour, plant and equipment. He should not pay and maintain unnecessary labour force or maintain and service idle plant and</p>				
36	<p>Extended Preliminaries: Where it shall be necessary to extend the contract period by the Project manager the contractor shall still ensure availability on site, optimum labour, materials, plant and equipment. The contractor shall make provision for extended preliminaries, should the contract period be extended and this shall be in a form of a percentage of the total Contractor works.</p>				
37	<p>Supervision by Engineer and Site: A competent Project Engineer appointed by the Engineer as his representative shall supervise the Contract works. The Project Engineer shall be responsible for issuing all the site instructions in any variations to the works and these shall be delivered through the Contractor with the authority of the Project Manager. Any instructions given verbal shall be confirmed in writing. The project engineer and (or) the Engineer shall attend management meetings arranged by the Project Manager and for which the Contractor or his representative shall also attend. For the purpose of supervising the project, provisional sums are provided to cover for transport and allowances. The Contractor shall in his tender allow for the provision of management meetings and site inspections, as instructed by the Engineer, and also profit and attendance on these funds. The funds shall be expended according to Project Manager's instructions to the contractor</p>				
38	<p>Allow for profit and Attendance for the above</p>				
39	<p>Amendment to Scope of Sub-contract Works No amendment to scope of sub-contract works is expected and in case of amendment or modification to scope of work, these shall be communicated to all tenderers in</p>				
	<p><b>Sub-total carried forward to page .....</b></p>			<p><b>321</b></p>	

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
40	<p>sufficient time before the deadline of the tender submission. However, during the contract period and as the works progress the Project Manager may vary the works as per conditions of contract by issuing site instructions</p> <p>Contractor Obligation and Employers Obligation: The sub-contractor will finance all activities as part of his obligation to this contract. The employer shall pay interim payment for materials and work completed on site as his obligation in this contract, as the works progresses. The contractor shall, where called upon, insert his price to compensate for any of the occurrence stated here (premature termination, reduction or increase of works), as a percentage of the contract sum.</p>				
41	Any other preliminaries;				
Sub-total above					
Sub-total brought forward from page .....					311
Sub-total brought forward from page .....					312
Sub-total brought forward from page .....					313
Sub-total brought forward from page .....					314
Sub-total brought forward from page .....					315
Sub-total brought forward from page .....					316
Sub-total brought forward from page .....					317
Sub-total brought forward from page .....					318
Sub-total brought forward from page .....					319
Sub-total brought forward from page .....					320
<b>TOTAL FOR BILL NO. 1- PRELIMINARIES CARRIED FORWARD TO PRICE MAIN SUMMARY PAGE .....</b>					<b>334</b>

**BILL No. 2 PRODUCT COOLING ROOM 1**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Coldroom Installation</b>				
	<b>Evaporator Unit</b>				
A	The evaporator unit with a cooling load of 2.39 kW complete with cooling coil, defrost heater, expansion valve, air circulating fans, guards, drip tray, drainage pipework outlet, supports etc. The unit to be complete with a power supply and to be as Guntner Manufactured Model or equal.	2	No.		
	<b>Evaporator Unit Support</b>				
B	Allow for a suitable wall mounting support for the above that can match the panel used for constructing the cold room	2	Item		
	<b>Condensing Unit</b>				
C	An air cooled condensing unit with semi-hermetic reciprocating compressor capable of a cooling load to match the evaporator unit and to be complete with fan, compressor, condenser, liquid receiver, controls, anti-vibration mountings etc. Unit to use a refrigerant that complies with the Montreal Protocol and NEMA, have a power supply and to be as Guntner Manufactured or equal.	2	No.		
	<b>Control Panel</b>				
D	The panel shall be complete with contactors, timers and all other accessories necessary for the automatic operation of the cold store.	2	No.		
	<b>Controls</b>				
E	Thermostatic expansion valve	2	No.		
F	Filter drier to match refrigerant capacity that can carry the above cooling load of 2.39 kW to be as Danfoss or equal.	2	No.		
G	Sight glass with colour coding	2	No.		
<b>Sub Total Carried to Collection Page 325</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Low pressure gauge	2	No.		
B	High pressure gauge	2	No.		
C	Room thermostat to cut compressor in and out, depending on the room temperature.	2	No.		
D	Dial thermometer	2	No.		
E	Solenoid valve	2	No.		
F	Low and high cut-out switch	2	No.		
	<b>Light Fitting</b>				
G	65 watts vapour proof light fitting	4	No.		
	<b>Refrigerant Pipework</b>				
H	Refrigeration pipework complete with armflex Insulation for both the <b>liquid line</b> and the <b>suction line</b> to match the evaporator units and condensing units. The pipework to be complete with all the necessary bends, reducers, Y's, joints, distributors, support brackets etc. an average distance of 8 m is taken for between any two units (the evaporator unit and condenser unit)	2	Item		
	<b>Refrigerant</b>				
I	Allow for the charging of the refrigeration system with necessary amount of refrigerant for initial testing and eventual operation of the cold store.	1	Item		
	<b>Anti-Vibration Mountings</b>				
J	Anti-Vibration Mountings for each of the condensing unit installed as WOODS P.N.50417 or equal and a cage for each condensing unit.	2	Item		
K	40mm diameter class 41 uPVC condensate pipe complete with bends, tees, and access caps	10	LM		
<b>Sub Total Carried to Collection Page 325</b>					



Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Room Insulation</b>				
A	150 mm thick prefabricated TSSC sandwich panels with pressure injected polyuretane foam insulation of density 42 kg/cu. M and cladded with 0.5 mm thick white Lacquered galvanised steel sheet panels as room insulation complete with aluminium supports. The panels should be suplied with all accessories to support all the four walls and roof in an open space	72	SM		
	<b>Associated Electrical Works</b>				
B	Allow for electrical works including but not limited to wiring and conduits from the local isolator provided by others within 50 metres in the machine room to the control panel, condenser and evaporator. It shall include a push and turn safety switch near the machines in the machine room for isolation during servicing and maintenance.	1	Item		
C	Allow for as-built drawing, maintenance and operation manuals in both soft and hard copies. Three copies of the as-built drawing shall be submitted in A1 paper in a scale of 1:50	1	Item		
	<b>Cold Room Door</b>				
D	Two sliding cold room doors whose overall size is 1900 mm high by 900 mm wide complete with opening handles and thickness of 175 mm TSSC sandwich panels and claded micron plasstisol coated G.I sheet with fittings and gasket TPE rubber, slab gaskets even internally	1	No.		
<b>Sub Total Carried to Collection Page 325</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	Allow for setting to work, testing and commissioning of the coldroom installation to the satisfaction of the Project Engineer. Provide a sum for supervision that will be used by the Engineer during the carrying out of these activities.	1	Item		
	<b>Wooden Pallet</b>				
B	Supply a pallet for trolley that is capable of carrying the product. The construction material shall be hard wood with a loading capacity of one tonne (1000 kg) and overall dimensions of 1800 mm in length by 1200 mm in width and a height of 900 mm. <b>(the overall height includes a base of 150mm)</b> It shall have face boards ten of which shall be of 1800 mm in length and ten of which shall be 1200 mm in length each piece being 100 mm in length and 15 mm in thickness. It shall have brace timber for trolley forks and bottom brace timbers that will allow for the product to be stored in the pallet and allow for the pallet to be trolleyed.	2	No.		
<b>Sub Total Carried to Collection Page 325</b>					

**COLLECTION PAGE FOR COLDROOM 1**

Item	Description	Amount (Kshs)
1	Sub-Total 1 from page 322	
2	Sub-Total 2 from page 323	
3	Sub-Total 3 from page 324	
4	Sub-Total 4 from page 325	
<b>Total for Coldroom 1 carried forward to the Summary Page 334</b>		

**BILL No. 3 PRODUCT COOLING ROOM 2**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b><u>Coldroom Installation</u></b>				
	<b>Evaporator Unit</b>				
A	The evaporator unit with a cooling load of 7.18 kW complete with cooling coil, defrost heater, expansion valve, air circulating fans, guards, drip tray, drainage pipework outlet, supports etc. The unit to be complete with a power supply and to be as Guntner Manufactured Model or equal.	2	No.		
	<b>Evaporator Unit Support</b>				
B	Allow for a suitable wall mounting support for the above that can match the panel used for constructing the cold room	2	Item		
	<b>Condensing Unit</b>				
C	An air cooled condensing unit with semi-hermetic reciprocating compressor capable of a cooling load to match the evaporator unit and to be complete with fan, compressor, condenser, liquid receiver, controls, anti-vibration mountings etc. Unit to use a refrigerant that complies with the Montreal Protocol and NEMA, have a power supply and to be as Guntner Manufactured or equal.	2	No.		
	<b>Control Panel</b>				
D	The panel shall be complete with contactors, timers and all other accessories necessary for the automatic operation of the cold store.	2	No.		
	<b>Controls</b>				
E	Thermostatic expansion valve	2	No.		
F	Filter drier to match refrigerant capacity that can carry the above cooling load of 7.18 kW to be as Danfoss or equal.	2	No.		
G	Sight glass with colour coding	2	No.		
<b>Sub Total Carried to Collection Page 329</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Low pressure gauge	2	No.		
B	High pressure gauge	2	No.		
C	Room thermostat to cut compressor in and out, depending on the room temperature.	2	No.		
D	Dial thermometer	2	No.		
E	Solenoid valve	2	No.		
F	Low and high cut-out switch	2	No.		
	<b>Light Fitting</b>				
G	65 watts vapour proof light fitting	4	No.		
	<b>Refrigerant Pipework</b>				
H	Refrigeration pipework complete with armflex Insulation for both the <b>liquid line</b> and the <b>suction line</b> to match the evaporator units and condensing units. The pipework to be complete with all the necessary bends, reducers, Y's, joints, distributors, support brackets etc. an average distance of 8 m is taken between any two units (the evaporator unit and condenser unit)	2	Item		
	<b>Refrigerant</b>				
I	Allow for the charging of the refrigeration system with necessary amount of refrigerant for initial testing and eventual operation of the cold store up until the end of defects liability period.	1	Item		
	<b>Anti-Vibration Mountings</b>				
J	Anti-Vibration Mountings for each of the condensing unit installed as WOODS P.N.50417 or equal and a cage for each condensing unit.	2	Item		
K	40mm diameter class 41 uPVC condensate pipe complete with bends, tees, and access caps	10	LM		
<b>Sub Total Carried to Collection Page 329</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Room Insulation</b>				
A	150 mm thick prefabricated TSSC sandwich panels with pressure injected polyuretane foam insulation of density 42 kg/cu. M and cladded with 0.5mm thick white Lacquered galvanised steel sheet panels as room insulation complete with aluminium supports. The panels should be suplied with all accessories to support all the four walls and roof in an open space	72	SM		
	<b>Associated Electrical Works</b>				
B	Allow for electrical works including but not limited to wiring and conduits from the local isolator provided by others within 50 metres in the machine room to the control panel, condenser and evaporator. It shall include a push and turn safety switch near the machines in the machine room for isolation during servicing and maintenance.	1	Item		
C	Allow for as-built drawing, maintenance and operation manuals in both soft and hard copies. Three copies of the as-built drawing shall be submitted in A1 paper in a scale of 1:50	1	Item		
	<b>Cold Room Door</b>				
D	Two sliding cold room doors whose overall size is 1900 mm high by 900 mm wide complete with opening handles and thickness of 175 mm TSSC sandwich panels and claded micron plasstisol coated G.I sheet with fittings and gasket TPE rubber, slab gaskets even internally	1	No.		
E	Allow for setting to work, testing and commissioning of the coldroom installation to the satisfaction of the Project Engineer. Provide a sum for supervision that will be used by the Engineer during the carrying out of these activities.	1	Item		
<b>Sub Total Carried to Collection Page 329</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	Allow for setting to work, testing and commissioning of the coldroom installation to the satisfaction of the Project Engineer. Provide a sum for supervision that will be used by the Engineer during the carrying out of these activities.	1	Item		
	<b>Wooden Pallet</b>				
B	Supply a pallet for trolley that is capable of carrying the product. The construction material shall be hard wood with a loading capacity of one tonne (1000 kg) and overall dimensions of 1800 mm in length by 1200 mm in width and a height of 900 mm. <b>(the overall height includes a base of 150mm)</b> It shall have face boards ten of which shall be of 1800 mm in length and ten of which shall be 1200 mm in length each piece being 100 mm in length and 15 mm in thickness. It shall have brace timber for trolley forks and bottom brace timbers that will allow for the product to be stored in the pallet and allow for the pallet to be trolleyed.	2	No.		
<b>Sub Total Carried to Collection Page 329</b>					

**COLLECTION PAGE FOR COLDROOM 2**

Item	Description	Amount (Kshs)
A	Sub-Total 1 from page 326	
B	Sub-Total 2 from page 327	
C	Sub-Total 2 from page 328	
D	Sub-Total 2 from page 329	
<b>Total for Coldroom 2 carried forward to the Summary Page 334</b>		

**BILL No. 4 PRODUCT COOLING ROOM 3**

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b><u>Coldroom Installation</u></b>				
	<b>Evaporator Unit</b>				
A	The evaporator unit with a cooling load of 3.8 kW complete with cooling coil, defrost heater, expansion valve, air circulating fans, guards, drip tray, drainage pipework outlet, supports etc. The unit to be complete with a power supply and to be as Guntner Manufactured Model or equal.	2	No.		
	<b>Evaporator Unit Support</b>				
B	Allow for a suitable wall mounting support for the above that can match the panel used for constructing the cold room	2	Item		
	<b>Condensing Unit</b>				
C	An air cooled condensing unit with semi-hermetic reciprocating compressor capable of a cooling load to match the evaporator unit and to be complete with fan, compressor, condenser, liquid receiver, controls, anti-vibration mountings etc. Unit to use a refrigerant that complies with the Montreal Protocol and NEMA, have a power supply and to be as Guntner Manufactured or equal.	2	No.		
	<b>Control Panel</b>				
D	The panel shall be complete with contactors, timers and all other accessories necessary for the automatic operation of the cold store.	2	No.		
	<b>Controls</b>				
E	Thermostatic expansion valve	2	No.		
F	Filter drier to match refrigerant capacity that can carry the above cooling load of 3.8 kW to be as Danfoss or equal.	2	No.		
G	Sight glass with colour coding	2	No.		
<b>Sub Total Carried to Collection Page 333</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Low pressure gauge	2	No.		
B	High pressure gauge	2	No.		
C	Room thermostat to cut compressor in and out, depending on the room temperature.	2	No.		
D	Dial thermometer	2	No.		
E	Solenoid valve	2	No.		
F	Low and high cut-out switch	2	No.		
	<b>Light Fitting</b>				
G	65 watts vapour proof light fitting	4	No.		
	<b>Refrigerant Pipework</b>				
H	Refrigeration pipework complete with armflex Insulation for both the <b>liquid line</b> and the <b>suction line</b> to match the evaporator units and condensing units. The pipework to be complete with all the necessary bends, reducers, Y's, joints, distributors, support brackets etc. an average distance of 8 m is taken between any two units (the evaporator unit and condenser unit)	2	Item		
	<b>Refrigerant</b>				
I	Allow for the charging of the refrigeration system with necessary amount of refrigerant for initial testing and eventual operation of the cold store up until the end of defects liability period.	1	Item		
	<b>Anti-Vibration Mountings</b>				
J	Anti-Vibration Mountings for each of the condensing unit installed as WOODS P.N.50417 or equal and a cage for each condensing unit.	2	Item		
K	40mm diameter class 41 uPVC condensate pipe complete with bends, tees, and access caps	10	LM		
<b>Sub Total Carried to Collection Page 333</b>					



Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
	<b>Room Insulation</b>				
A	150 mm thick prefabricated TSSC sandwich panels with pressure injected polyuretane foam insulation of density 42 kg/cu. M and cladded with 0.5mm thick white Lacquered galvanised steel sheet panels as room insulation complete with aluminium supports. The panels should be supplied with all accessories to support all the four walls and roof in an open space	119	SM		
	<b>Associated Electrical Works</b>				
B	Allow for electrical works including but not limited to wiring and conduits from the local isolator provided by others within 50 metres in the machine room to the control panel, condenser and evaporator. It shall include a push and turn safety switch near the machines in the machine room for isolation during servicing and maintenance.	1	Item		
C	Allow for as-built drawing, maintenance and operation manuals in both soft and hard copies. Three copies of the as-built drawing shall be submitted in A1 paper in a scale of 1:50	1	Item		
	<b>Cold Room Door</b>				
D	A cold room door whose overall size is 1900 mm high by 900 mm wide complete with opening handles and thickness of 175 mm TSSC sandwich panels and cladded micron plasstisol coated G.I sheet with fittings and gasket TPE rubber, slab gaskets even internally	1	No.		
<b>Sub Total Carried to Collection Page 333</b>					

Item	Description	Qty	Unit	Rate (Ksh)	Amount (Ksh)
A	Allow for setting to work, testing and commissioning of the coldroom installation to the satisfaction of the Project Engineer. Provide a sum for supervision that will be used by the Engineer during the carrying out of these activities.	1	Item		
	<b>Wooden Pallet</b>				
B	Supply a pallet for trolley that is capable of carrying the product. The construction material shall be hard wood with a loading capacity of one tonne (1000 kg) and overall dimensions of 1800 mm in length by 1200 mm in width and a height of 900 mm. <b>(the overall height includes a base of 150mm)</b> It shall have face boards ten of which shall be of 1800 mm in length and ten of which shall be 1200 mm in length each piece being 100 mm in length and 15 mm in thickness. It shall have brace timber for trolley forks and bottom brace timbers that will allow for the product to be stored in the pallet and allow for the pallet to be trolleyed.	2	No.		
<b>Sub Total Carried to Collection Page 333</b>					

**COLLECTION PAGE FOR COLDROOM 3**

Item	Description	Amount (Kshs)
A	Sub-Total 1 from page 330	
B	Sub-Total 2 from page 331	
C	Sub-Total 3 from page 332	
D	Sub-Total 4 from page 333	
<b>Total for Coldroom 3 carried forward to the Summary Page 334</b>		

**MAIN SUMMARY PAGE**

ITEM	DESCRIPTION	AMOUNT (KSHS)
A	Total for preliminaries brought forward from Collection Page... <b>324</b>	
B	Total for Product Cold Room 1 brought forward from the Collection Page..... <b>325</b>	
C	Total for Product Cold Room 1 brought forward from the Collection Page..... <b>329</b>	
D	Total for Product Cold Room 1 brought forward from the Collection Page..... <b>333</b>	
<b>TOTAL FOR COLD STORAGE ROOMS AND REFRIGERATION CARRIED FORWARD TO VOLUME 1 OF 3 SUMMARY PAGE 160</b>		

Amount in Kenya Shillings .....

.....

.....

Period of Execution of the works.....

Tenderers Name & Stamp.....

.....

SIGNATURE.....

DATE.....

IN NO.....

VAT CERTIFICATE

NO.....

(Provide copy)

(Provide copy)

WITNESS' NAME.....

OCCUPATION.....

SIGNATURE.....

DATE.....

### SCHEDULE OF UNIT RATES

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorized variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted

ITEM	DESCRIPTION	UNIT	RATE (Kshs)
A	Pre-insulated aluminium/polystyrene cold room wall panels for 3.2m x 3.85 x 2.8m high room	Item	
B	4.7kW cold room evaporator as Guntner	Item	
C	4.7 kW condensing unit Bitzer	Item	
D	Hardwood Coldroom door	No.	
E	3 tier, 1800mm, long Stainless steel food rack	Item	
F	Meat Hook	No.	

### TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

1. The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders, especially where the tenderer intends to supply or has based his tender sum on equipment which differs in manufacture, type or performance from the specifications indicated by the Project Manager/Engineer.
2. This schedule shall form part of the technical evaluation criterion, and tenderers are therefore advised to complete the schedule as they shall be considered non responsive.

**NB.** The tenderer must complete in full the technical schedule. Apart from the information required in the technical schedule, the tenderer **MUST SUBMIT LEGIBLE** comprehensive manufacturer's technical brochures and performance details for all items listed in this schedule and **CLEARLY HIGHLIGHT THE SPECIFIC REQUIRED ITEM ONLY.**

S/NO	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No. etc.)
A	Evaporator unit with a cooling load of 2.39 Kw			
B	air cooled condensing unit with semi-hermetic air-cooled condensing unit to match the above evaporator			
C	Evaporator unit with a cooling load of 7.18 Kw			
D	air cooled condensing unit with semi-hermetic air-cooled condensing unit to match the above evaporator			
E	150 mm thick prefabricated TSSC sandwich panels			
F	Cold Room Door			

**Catalogue must be attached for all the items in the schedule of material above**

## STANDARD FORMS

**NOTE:**

ALL FORMS IN THIS SECTION MUST BE FILLED AS THEY SHALL BE PART OF THE  
EVALUATION CRITERIA

*STANDARD FORMS*

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2. CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS.....	340
3. SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS.....	341

### 1 KEY PERSONNEL

Qualifications and experience of key personnel proposed for administration and execution of the Contract.

POSITION	NAME	YEARS OF EXPERIENCE (GENERAL)	YEARS OF EXPERIENCE IN PROPOSED POSITION
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

I certify that the above information is correct.

.....  
Title

.....  
Signature

.....  
Date



**2 CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS**

Work performed on works of a similar nature and volume over the last five years.

PROJECT NAME	NAME OF CLIENT	TYPE OF WORK AND YEAR OF COMPLETION	VALUE OF CONTRACT (Kshs.)

I certify that the above works were successfully carried out and completed by ourselves.

.....  
Title

.....  
Signature

.....  
Date

**3 SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS**

ITEM OF EQUIPMENT	DESCRIPTION, MAKE AND AGE (Years)	CONDITION (New, good, poor) and number available	OWNED, LEASED (From whom?), or to be purchased (From whom?)



# KENYA UTALII COLLEGE

## PROPOSED CONSTRUCTION OF INDIVIDUAL TRAINING KITCHEN AT KENYA UTALII COLLEGE

W.I.P ITEM NO. D117 NB/NB/1802 JOB NO. 10489A

### TENDER SPECIFICATIONS AND BILLS OF QUANTITIES FOR

VOLUME 1 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF KITCHEN  
EQUIPMENT AND LIQUIFIED PETROLEUM GAS INSTALLATION WORKS

VOLUME 2 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF COLD  
STORAGE ROOMS & REFRIGERATION INSTALLATION WORKS

VOLUME 3 OF 3: SUPPLY, DELIVERY, TESTING AND COMMISSIONING OF WATER  
HARVESTING, WATER RETICULATION, WATER TANKS AND SOLAR WATER HEATING  
INSTALLATION WORK

## VOLUME 3 OF 3

### CLIENT

The Principal & C.E.O,  
Kenya Utalii College  
P.O. Box 31052 – 00600

### NAIROBI

### PROJECT MANAGER

Works Secretary,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### QUANTITY SURVEYOR

Chief Quantity Surveyor,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### ELECTRICAL ENGINEER

Chief Electrical Engineer  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### ARCHITECT

Chief Architect,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### MECHANICAL ENGINEER (BS)

Chief Mechanical Engineer (BS),  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

### STRUCTURAL ENGINEER

Chief Structural Engineer,  
Ministry of Lands, Public Works,  
Housing and Urban Development  
State Department for Public Works,  
P.O. Box 30743 – 00100

### NAIROBI.

MARCH 2023

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## **PART1: TENDERING PROCEDURES**

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## TENDER EVALUATION CRITERIA

**Note:** The tenderer who shall be domestic subcontractor to the Main Contractor upon award of the tender, must comply with the following conditions and instructions failure to which the tender shall be rejected.

After tender opening, the tenders will be evaluated in **2 stages**, namely:

1. Preliminary Evaluation;
2. Technical Evaluation;

### STAGE 1: PRELIMINARY EVALUATION

This stage of evaluation shall involve examination of the mandatory requirements as set out in the Tender Advertisement Notice or Letter of Invitation to Tender and any other conditions stated in the bid document.

These conditions shall include the following:

- i) Company Certificate of incorporation/registration;
- ii) Valid Tax Compliance Certificate;
- iii) Current Certificate of registration with National Construction Authority in Mechanical Engineering Works on High & Low-Level Tanks, and Solar Water Heating System Installation (NCA 3 and above);
- iv) Current and Valid NCA contractor's practicing license
- v) Duly Filled Form CR12 from the Registrar of Companies not older than 3 months.

**Note:**

*On compliance with Technical Specifications, bidders shall supply equipment /items which comply with the technical specifications set out in the bid document. In this regard, the bidder will be required to submit relevant technical brochure/catalogues with the tender document, highlighting (using a mark-pen or highlighter) the Catalogue Number/Model of the proposed items. Such brochure/catalogues should indicate comprehensive relevant data of the proposed equipment/items which should include but not limited to the following:*

- (i) Standards of manufacture;
- (ii) Performance ratings/characteristics;
- (iii) Material of manufacture;
- (iv) Electrical power ratings; and
- (v) Any other necessary requirements so as to comply with the bid technical specifications.

The bid will then be analyzed, using the information in the technical brochures, to determine compliance with key technical specifications for the works/items as indicated in the tender document. Bidders not complying with **any** of the key Technical Schedule specifications shall be **Non-Responsive** while those meeting all the key technical specifications shall be **Responsive** (evaluation committee may add more key requirements from the bid technical specifications).

The tenderer shall also fill in the Technical Schedule as Specified in the tender document for Equipment's and items indicating the Country of Origin, Model/Make/Manufacturer and catalogue numbers of the Items/ Equipment they propose to supply.

**The tenderers who do not satisfy any of the above mandatory requirements shall be considered Non-Responsive and their tenders will not be evaluated further.**

## **STAGE 2 TECHNICAL EVALUATION**

At this stage technical evaluation shall be done by comparing each tender to the technical requirements in the tender document

**TABLE 1: Assessment for Eligibility**

Item	Description	YES/NO
1.	<b>Compliance with Technical Specifications (Vol. 3 of 3 of the Tender Documents)</b> <i>(Note: Tender Evaluation Committee to carryout analysis showing how decision on this requirement has been arrived at)</i>	
2.	<b>Qualification and Experience of Key Personnel</b>	
	<b>Academic Qualification and Experience (Provide evidence in form copies of Academic Certificates)</b> <b>a) Director of the firm</b> <ul style="list-style-type: none"> <li>• Holder of at least a diploma with 10 years' experience in a relevant field</li> </ul>	
	<b>b) Project Manager</b> <ul style="list-style-type: none"> <li>• Holder of at least a degree with 5 years' experience in a relevant field</li> </ul>	
<b>c) At least 3 No artisans</b> <ul style="list-style-type: none"> <li>• Holder of at least a certificate with 5 years' experience in relevant Engineering field</li> </ul>		
3.	<b>Experience of the firm in similar services: (Water Harvesting, <i>Water Reticulation, Water Tanks and Solar Water Heating Installation Works</i>)</b> <b>a) Provide Three (3No.) projects of similar nature, complexity or magnitude) between the Period 2018 – 2022: (Provide evidence in form of copies of Award letters, Completion Certificates, LSOs etc.)</b>	
4.	<b>Adequacy of tools and equipment (Provide evidence in form Log Books, Purchase Receipts, Lease Agreements etc.)</b> The tenderer <b><i>must</i></b> show proof of ownership or leasing of the following equipment: - <b>a) Relevant Transport (at least 3No.)</b> <ul style="list-style-type: none"> <li>• Means of transport</li> </ul> <b>b) Relevant Equipment (at least 3No.)</b> <ul style="list-style-type: none"> <li>• Has relevant equipment for work being tendered</li> </ul>	
	<b>QUALIFIED YES / NO</b>	

*Non compliance with the Technical Specifications will render the Tenderer Non responsive and therefore unqualified for further evaluation:*

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**PART II - WORKS REQUIREMENTS**

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## GENERAL MECHANICAL SPECIFICATIONS

**SECTION B**

**GENERAL MECHANICAL SPECIFICATION**

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## GENERAL MECHANICAL SPECIFICATION

### 2.01 General

This section specifies the general requirement for plant, equipment and materials forming part of the Sub-contract Works and shall apply except where specifically stated elsewhere in the Specification or on the Contract Drawings.

### 2.02 Quality of Materials

All plant, equipment and materials supplied as part of the Sub-contract Works shall be new and of first-class commercial quality, shall be free from defects and imperfections and where indicated shall be of grades and classifications designated herein.

All products or materials not manufactured by the Sub-contractor shall be products of reputable manufacturers and so far as the provisions of the Specification is concerned shall be as if they had been manufactured by the Sub-contractor.

Materials and apparatus required for the complete installation as called for by the Specification and Contract Drawings shall be supplied by the Sub-contractor unless mention is made otherwise.

Materials and apparatus supplied by others for installation and connection by the Sub-contractor shall be carefully examined on receipt. Should any defects be noted, the Sub-contractor shall immediately notify the Engineer.

Defective equipment or that damaged in the course of installation or tests shall be replaced as required to the approval of the Engineer.

### 2.03 Regulations and Standards

The Sub-contract Works shall comply with the current editions of the following:

- a) The Kenya Government Regulations.
- a) The United Kingdom Institution of Electrical Engineers (IEE) Regulations for the Electrical Equipment of Buildings.
- b) The United Kingdom Chartered Institute of Building Services Engineers (CIBSE) Guides.
- c) British Standard and Codes of Practice as published by the British Standards Institution (BSI)
- e) The Local Council By-laws.
- f) The Electricity Supply Authority By-laws.
- g) Local Authority By-laws.
- h) The Kenya Building Code Regulations.
- i) The Kenya Bureau of Standards

#### **2.04 Electrical Requirements**

Plant and equipment supplied under this Sub-contract shall be complete with all necessary motor starters, control boards, and other control apparatus. Where control panels incorporating several starters are supplied, they shall be complete with a main isolator.

The supply power up to and including local isolators shall be provided and installed by the Electrical Sub-contractor. All other wiring and connections to equipment shall form part of this Sub-contract and be the responsibility of the Sub-contractor.

The Sub-contractor shall supply three copies of all schematic, cabling and wiring diagrams for the Engineer's approval.

The starting current of all electric motors and equipment shall not exceed the maximum permissible starting currents described in the Kenya Power and Lighting Company (KPLC) By-laws.

All electrical plant and equipment supplied by the Sub-contractor shall be rated for the supply voltage and frequency obtained in Kenya, that is 415 Volts, 50Hz, 3-Phase or 240Volts, 50Hz, 1-phase.

Any equipment that is not rated for the above voltages and frequencies shall be rejected by the Engineer.

#### **2.05 Transport and Storage**

All plant and equipment shall, during transportation be suitably packed, crated and protected to minimize the possibility of damage and to prevent corrosion or other deterioration.

On arrival at site all plant and equipment shall be examined and any damage to parts and protective priming coats made good before storage or installation.

Adequate measures shall be taken by the Sub-contractor to ensure that plant and equipment do not suffer any deterioration during storage.

Prior to installation all piping and equipment shall be thoroughly cleaned.

If, in the opinion of the Engineer any equipment has deteriorated or been damaged to such an extent that it is not suitable for installation, the Sub-contractor shall replace this equipment at his own cost.

#### **2.06 Site Supervision**

The Sub-contractor shall ensure that there is an English-speaking supervisor on the site at all times during normal working hours.

#### **2.07 Installation**

Installation of all special plant and equipment shall be carried out by the Sub-contractor under adequate supervision from skilled staff provided by the plant and equipment manufacturer or his appointed agent in accordance with the best standards

of modern practice and to the relevant regulations and standards described under Clause 2.03 of this Section.

## 2.08 **Testing**

### 2.08.1 General

The Sub-contractor's attention is drawn to Part 'C' Clause 1.38 of the "Preliminaries and General Conditions".

### 2.08.2 Material Tests

All material for plant and equipment to be installed under this Sub-contract shall be tested, unless otherwise directed, in accordance with the relevant B.S Specification concerned.

For materials where no B.S. Specification exists, tests are to be made in accordance with the best modern commercial methods to the approval of the Engineer, having regard to the particular type of the materials concerned.

The Sub-contractor shall prepare specimens and performance tests and analyses to demonstrate conformance of the various materials with the applicable standards.

If stock material, which has not been specially manufactured for the plant and equipment specified is used, then the Sub-contractor shall submit satisfactory evidence to the Engineer that such materials conform to the requirements stated herein in which case tests of material may be partially or completely waived.

Certified mill test reports of plates, piping and other materials shall be deemed acceptable.

### 2.08.3 Manufactured Plant and Equipment – Work Tests

The rights of the Engineer relating to the inspection, examination and testing of plant and equipment during manufacture shall be applicable to the Insurance Companies or Inspection Authorities so nominated by the Engineer.

The Sub-contractor shall give two weeks' notice to the Engineer of the manufacturer's intention to carry out such tests and inspections.

The Engineer or his representative shall be entitled to witness such tests and inspections. The cost of such tests and inspections shall be borne by the Sub-contractor.

Six copies of all test and inspection certificates and performance graphs shall be submitted to the Engineer for his approval as soon as possible after the completion of such tests and inspections.

Plant and equipment which is shipped before the relevant test certificate has been approved by the Engineer shall be shipped at the Sub-contractor's own risk and should

the test and inspection certificates not be approved; new tests may be ordered by the Engineer at the Sub-contractor's expense.

#### **2.08.4 Pressure Testing**

All pipe work installations shall be pressure tested in accordance with the requirements of the various sections of this Specification. The installations may be tested in sections to suit the progress of the works but all tests must be carried out before the work is buried or concealed behind building finishes. All tests must be witnessed by the Engineer or his representative and the Sub-contractor shall give 48 hours' notice to the Engineer of his intention to carry out such tests.

Any pipe work that is buried or concealed before witnessed pressure tests have been carried out shall be exposed at the expense of the Sub-contractor and the specified tests shall then be applied.

The Sub-contractor shall prepare test certificates for signature by the Engineer and shall keep a progressive and up-to-date record of the section of the work that has been tested.

#### **2.08.5 Shop drawings**

Before manufacture or Fabrication is commenced the contractor shall submit Two copies of detailed drawings of all water tanks, fire hose reel pump, water booster pump and any other equipment including their components showing all pertinent information including sizes, capacities, construction details, etc., as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

#### **2.09 Colour Coding**

Unless stated otherwise in the Particular Specification all pipe work shall be color coded in accordance with the latest edition of B.S 1710 and to the approval of the Engineer or Architect.

#### **2.10 Welding**

##### **2.10.1 Preparation**

Joints to be made by welding shall be accurately cut to size with edges sheared, flame cut or machined to suit the required type of joint. The prepared surface shall be free from all visible defects such as lamination, surface imperfection due to shearing or flame cutting operation, etc., and shall be free from rust scale, grease and other foreign matter.

##### **2.10.2 Method**

All welding shall be carried out by the electric arc processing using covered electrodes in accordance with B.S. 639.

Gas welding may be employed in certain circumstances provided that prior approval is obtained from the Engineer.

#### 2.10.3 Welding Code and Construction

All welded joints shall be carried out in accordance with the following Specifications:

a) Pipe Welding

All pipe welds shall be carried out in accordance with the requirements of B.S.806.

b) General Welding

All welding of mild steel components other than pipework shall comply with the general requirements of B.S. 1856.

#### 2.10.4 Welders Qualifications

Any welder employed on this Sub-contractor shall have passed the trade tests as laid down by the Government of Kenya.

The Engineer may require to see the appropriate to see the appropriate certificate obtained by any welder and should it be proved that the welder does not have the necessary qualifications the Engineer may instruct the Sub- contractor to replace him by a qualified welder.

## PARTICULAR PLUMBING AND DRAINAGE SPECIFICATIONS

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## GENERAL

### **SITE LOCATION**

The site of the proposed works is at **The Utalii College – Nairobi County**

### **SCOPE OF WORKS**

The works to be carried out under this sub-contract comprise Supply, installation, testing and commissioning of the following: -

- a. **Supply, Delivery, Testing and Commissioning of Water Harvesting, Water Reticulation, Water Tanks and Solar Water Heating Installation Works**

### **BROCHURES FOR DEVICES**

For consideration and qualification tenderers shall, at their own cost, provide colored manufacturer's brochures detailing technical literature and specifications where applicable. This section specifies the general requirements for plant, equipment and materials forming part of the plumbing and drainage installations.

#### **3.2 MATERIALS AND STANDARDS**

##### **3.2.1 Pipework and Fittings**

Pipework materials are to be used as follows:

- i. **Galvanized Steel Pipework**

Galvanized steel pipe work up to 65mm nominal bore shall be manufactured in accordance with B.S. 1387 Medium Grade, with tapered pipe threads in accordance with B.S. 21. All fittings shall be malleable iron and manufactured in accordance with B.S. 143.

Pipe joints shall be screwed and socketed and sufficient coupling unions shall be allowed so that fittings can be disconnected without cutting the pipe. Running nipples and long screws shall not be permitted unless exceptionally approved by the Engineer.

Galvanized steel pipe work, 80mm nominal bore up to 150mm nominal bore shall be manufactured to comply in all respects with the specification for 65mm pipe, except that screwed and bolted flanges shall replace unions and couplings for the jointing of pipes to valves and other items of plant. All flanges shall comply with the requirements of B.S. 10 to the relevant classifications contained hereinafter under Section 'C' of the Specification.

Galvanizing shall be carried out in accordance with the requirements of B.S. 1387 and B.S. 143 respectively.

- ii. **Copper Tubing**

All copper tubing shall be manufactured in accordance with B.S. 2871 from C.160

'Phosphorous De-oxidized Non-Arsenical Copper' in accordance with B.S. 1172.

Pipe joints shall be made with soldered capillary fittings and connections to equipment shall be with compression fittings manufactured in accordance with B.S. 864.

iii. **CPVC piping**

PVC (polyvinyl chloride) that has been chlorinated via a free radical chlorination reaction. CPVC is produced by adding chlorine to PVC in a water slurry or fluidized bed chlorination process. The chlorination reaction is initiated by ultraviolet light. The chlorinated PVC is compounded with ingredients necessary for the desired properties for further processing. The chlorine added to PVC gives CPVC higher temperature performance and improved fire and corrosion resistance.

Should conform to ASTM D2846 standard and ASTM F441 Standard for chlorinated poly vinyl chloride pipes.

Short copper connection tubes between galvanized pipe work and sanitary fittings shall not be used because of the risk of galvanic action.

If, as may occur in certain circumstances, it is not possible to make the connection in any way than the use of copper tubing, then a brass straight connector shall be positioned between the galvanized pipe and the copper tube in order to prevent direct contact.

b) **P.V.C. (Hard) Pressure Pipes and Fittings**

All P.V.C. pipes and fittings shall be manufactured in accordance with B.S. 3505: 1968.

**Jointing**

The method of jointing to be employed shall be that of solvent welding, using the pipe and manufacturer's approved cement. Seal ring joint shall be introduced where it is necessary to accommodate thermal expansion.

**Testing**

Pipelines shall be tested in sections under an internal water pressure normally one and a half times the maximum allowable working pressure of the class of pipe used. Testing shall be carried out as soon as practical after laying and when the pipeline is adequately anchored. Precautions shall be taken to eliminate all air from the test section and to fill the pipe slowly to avoid risk of damage due to surge.

c) **A.B.S. Waste System**

Where indicated on the Drawings and Schedules, the Sub-contractor shall supply and fix A.B.S. waste pipes and fittings.

The pipes, traps and fittings shall be in accordance with the relevant British Standards, including B.S. 3943, and fixed generally in accordance with manufacturer's instructions and B.S. 5572: 1978.

Jointing of pipes shall be carried out by means of solvent welding, the manufacturer's instructions and B.S. 5572: 1978.

Jointing of pipes shall be carried out by means of solvent welding. The manufacturer's

recommended method of joint preparation and fixing shall be followed.  
Standard brackets, as supplied for use with this system, shall be used wherever possible. Where the building structure renders this impracticable the Sub-contractor shall provide purpose made supports, centers of which shall not exceed one meter.  
Expansion joints shall be provided as indicated.  
Supporting brackets and pipe clips shall be fixed on each side of these joints.

e) **PVC Soil System**

The Sub-contractor shall supply and fix PVC soil pipes and fittings as indicated on the Drawings and Schedules.

Pipes and fittings shall be in accordance with relevant British Standards, including B.S. 4514 and fixed to the manufacturer's instructions and B.S. 5572.

The soil system shall incorporate synthetic rubber gaskets as provided by the manufacturer whose fixing instructions shall be strictly adhere to.

Connections to WC pans shall be effected by the use of a WC connector, gasket and cover, fixed to suit pan outlet.

Suitable supporting brackets and pipe clips shall be provided at maximum of one meter centers.

The Sub-contractor shall be responsible for the joint into the Gully Trap on Drain as indicated on the Drawings.

3.2.2 **Valves**

a) **Draw-off Taps and Stop Valves (Up to 50mm Nominal Bore)**

Draw-off taps and valves up to 50mm nominal bore, unless otherwise stated or specified for attachment or connection to sanitary fitment shall be manufactured in accordance with the requirements of B.S.1010.

b) **Gate Valves**

All gate valves 80mm nominal bore and above, other than those required for fitting to buried water mains shall be of cast iron construction, in accordance with the requirements of B.S. 3464. All gate valves required for fitting to buried water mains shall be of cast iron construction in accordance with the requirements of B.S.1218.

All gate valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S. 1952.

The pressure classification of all valves shall depend upon the pressure conditions pertaining to the site of works.

c) **Globe Valves**

All globe valves up to and including 65mm nominal bore shall be of bronze construction in accordance with the requirements of B.S.3061.

The pressure classification of all globe valves shall depend upon the pressure conditions pertaining to the site of works.

3.2.3 **Waste Fitment Traps**

a) Standard and Deep Seal P & S Traps

Where standard or deep seal traps are specified, they shall be manufactured in suitable non-ferrous materials in accordance with the full requirements of B.S. 1184.

In certain circumstances, cast iron traps may be required for cast iron baths and in these instances bath traps shall be provided which are manufactured in accordance with the full requirements of B.S.1291.

b) Anti-Syphon Traps

Where anti-syphon traps are specified, these shall be similar or equal to the range of traps manufactured by Greenwood and Hughes Limited, Deacon Works Littlehampton, Sussex, England.

The trade name for traps manufactured by this company is 'Grevak'.

### 3.2.4 Pipe Supports

a) General

This sub-clause deals with pipe supports securing pipes to the structure of buildings for above ground application.

The variety and type of support shall be kept to a minimum and their design shall be such as to facilitate quick and secure fixings to metal, concrete, masonry or wood.

Consideration shall be given, when designing supports, to the maintenance of desired pipe falls and the restraining of pipe movements to a longitudinal axial direction only.

The Sub-contractor shall supply and install all steelwork forming part of the pipe support assemblies and shall be responsible for making good damage to builder's work associated with the pipe support installation.

The Sub-contractor shall submit all his proposals for pipe supports to the Engineer for approval before any erection works commence.

b) Steel and Copper Pipes and Tubes

Pipe runs shall be secured by clips connected to pipe angles, wall brackets, or trapeze type supports. 'U' bolts shall not be used as a substitute for pipe clips without the prior approval of the Engineer.

An approximate guide to the maximum permissible supports spacing in meters for steel and copper pipe and tube is given in the following table for horizontal runs.

Size Nominal Bores	Copper Tube to B.S. 659	Steel Tube to B.S. 1387
15mm	1.25m	2.0m
20mm	2.0m	2.5m
25mm	2.0m	2.5m
32mm	2.5m	3.0m
40mm	2.5m	3.0m
50mm	2.5m	3.0m
65mm	3.0m	3.5m
80mm	3.0m	3.5m
100mm	3.0m	4.0m
125mm	3.0m	4.5m
150mm	3.5m	4.5m

The support spacing for vertical runs shall not exceed one and a half times the distances given for horizontal runs.

### **C) Expansion Joints and Anchors**

Where practicable, cold pipework systems shall be arranged with sufficient bends and changes of direction to absorb pipe expansion providing that the pipe stresses are contained within the working limits prescribed in the relevant B.S. specification.

Where piping anchors are supplied, they shall be fixed to the main structure only. Details of all anchor design proposals shall be submitted to the Engineer for approval before erection commences.

The Sub-contractor when arranging his piping shall ensure that no expansion movements are transmitted directly to connections and flanges on pumps or other items of plant.

The Sub-contractor shall supply flexible joints to prevent vibrations and other movements being transmitted from pumps to piping systems or vice versa.

#### **3.2.5 Sanitary Appliances**

All sanitary appliances supplied and installed as part of the Sub-contract works shall comply with the general requirements of B.S. Code of Practice 305 and the particular requirements of the latest B.S. Specifications. They shall be as described in the bill of quantities.

#### **3.2.6 Pipe Sleeves**

Main runs of pipework are to be fitted with sleeves where they pass through walls and floors. Generally, the sleeves shall be of P.V.C. except where they pass through

the structure, where they shall be mild steel. The sleeves shall have 6mm – 12mm clearance all around the pipe or for insulated pipework all around the installation. The sleeve will then be packed with slag wool or similar.

### 3.3 **INSTALLATION**

#### 3.3.1 **General**

Installation of all pipework, valves, fittings and equipment shall be carried out under adequate supervision from skilled staff to the relevant codes and standards as specified herein. The Sub-contractor shall be responsible to the Main Contractor for ensuring that all builders work associated with his piping installation is carried out in a satisfactory manner to the approval of the Engineer.

#### 3.3.2 **Above Ground Installation**

##### a) Water Services

Before any joint is made, the pipes shall be hung in their supports and adjusted to ensure that the joining faces are parallel and any falls which shall be required are achieved without springing the pipe.

Where falls are not shown on the Contract Drawings or stated elsewhere in the Specification, pipework shall be installed parallel to the lines of the buildings and as close to the walls, ceilings, columns, etc., as is practicable.

All water systems shall be provided with sufficient drain points and automatic air vents to enable them to function correctly.

Valves and other user equipment shall be installed with adequate access for operation and maintenance.

Where valves and other operational equipment are unavoidably installed beyond normal reach or in such

Position as to be difficult to reach from a small step ladder, extension spindles with floor or wall pedestals shall be provided.

Screwed piping shall be installed with sufficient number of unions to facilitate easy removal of valves and fittings, and to enable alterations of pipework to be carried out without the need to cut the pipe.

Full allowances shall be made for the expansion and contraction of pipework, precautions being taken to ensure that any force produced by the pipe movements are not transmitted to valves, equipment or plant.

All screwed joints to piping and fittings shall be made with P.T.F.E. tape.

The test pressure shall be maintained by the pump for about one hour and if there is any leakage, it shall be measured by the quantity of water pumped into the main in that time. A general leakage of 4.5 litres per 25mm of diameter, per 1.6 kilometres per 24 hours per 30 metres head, may be considered reasonable but any visible individual leak shall be repaired.

#### **Sanitary Services**

Soil, waste and vent pipe system shall be installed in accordance with the best standard of modern practice as described in B.S. 5572 to the approval of the Engineer.

The Sub-contractor shall be responsible for ensuring that all ground waste fittings are discharged to a gully trap before passing to the sewer via a manhole.

The Sub-contractor shall provide all necessary rodding and inspection facilities within the draining system in positions where easy accessibility is available.

Where a branch requires rodding facilities in a position to which normal access is unobtainable, then that branch shall be extended so as to provide a suitable purpose made rodding eye in the nearest adjacent wall or floor to which easy access is available.

The vent stacks shall terminate above roof level and where stack passes through roof, a weather skirt shall be provided. The Sub-contractor shall be responsible for sealing the roof after installation of the stacks.

The open end of each stack shall be fitted with a plastic coated or galvanized steel wire guard.

Access for rodding and testing shall be provided at the foot of each stack.

**c) Sanitary Appliances**

All sanitary appliances associated with the Sub-contract works shall be installed in accordance with the best standard of modern practice as described in C.P. 305 to the approval of the Engineer.

**1.1. TESTING AND INSPECTION**

**3.4.1 Site Tests – Pipework Systems**

**a) Above Ground Internal Water Services Installation**

All water service pipe system installed above ground shall be tested hydraulically for a period of ten hours to not less than one and half times to design working pressure.

If preferred, the Sub-contractor may test the pipelines in sections. Any such section found to be satisfactory need not be the subject of a further test when system has been completed, unless specifically requested by the Engineer.

During the test, each branch and joint shall be examined carefully for leaks and any defects revealed shall be made good by the Sub-contractor and the section re-tested.

The Sub-contractor shall take all necessary precautions to prevent damage occurring to special valves and fittings during the tests. Any item damaged shall be repaired or replaced at the Sub-contractor's expenses.

**b) Above Ground Soil Waste and Ventilation System**

All soil, waste and ventilating pipe system forming part of the above ground installation, shall be given appropriate test procedures as described in B.S. 5572, 1972.

Smoke tests on above ground soil, waste and ventilating pipe system shall not be permitted.

Pressure tests shall be carried out before any work which is to be concealed is finally enclosed.

In all respects, tests shall comply with the requirements of B.S. 5572.

**3.4.2 Site Test – Performance**

Following satisfactory pressure test on the pipework system operational tests shall be carried out in accordance with the relevant B. S. Code of practice on the systems as a whole to establish that special valves, gauges, control, fittings, equipment and plant are functioning correctly to the satisfaction of the Engineer.

All hot water pipework shall be installed with pre-formed fibre glass lagging to a thickness of 25mm where the pipe runs above a false ceiling or in areas where the ambient temperature is higher than normal with the result that pipe "sweating", due to condensation will cause nuisance.

All lagged pipes which run in a visible position after erection shall be given a canvas cover and prepared for painting as follows:

- Apply a coating of suitable filler until the canvas weave disappears and allow to dry.
- Apply two coats of an approved paint and finish in suitable gloss enamel to colors approved by the Engineer.

All lagging for cold and hot water pipes erected in crawlways, ducts and above false ceiling which after erection are not visible from the corridors of rooms, shall be covered with a reinforced aluminium foil finish banded in colours to be approved by the Engineer.

In all respects, unless otherwise stated, the hot and cold-water installation shall be carried out in accordance with the best standard of modern practice and described in C.P.342 and C.P.310 respectively to the approval of the Engineer.

The test pressure shall be applied by means of a manually operated test pump or, in the case of long main or mains of large diameter, by a power-driven test pump which shall not be left unattended. In either case precautions shall be taken to ensure that the required pressure is not exceeded.

Pressure gauges should be recalibrated before the tests.

The Sub-contractor shall be deemed to have included in his price for all test pumps, and other equipment required under this specification.

The test pressure shall be one and a half times the maximum working pressure except where a pipe is manufactured from a material for which the relevant B.S. specification designates a maximum test pressure.

### **3.5: STERILISATION OF COLD-WATER SYSTEM**

All water distribution system shall be thoroughly sterilized and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilization procedures shall be carried out by the Sub-contractor in accordance with the requirements of B.S. Code of Practice 301, Clause 409 and to the approval of the Engineer.



## **PARTICULAR SPECIFICATION FOR THE DESIGN SUPPLY AND ERECTION OF WATER STORAGE TANKS AND BOOSTER PUMPS**

### **6.10 DESCRIPTION OF SITE**

The contractor is deemed to have visited the site and if unable to locate it or its details apply to the Principal Secretary, State Department of Public Works, Ministry of Transport, Infrastructure, Public Works, Housing and Urban Development, Ngong Road, Nairobi.

No claims will be allowed for the traveling or other expenses, which may be incurred by the sub-contractor's works. However, the sub-contractor may allow that he may have to, during contract time, do part of the works and therefore three visits may be catered for.

### **6.11 SCOPE OF CONTRACT**

The work to be carried out under, this sub-contract comprises the designs, manufacture, supply, delivery, erection, together with testing and commissioning of Water tanks as here-in specified and shown on the contract drawings.

All work shall be performed in straightforward manner by competent workmen under skilled supervision to the entire satisfaction of the project manager.

### **6.12 COMPLIANCE WITH REGULATIONS.**

The sub-contractor shall comply in all respects to the provisional and regulations of the By-laws of the Local Authority, Kenya Building Code, as 449 Part B5 1964. BS 4211, CP2 chapters V part 1 and 2 MOPW Structural steel work specification (1973) code of practice for design and construction of buildings and structures in Relation to Earthquake (1972) wherever applicable to the contract works.

The Ministry of Roads and Public Works are responsible for the design of the foundation subject to giving approval of the sub-contractor's design of the tower and due allowance should be given for this work to be carried out in sub-contractor programmed of works. The main contractor is responsible for the construction of the foundation in accordance to approved designs.

### **6.13 STRUCTURAL DRAWINGS AND CALCULATIONS**

2No copies of general arrangement and fabrication drawings properly dimensioned and detailed showing the whole tower and its accessories together with 2No copies of the structural calculations complying with all the relevant BS and CP are to be submitted for approval prior to the commencement of the work.

The calculation is to indicate the maximum downward and upward loads on the foundations for the Ministry of Roads and Public Works Structural Department to design the foundation.

### **6.20 STEEL WATER TANKS**

- a) The tanks shall be pressed steel sectional tanks complying in all respects to BS 1564 Types 1 or 2. The jointing materials shall be non-toxic and non-soluble to water and

the tank cover shall be joined throughout the tank top ensuring that the joint is both water proof and dust proof.

- b) Cover framing and members shall be designed to withstand super-imposed loading complying with the requirement complying with the requirements of CP2 Chapter V part 1 and BS 149 Part 2.
- c) All internal stays are to be provided as required by the tank manufacture and the Sub-contractor shall be responsible for ensuring the stays are adequate in number and position and properly tightened. These are to be manufactured from steel to BS 4360, Grade 43 A.
- d) All Bolts, nuts and washers used in the construction should comply with BS 4190. The contractor to allow in his pricing, for a complete set of spanners, spare bolts and Washers for maintenance purposes.
- e) Access manhole with hinged cover together with a filtered vent outlet shall be installed.
- f) The Sub-contractor is to notify the Project Manager of the type of panel he is proposing to use and the manufacturer who is to be approved.
- g) The inflow and outflow connection shall be as shown on the drawing.
- h) The outflow supply pipe shall be at least 50mm above the tank bottom while the inflow pipe shall be 200mm below the tank rim. The overflow pipe shall be about 1000mm long, away from the tank. The drain pipe shall be at the lowest part of the tank.

## **6.21 LOW LEVEL TANK**

**Tank Capacity: 131,437 Litres (28,912 Gal) Cold Pressed Steel**

### **Preferred dimensions:**

6.1 metres length

6.1 metres width

**3.66** metres height

**Plate thickness- 6mm**

Tank to be supplied completed with: -

- a) 50 mm diameter inflow connection
- b) 150 mm diameter outflow connections
- c) 150 mm diameter outflow connections
- d) 100 mm diameter washout pipe
- e) 100 mm diameter overflow pipe
- f) Level Electrode pair fully wired.
- g) 1No. water level indicator
- h) 2No. cover and manhole
- i) 1No. internal ladder

j) 1No. external ladder

The Structural Department will give details of foundations and R.C walls for the low level tank.

The base is to be cast by the Main Contractor unless otherwise instructed by the Project Manager.

### **6.221 HIGH LEVEL TANK**

Tank Capacity: **84,401 Litres (18,866 Gal) Cold Pressed Steel**

Preferred Dimensions

6 metres length

5 metres width

3 metres height

plate thickness: **6mm**

Height from ground level to the underside of the tank will be **18 metres.**

Tank to be supplied with:

1. 50- mm diameter inflow connection
2. 150- mm diameter outflow connection
3. 100- mm diameter washout pipe
4. 100- mm diameter overflow pipe
5. 1No. level regulator
6. 2No. Water level indicator
7. 1No. steel cover and manhole
8. 1No. internal ladder
9. 1No. external ladder to ground level with cage
10. 1No. perimeter walkway and handrail

### **6.23 Pipework**

The sub-contractor shall supply and fix all pipe work and fitting up to ground level as detailed on the drawing or in this specification. All pipe work shall be adequately supported and secured to the tank structure. The washout pipe will have a bend leading to a reasonable place where the drainage will not interfere with the structure.

The inflow outflow and washout pipes shall be fixed against the tower structure so as to facilitate fixing and good support.

The following pipework shall be used depending on the condition: -

- (a) Medium Grade Galvanized steel and must conform with BS 1987 1967 class 'B'
- (b) PP-R pipe work to be manufactured in accordance with the current European standards i.e DIN 8077 and DIN 8078 for PN 20 tubing, with metallic joints to DIN 8076, joints and fittings for tubing to DIN 16962.
- (c) HDPE PN 16

The sub-contractor shall provide high pressure ball valve capable of coping with the maximum area's local water supply pressure.

#### **6.24 Access Ladder**

Internal ladder shall be supplied for the tank and shall be fixed adjacent at the manhole but easily removable for cleaning the inside of the tank (i.e hooked connection).

The tanks shall be provided with an external ladder leading to the manhole and complying to BS 4211. The stringers shall be parallel, minimum width 15 inches apart and of flat bar of minimum dimensions 1½" by 2/8 inches. The rugs shall be of round bars not less than ¾ inches diameter and the distance between centers shall be 9 – 10 inches. The external ladder shall be fitted with safety hoofs made to conform with BS 4211.

#### **6.25 Platform**

The tower is to have a periphery walkway at tank level having minimum width of 600mm clear between the edge of the tank and the inside of the protective safety handrail. The platform is to be provided with a steel chequered plate floor of similar approved and to be completely sealed so as not to allow anybody or items such as bolts and spanners to fall on persons on the ground.

All loading for the design of such platform are to be provided in the structural calculations.

#### **6.26 Painting**

The tank shall be painted inside with one coat of bituminous non-toxic paint (or any other equivalent and approved) and on the outside with coat of primer before erection. After erection, the tank inside shall be painted with two coats of aluminium paint. The other structures shall be cleaned and painted one coat lead oxide or red lead before erection and two coats of aluminium paints after erection.

All the painting shall be approved by the Engineer.

#### **6.27 Erection**

The sub-contractor shall erect the tank complete, on foundation prepared and designed by others and with all necessary pipes, ladders, tower etc. as listed herein and shown on the drawing.

The main contractor shall prepare the foundation to the sub-contractor's and Public Works Structural Department's details. The main contractor shall also concrete or grout in the HD bolts to the sub-contractor's requirements.

#### **6.30 POLYETHYLENE WATER STORAGE TANKS**

- (a) The tanks are made of graded polyethylene that has been effectively stabilized against the harmful effects of sunlight. This being achieved by incorporating more than 2% carbon black into the melt.
- (b) The tank to manufactured as per the relevnt Kenyan Starndard.

#### **6.40 Booster pumps**

2 No. electrically operated pumps capable of pumping 15 Litres per second (110 gallons per minute) of water against 20 metres static head shall be installed. The pumps to be as 'Grundfos CR 15-3' or equal and approved.

Each pump shall be directly driven by a three phase motor; the pump motor being mounted on a common base.

Pump casing shall be manufactured from good quality cast iron and impellers, shafts and other material in contact with water shall be of corrosion resistant metal. The pumps shall be suitable for pumping filtered water treated for human consumption.

The motor shall be completely protected against possible damage due to entry of water, dust etc. It shall be fitted with glands for the entry of PVC armoured cables with overall PVC sheath. The completed cable connection to the motor terminal box shall be proof against ingress of water or dust.

The pump shall be mounted on concrete plinth which shall be constructed by the main contractor in accordance with specifications from the sub-contractor.

Holes for holding down bolts shall be left in concrete and after the concrete has cured the pumps shall be placed in position and bolts grounded into position. A grout shall be floated under pump motor base to ensure an even surface for the pump to rest upon.

#### **6.50 Electrical works**

It shall be the responsibility of the sub-contractor to provide all electrical wiring between all items of his sub-contract works to ensure the correct functioning of his equipment. The sub-contractors electric works shall start from nearest electrical isolator.

#### **6.60 Control panel**

The sub-contractor shall provide an electric control panel and shall be responsible for its fixing and satisfactory operation. The panel shall be fabricated from minimum thickness. 1.2mm steel sheet and finished grey stoved enamel.

The panel shall be wall mounted with a removable hinged front access panel. Motor control switch gear shall be of approved type. The panel shall have an integral isolator.

Pump changeover shall be automatic alternating after each duty cycle. A green 'running' red 'trip' lamp shall be provided for each pump. The control system (float switches etc.) shall be energized when a pump is started.

The motor system shall be wired so that they operate only automatically as called for by the switches except that starter push button shall be connected so as to enable the pumps to be started and run and cease to run when the push button is allowed to its normal position.

An emergency stop button shall be located adjacent to each pump.

The level regulator shall be wired and set in such a manner that the duty pumps shall be called to start when the high level tank is full.

The electrode in the low level tank shall override instructions from high level regulator and stop when the water is approximately 600mm high.

Where a three-phase motor is used, a single phasing protector shall be provided if the motor does not have one.

A phase failure relay shall be installed in 3 phase – operated pumps.

#### **6.70 Testing**

Testing shall be done by filling the tank with water after erection. The water will be from the local supply and the main contractor shall apply from the Authority for connection.

In cases where water is already on site and being used by the client, the contractor will make necessary arrangements and reimburse the client amount equivalent to volume of water used.

Testing shall be witnessed by the Project Manager or his representative.

#### **6.80 Guarantee**

The sub-contractor shall guarantee the tanks against leaks, and the tower for a period of (12) months from the testing date. Any damage incurred due to bad workmanship shall be made good by the contractor.

#### **6.90 SCHEDULES**

##### **6.91 Introduction**

The tenderer shall complete all schedules. The schedules shall be read in conjunction with the specification. The GRAND TOTAL of prices in the main summary of prices schedule shall be deemed to have been included in another part of section.

##### **Note: -**

The list of recommended initial spare parts prices are to be submitted separately on tenderer's own paper. The spares prices are not to be included in the GRAND TOTAL or prices as the spares are an extra item only to be purchased if and when convenient to the Government of Kenya.

All prices shall be in Kenya shillings and shall be inclusive of all taxes and duties current at the time of tendering.

## GENERAL SOLAR WATER HEATING SPECIFICATIONS

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## SOLAR HEATING SYSTEM

### GENERAL SOLAR WATER HEATING SPECIFICATIONS

#### 1.1.0 QUALITY OF MATERIALS AND WORKMANSHIP

##### 1.1.1 General

All materials, equipment and accessories are to be new and in accordance with the requirements of the current rules and regulations where such exist, or in their absence with the relevant British/European standard.

Uniformity of type and manufacture of equipment or accessories is to be preserved as far as practicable throughout the whole work.

If in this specification, the practice is adopted of specifying a particular item as “similar” to that of a particular firm’s product, it is to be clearly understood that this is to indicate the type and quality of the equipment required. No attempt is being made to give preference to the equipment supplied by a firm whose name or products is being quoted.

Where particular manufacturers are specified herein, no alternatives makes will be considered, and the Engineer shall be allowed to reject any other makes.

The tenderer will be entirely responsible for all the materials, apparatus, equipment, etc in connection to his work, and shall take special care to protect all parts of finished work from damage until handed over to the Employer.

The work shall be carried out by competent workmen under skilled supervision. The Engineer shall have authority to have any of the work taken down or changed, which is executed in any unsatisfactory manner.

The works shall be carried out strictly in accordance with:

- a) British Standard B.S. 5918, Domestic hot water supply and solar water heating System
- b) “British code of Practice” C.P. 310: Water Supply
- c) British Standard code of Practice” C.P. 342: Centralized Hot water supply
- d) All other relevant British standard Specifications and Codes of Practice (herein after referred to as B.S and C.P respectively.)
- e) By-Laws of the Local Authority
- f) The “Specification” and the “Particular Specification”
- g) The tender/working drawings
- h) The engineer’s Instructions.

The drawings and specifications are to be read as a whole and are to explain each other. Work shown on the drawings and not described in the specifications or vice versa shall be duly executed under the contract.

##### 1.1.2 Solar Panel – Construction

Solar panels shall be flat plate solar collectors. The structure of the collector and



its components must withstand local extreme environmental conditions including winds, storm etc.

#### **Solar Panel – External Construction**

- a) Glazing material shall be transparent and non-reflective to solar radiation. Total surface heating area of the solar panel shall be as specified elsewhere. The top of the panel shall be a single transparent glazed glass sheet. The glazed glass shall be as low-iron tempered glass or equivalent. The thickness of the glazed glass shall be 3 mm.

The glazing and the holding construction shall have thermal characteristics to withstand extreme local temperatures and also thermal shock due to storms etc. Gasket for the glazing shall be EPDM gasket or similar.

During accidental breakage of the glazing, the glazed glass sheet shall be replaceable at site.

- b) Solar panel collector casement shall be rigid, structurally sound and corrosion resistant. Sides and bottom of panel shall be 24 gauge galvanized mild steel sheet or 2mm aluminium sheet.

Galvanized mild steel sheet shall be etched primed and applied with two coats of approved oil-base paint.

4 mm to 6 mm breathing hole shall be provided on the galvanized mild steel casing for the removal of moisture content formed due to condensation within the panel.

- c) The panel/glass construction shall be weatherproof. Pipework joints and collector interconnection shall be water proof. Approved silicone gasket or similar to be used at the panel connections.

#### **Solar Panel - Internal Construction**

- a) **Absorber** - Shall be located directly beneath the glass sheet and fully cover the internal area of the panel.

Absorber shall be made of copper sheet or aluminium with a selective surface chemically treated similar to the black chrome finish or similar. The selective surface shall achieve 95% absorptivity of solar radiation and 15 to 20% emissivity of infra-red radiation. The absorber and the selective surface shall not be affected during life span of the absorber.

- b) **Heat Exchanger**

Copper tubes and fittings shall be utilized for internal panel pipework and in accordance with B.S. 2871 or similar. All joints and connections between the riser and header tubings shall be leak proof and stand to hydraulic pressure tests.

The collector to be pressure tested to withstand a pressure of 8 kg/cm<sup>2</sup>.

whichever is greater. In general, collectors shall be pressure tested at 15 times the rated operating gauge pressure of 8kg/cm<sup>2</sup>, which ever is greater.

A certificate of pressure testing to be issued when required and requested by the Engineers.

c) **Insulation**

The underside of the absorber, inclusive headers and the outer casing internal sides shall be insulated with 50 mm fibre glass insulation, minimum density 64 kg/m<sup>3</sup>. The insulation shall be non-combustible and shall withstand maximum continuous operating temperature of 200°C (and minimum operating temperature of -50°C).

**1.1.2.3 Hot Water Solar Cylinder**

a) The hot water solar cylinder shall have a nominal capacity as specified on the contract drawing and particular specification to the designed highest water level. The hot water cylinder shall have a separate feed tank attached to it.

b) The cylinders and the feed tanks shall comply with B.S. 417, 699, 2777, 4214, 1565, 1566 and 3198. Refer also Water Storage tanks as specified elsewhere. The Cylinder and tanks shall be supplied complete with screwed BSPF parallel thread flanged connections for flow, return, vent, overflow and drain pipes.

c) Cylinder shall be provided with a magnesium electrode as corrosion protection, weight: minimum 1.5 kg. and have an inspection cover to facilitate renewal of the electrode.

d) The cylinder shall be galvanized, after manufacture in accordance with the requirements of BS. 729 Part 1 and pressure tested in accordance with the above B.S.

A certificate of pressure testing to be issued when required and requested by the Engineers/Project Manager's Representative. Refer also to "Protection of Metal surface" as specified elsewhere in the specification.

e) **Insulation**

The cylinder shall be insulated on all the sides with 100 mm fibreglass, or 100 mm thick foam injected polyurethane. At the inspection cover the insulation shall be easily removable.

(f) **Cladding**

The insulation shall be fully laded with 24 gauge galvanized M.S. Sheet.

**1.1.2.4 Flow and Return Pipework**

Pipework shall be galvanized mild steel medium duty and in accordance with BS. 1387, and insulated as specified.

### 1.1.3 INSTALLATION

#### 1.1.3.1 Solar panel

- a) **Location**  
The solar panel shall where physically possible be installed facing South. Where it is not practical for the solar panel to face due South, the maximum allowance variation shall be 45°.
- b) **Angle of Inclination**  
The solar panels for maximum efficiency should be fitted at an angle equal to the latitude of the installation area. Minimum angle of inclination should be 5°.
- c) Solar panel shall be mounted on angle frame and rise to flow outlet according to manufacturer's specifications.

#### 1.1.3.2 Solar Cylinder

- a) **For Standard Thermosyphon**  
The solar cylinder shall maintain a minimum horizontal distance of 300 mm above the highest point of the solar panel installation
- b) **For low Thermosyphon**  
The solar cylinder shall maintain a flow line up grade of 1:20 minimums where the low profile thermosyphon system is utilized.

#### 1.1.3.3 Flow and Return Pipework

- (a) **Joints**  
All joints between ferrous and copper piping shall be made with dielectric pipe unions for the prevention of electrolytic corrosion.
- (b) **Penetration through Roof decking.**  
Where pipes penetrate the roof decking, they shall be provided with a sleeve that fits around the pipe making a weatherproof joint between roof and pipe.
- (c) **Insulation**  
All pipework between solar panel and storing tank to be insulated with 25 mm fibreglass where exposed to weather, covered with 24 gauges galvanized M.S. sheet cladding and weatherproofed.

All insulation for supply and return pipework in roof space shall be covered with cotton canvas.

All insulation shall be in accordance with BS. 1334 unless otherwise specified.

#### 1.3.3.4 Drain, overflow and Vent Pipework

- (a) The drain and overflow pipework from the solar cylinder shall Terminate approximately 75 mm away from the nearest drain outlet.

- (b) Vent pipe from the solar cylinder shall terminate approximately 150 mm over the top water level in the solar cylinder feed tank.
- (c) Provided drain valve for the solar panel. Drain valve shall be firmly Clamped in order to avoid leaks at the joints during operation.

#### **1.3.3.5 Valves**

- (a) Copper alloy gate valves complying with BS.1952 shall be installed on flow and return pipework prior to it being connected to the solar cylinder.
- (b) The solar cylinder and panel shall be supplied with stop valves for Draining and to comply with BS 1010.

#### **1.3.3.6 Inter connection of solar panels**

Shall be done utilizing Neoprene tubing or Stainless Steel connector or equivalent, fitted with clamps and able to withstand the working pressure.

#### **1.3.3.7 Precaution**

Solar panel glass shall be adequately protected against cracking and the protection removed only when the solar system is commissioned.

### **1.1.4 Alternate Solar Heating System**

Should the contractor intend utilizing an alternate equivalent solar heating system to the one specified under this contract, he shall when submitting his tender provide the Engineer with all necessary information such as material used, construction detail, installation procedure etc. for his approval.

### **1.1.5 Test and Efficiency Certificates**

The Contractor shall provide test and efficiency certificates for the solar panels proposed for the installation in accordance with methods outlined in ASHRAE 23-77.

Certificates for the following tests shall be provided:

1. No flow 30 day exposure
2. Peak exposure test
3. Solar collector Thermal Shock/Water spray test
4. Solar Collector Thermal Shock/Cold Fill test
5. Solar Collector leak and pressure test
6. Thermal efficiency/performance test.

The Contractor shall also provide documentary evidence regarding the absorber sheet, the selective coatings and its optical performances (absorptivity and emissivity factors).

### **1.1.6 Pipework above Ground**

Before any joint is made, the pipes shall be hung in their supports and adjusted to

ensure that the joining faces are parallel and any falls which shall be required are achieved without springing the pipe.

Where falls are not shown on the contract drawings or stated elsewhere in the specification, pipework shall be installed parallel to the lines of the building.

All water systems shall be provided with sufficient drain points and automatic air vents to enable them to function correctly. Valves and other user equipment shall be installed with adequate access for operation and maintenance.

Where valves and other operational equipment are unavoidably installed beyond normal reach or in such a position as to be difficult to reach from a short step ladder, extension spindles with floor or wall pedestals shall be provided.

Screwed piping shall be installed with a sufficient number of unions to facilitate easy removal of valves and fittings, and to enable alterations of the pipework to be carried out without the need to cut the pipe.

Full allowance shall be made for the expansion and contraction of pipework, precautions being made to ensure that any forces produced by pipe movements are not transmitted to valves, equipment or plant.

All tubing exposed on faces of walls shall, unless otherwise specified, be fixed at least 25mm clear of adjacent surfaces with approved holder bats built into the walls, cut and pinned to walls in cement mortar. Where fixed to woodwork, suitable clips shall be used.

All tubings specified as chased into walls shall have the wall face neatly cut and chased, the tubing wedged and fixed and plastered over.

All tubing specified as fixed to ceilings, roofs or roof structures shall be fixed with approved mild steel hangers cut and pinned to ceilings, roofs or roof structures.

Where three or more tubes are fixed to the ceilings, roofs or roof structures close to each other, they shall be fixed in positions, which leave the lower surfaces at the same horizontal level, unless otherwise specified.

Tubes fixed to steel work shall be fixed with clips and tap screws.

Tubes shall be fixed to true lines parallel to adjacent lines of the building unless otherwise specified.

Where insulated, tubing shall be fixed with the insulation at least 25mm clear of the adjacent surfaces.

Pipe runs shall be secured by pipe clips connected to pipe hangers, wall brackets or trapeze type supports. 'U' bolts shall not be used as a substitute for the pipe clips without prior approval of the Engineer.

An approximate guide to the maximum permissible supports spacing in meters for the steel and copper pipe is given in the following table for horizontal runs.

<u>Size</u> <u>Nominal Bores</u>	<u>Maximum support</u> <u>Spacing</u>
15mm	2.0m
20mm	2.5m
25mm	2.5m
32mm	3.0m
40mm	3.0m
50mm	3.0m
65mm	3.5m
80mm	3.5m
100mm	4.0m

Each support shall take its due proportion of the weight of the pipe and shall allow free movement for expansion and contraction.

The support spacing for vertical runs shall not exceed one and a half times the distances given for the horizontal runs.

Sleeves shall provided where pipes pass through walls and solid floors to allow movement of the pipes without damage to the structure. The overall length of the sleeve shall be such that it projects at least 2mm beyond the finished thickness of the wall or partition.

Sleeves passing through the structure shall be of mild steel. Elsewhere they shall be of PVC. The sleeves shall have 5-15mm clearance all round the pipe, or for insulated pipework, all round the insulation. The sleeves shall be packed with slag wool or similar.

Unless anything else is stated in the specification, the tenderer must include in his tender for all protective and finish painting of the works including colour coding of special requirements, if any, are specified in the text of the particular specification. The painting shall be carried out by skilled painters.

#### **1.1.6.1 Galvanised Mild steel Tubing**

Galvanized mild steel tubing shall be in accordance with B.S 1387 with screwed and socketed joints.

Fittings for the same shall be galvanized malleable iron to B.S 143 & 1256 threads to BS 21.

Joints shall be made with fine hemp and an approved jointing compound or with Teflon sealing tape. Compound containing red lead must be used, unless otherwise specified.

All changes of direction shall be obtained by use of proper fittings. Formed bends shall not be accepted.

Long screw connectors and flat-faced unions shall not be used, unless otherwise specified.

Where chased into walls or cast in concrete, galvanized mild steel tubing carrying hot water shall be wrapped with hair felt secured by copper wire.

The fixing of galvanized mild steel tubing shall be done using:

- a) Malleable iron “school board” pattern brackets for building in or screwing to structure or
- b) Malleable pipe rings, with either back plate, plugs or girder clips or
- c) Purpose made straps to Engineer’s Approval.

### 1.1.6.2 Copper Tubing

Copper tubing shall be light gauge conforming to B.S. 2871 and the fittings shall be capillary or compression fittings to B.S. 864 of approved manufacture.

Joints on tubing up to and including 50 mm diameter, shall be compression or capillary joints or direct joints using zinc-free self-fluxing silver brazing alloys. Joints on tubing above 50 mm diameter shall be welded or blazed joints.

Copper tubing shall be jointed to steel cisterns by the use of copper-alloy connector having a shoulder to bear on the outside of the cistern and secured by a back nut inside. Washers shall be used both inside the cistern.

Where chased into walls or cast in concrete, copper tubing shall be wrapped with corrugated cardboard or hair felt secured by copper wire.

The fixing of copper tubing shall be done by using :-

- a) Copper-alloy holderbats for building in, or screwing to structure.

Or

- b) Strap clips of copper, copper-alloy or other suitable material.

Or

- c) Gunmetal holderbats similar to “YORKSHIRE”,

Iron or steel supports shall not be used for copper tubing.

All bends and sets shall be formed without diminishing the internal diameter in any part or causing fracture or weakness of the tube walls.

### 1.1.6.3 Valves, Cocks, Taps Etc.

#### Gate Valves

All gate valves up to and including 65mm nominal bore and above, other than those required for fitting to buried water mains shall be of bronze construction in accordance with the requirements of B.S. 5154. The pressure classification of all gate valves shall depend upon the pressure conditions pertaining to the site of the works.

The pressure classification of all gate valves shall depend upon the pressure conditions pertaining to the Site of Works.

#### Globe Valves

All globe valves up to and including 65 mm nominal bore shall be of bronze construction in accordance with B.S. 2060.

All globe valve 80 mm nominal bore and above shall be of cast iron construction in accordance with the requirements of B.S. 3961.

The pressure classification of all globe valves shall depend upon the pressure conditions pertaining to the Site of Works.

#### **Check or Non-Return Valves**

All check or non-return valves up to and including 65 mm nominal bore shall be of the swing check type of bronze construction in accordance with B.S. 1953.

All check or non-return valves 80 mm nominal bore and above shall be of the swing check type of cast iron construction in accordance with the requirements of B.S. 4090.

The pressure classification of all check or non-return valves shall depend on the pressure conditions pertaining to the Site of work

#### **Ball Float Valves**

All ball valves for use in connection with hot and cold water services shall be of the Portsmouth type in accordance with the requirements of B.S. 1212, constructed from bronze or other corrosion resistant materials. These valves fall into three pressure classification as follows: -

- (i) Low pressure – 3.588 bar maximum
- (ii) Medium pressure – 7.725 bar maximum.
- (iii) High pressure – 12.620 bar maximum.

The pressure Classification required for each ball valve will be designated in the description of its associated equipment.

#### **Safety Valves**

Safety valves for thermal storage water heaters shall comply with B.S. 759

#### **Draw-Off Taps and Stop Valves (up to 50 mm nominal bore)**

Draw-off taps and stop valves up to 50 mm nominal bore, unless otherwise stated or specified, for attachment or connection to sanitary fittings shall be manufactured in accordance with the requirements of B.S. 1010.

Mixing valves for shower fittings and other appliances shall be manufactured in accordance with the requirements of B.S. 1415 from bronze or other corrosion resistant materials.

#### **1.1.6.4 Thermal Insulation**

Insulation shall be installed by tenderer specializing in this type of work.



All primary hot (flow and return pipes) and secondary hot water and circulation pipes shall be insulated. Thermal insulating material for hot water supply insulation shall conform to B.S. 1334 unless otherwise specified. Materials shall have fire retardant qualities.

Insulation shall be fiberglass, minimum density 64 kg/m<sup>3</sup>. Premolded fittings shall be used, or if unavailable, metered sections or built-up blanket insulation shall be used.

Insulation shall be fastened in concealed locations with aluminium bands or soft annealed wires and shall be fastened in exposed locations with aluminium bands, 30 cm. (12inches) o.c.

Each pipe item shall be insulated separately.

Insulation must be carried through or around hangers.

All insulating materials, however fixed, shall be in close contact with the surface to which it is applied and all joints shall be sealed after ensuring that edges or ends of any section built up close to one another. Edges or ends shall be cut or sharpened on site as necessary.

All surfaces to be insulated shall be cleaned carefully before fixing the insulating material. Whereby subject to outside weather or other potentially damp or wet conditions, the insulation shall be adequately protected against moisture pick-up with weatherproof jacketing. Elsewhere, the insulation shall be finished with open weave glass cloth and finish coats of adhesive or paint to approval.

Fixing of insulating material shall suit the progress of other installation works in the building.

All thermal insulating materials shall be delivered to the site in a dry condition and housed in a store until drawn upon for use. If nothing else is specified, the minimum thickness of insulating material for hot water pipes shall be 25 mm.

Equipment, such as tanks, shall be insulated with 50 mm fibre glass board and finished with open weave glass cloth and finish coats of adhesive or paint to approval.

### **1.1.7 Water Storage Tanks**

#### **1.1.7.1 Cold Water Storage Tanks**

Where specified as galvanized mild steel, water storage tanks shall comply with B.S. 417. Galvanizing shall take place after manufacture.

Pressed steel sectional water storage tanks shall comply with B.S. 1564, and shall be similar in manufacture to "BRAITH-WAITE".

Water storage tanks shall be mosquito proofed by means of well fitting bolted cover bedded on a thick gasket of felt or bitumen.

Overflow pipes from tanks shall discharge into air or floor gullies where nearby positioned, with splay cut ends mosquito proofed by means of wire gauze tightly bound on with stout galvanized wire or soldered on.

#### **1.1.7.2 Thermal Storage Water Heaters**

The pressure and low pressure types domestic electric water heaters shall comply with B. S. 843; high pressure types shall be of a Standard not less than the appropriate B.S.

Domestic heaters shall, if nothing else is specified, be supplied with 50 mm thick fibre glass lagging.

Electric thermostatically controlled immersion heaters shall comply with B.S. 3456: Section 2:21 and C.P. 324.202.

Purpose made storage water heaters of the specified size shall comply with B.S.853 and shall be to the specified working and test pressure. The heaters shall be provided with all necessary bosses, coils, etc. and shall be hot dip galvanised after manufacture.

### **1.1.7.3 Pressure Vessels**

Pressure vessels shall be manufactured in accordance with B.S. 1500 A for the specified pressure and be fitted with all necessary openings and connections.

### **1.1.8 Protection of metal surfaces**

Machinery, equipment, etc. shall be tropicalized and with protective treatment fully suitable for application and in the prevailing climatic conditions.

Full details of tropicalization and comprehensive paint treatments, to a dry film thickness of nowhere less than 200 microns, shall be submitted for the approval of the Consultant.

All metalwork shall be protected by either:-

- (a) Hot dip galvanizing; where painted treatment shall be 50 microns epoxy primer or 5-10 microns wash-primer; 30 microns modified alkyd undercoat and 30 microns enamel finish,

Or

- (b) Metallic lead epoxy primer, epoxy micaceous iron oxide, micaceous iron oxide modified alkyd undercoat and enamel finish, layers minimum 30 microns each.

Surfaces of metalwork shall be thoroughly brushed down with wire brushes to remove all scale, rust, etc., and structural steelwork shall be grit blasted before protective treatment.

All paint shall be applied fully in accordance with the manufacturer's instructions.

All water tanks inclusive covers, machinery casings, claddings and whosoever specified shall be protected by hot dip galvanizing.

Hot dip galvanized coatings shall be executed in accordance with British Standard BS 729.

The values for coating weight shall be as follows to B.S 729:-

5 mm thick and over	- 610 to 630 g/m (87 –90 um)
13 Under 5 mm but not less than 2 mm	- 460 to 490 g/m (66 – 70 um)
Under 2 mm but not less than 1 mm	- 335 to 350 g/m (48 – 50 um)
Grey and malleable iron castings	- 610 to 630 g/m (87 – 90 um)
Threaded work and other articles which are centrifuged	- 305 to 315 g/m (44 –45 um)

For conversion to coating thickness unit weight of zinc shall be assumed 7 g/cm<sup>3</sup>. The values stated shall be taken as minimum average values for a set of samples. Individual minimum values shall be introduced as the above mentioned minus 10%.

When galvanized coats are damaged, e.g. threaded pipe connections made on site, the exposed parts shall be repaired with same paints as for additional coating. Colour grey.

### 1.1.9 Instrumentation

Instrumentation shall be provided as indicated on the drawings and specified in the specifications.

Pressure gauges shall be installed on the pipe at both sides of pumps.

Pressure gauges shall be fitted with shutoff cock, read in the pressure range of system, minim 12 cm. (4 1/2 inch) dial, adjustable angle face, white face with black figures and pointer.

Thermometers shall be installed with separable sockets. Bronze sockets shall be used in nonferrous systems and stainless steel in ferrous systems.

Thermometers shall be mercury actuated, 12 cm (4 1/2 inch) dial, adjustable angle face with black figures and pointer.

Where recording thermometers are required, they shall have chart 25 cm.(10 inches) in diameter, shall operate with one pen on 24 hour charts, with a range 10°C to 105°C (50°F to 220°F).

## 1.2 COMMISSIONING AND MAINTENANCE

### 1.2.1 Commissioning and Testing

The tenderer for solar heating system shall be responsible for testing and commissioning of the solar installation. The testing and commissioning shall be done in the presence of the Engineer. The tenderer shall be held responsible for any damage to the builders work, during the installation, initial system testing etc.

When installation is completed, an acceptance test shall be carried out on the tenderer's own expense.

All hot water pipes, including flow and return, solar absorbers, cylinders, cisterns, tanks,

calorifiers, pumps, etc. shall be thoroughly sterilized and flushed out after the completion of all tests and before being fully commissioned for handover.

The sterilization procedure shall be carried out by the tenderer or specialists employed by the tenderer in accordance with the requirements of B.S. Code of Practice 310, Clause 409, to the approval of the Engineer.

Before handing over, the tenderer shall confirm that the installation has been examined, tested, is ready for use, that it will operate and can be maintained efficiently.

The whole of the solar heating installation shall be tested to the satisfaction of the Engineer and the Local Authority.

The tenderer shall provide all necessary testing apparatus and facilities for testing the installations and any defective work shall be replaced immediately and shall be the subject of re-testing until found satisfactory.

Where pipes are to be lagged, chased into walls or otherwise concealed, the work shall be tested prior to lagging, making good chases, etc.

The complete solar heating installations, including flow and return pipes shall, if nothing else is specified, be tested to a cold water pressure of not less than 1.5 times the working pressure, minimum 8 kg/cm<sup>2</sup>.

The test pressure shall be applied by means of a manually operated test pump or, by a power-driven test pump. Pressure gauges shall be recalibrated before the test.

The test pressure shall be maintained by the pump for about one hour and a leakage as specified in C.P 310, Section 502 J shall be approved, but any visible individual leak shall be repaired.

Valves, cocks and taps shall be absolutely tight under the test pressure for the corresponding pipes as well as under a small pressure.

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Upon completion of the work, including re-testing if necessary, the installations shall be thoroughly flushed out and water pipes refilled with clean water ready for use.

Any defects revealed by the tests shall be made good by the tenderer and the test repeated to the approval of the Engineer.

In all other respects, test shall comply with the requirements of B.S. Code of Practice 304.

Following satisfactory pressure tests on the pipework system, operational tests shall be carried out in accordance with the relevant B.S. Codes of practice on the systems as a whole to establish that special valves, gauges, controls, fittings, equipment and plant are functioning correctly to the satisfaction of the Engineer.

### **1.2.2 Spare Parts**

The tenderer shall submit with the tender a guarantee that he will hold a sufficient number of spare parts for the maintenance of the equipment.

If specific requirements for supply of spare parts are specified in the bill of quantities or schedule of prices, these spare parts shall be supplied to the client/employer, when the installations are handed over.

The tenderer shall submit with his tender a priced list of any optional extras, which he recommends should be purchased for the plants and are not supplied as standard with the unit.

### **1.2.3 Defects Liability and Contractual Maintenance Period**

The tenderer shall maintain the complete installation in the total defects liability period and shall be responsible for the initiation and execution of the clients/employer planned programme of maintenance during this period.

During this maintenance period the tenderer shall carry out all necessary adjustments and repairs, cleaning and lubricating, ect. A report of any work shall be submitted to the Client and incorporated in the maintenance records.

The tenderer shall be held responsible for and shall make good all defects in materials that appear during the maintenance period; he shall supply expendable items, such as gaskets, filters, indicator lamps, etc. The period of liability shall not end until all defects which appear during the maintenance period have been rectified.

The tenderer shall allow in his Contract price for this maintenance and inspection service and shall provide for all tools, instruments, plant and scaffolding, and the transportation thereof, as required for the correct and full execution of these

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obligations, and the provision, use or installation of all materials whether they are normal maintenance materials such as oils, greases, sandpaper, etc. and parts which are periodically renewed such as relay contracts or parts which are faulty for any reason whatsoever excepting always Acts of God such as a storm, tempest or flood, lightning and earthquake; civil revolt, acts of war and vandalism.

### **1.2.4 Maintenance Manual**

Upon completion the tenderer shall furnish to the Client four copies of a manual size A4 of loose leaf type containing all the following items:-

- a. Description of equipment
- b. Full operation and maintenance instructions
- c. Valve operation
- d. Fault-finding chart
- e. Emergency procedure
- f. Maintenance and service periods
- g. Lubricating instruction
- h. Colour code legend
- i. Schedule of primary and secondary spares
- j. Record drawing – Folded to size A4.

The manual must be specially written and not standard manufacturers manual unless

approved by the Engineer.

Tags giving instructions are not permitted. All instructions must be written into the manual with reference to the drawings.

All valves, terminals and controls on the plant shall be labeled to correspond with the maintenance and operation manuals.

#### **1.2.5 Maintenance and Service After Expirations of the Contractual Maintenance Period**

The tenderer shall if required, enter into a maintenance and service agreement with the employer for the complete installation, for a period of up to five years from the day of expiration of the contractual maintenance period.

The terms of any such agreement shall not be less beneficial to the Client, than the terms of agreement for other similar installations.

## SOLAR WATER HEATING SYSTEM

### 2.0 TECHNICAL QUESTIONNAIRE

The following information shall be supplied by tenderer regarding the solar flat plate collectors proposed:

1. Manufacturer/Trade Mark .....  
.....  
.....
  
2. Construction Details of the Collector:  
  
Aperture Dimensions & Area (m & m<sup>2</sup>) .....  
.....  
  
Gross Dimensions & Area (m & m<sup>2</sup>) .....  
.....  
  
Dimensions and Area absorbing  
surface (m & m<sup>2</sup>) .....  
.....
  
3. Solar Panel  
Collector Casement material .....  
Thickness .....  
Corrosion Treatment .....
  
4. Glazing  
Material .....  
Thickness .....  
Physical Properties .....
  
5. Insulation  
Material .....  
Thickness (mm) .....  
Thermal properties .....
  
6. Absorber  
Material Absorber plate .....  
Material for tubes for heat exchange .....  
Selective Coating .....  
Absorption Factor .....  
Emissivity Factor .....
  
7. Solar Cylinder  
Material .....  
Thickness .....  
Insulation Material .....





## BILLS OF QUANTITIES

**STATEMENT OF COMPLIANCE**

- a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.
  
- b) I confirm I have not made and will not make any payment to any person, which can be perceived as an inducement to win this tender.

Signed: ..... *for and on behalf of the Tenderer*

Date: .....

Official Rubber Stamp: .....

**A. Notes and Sample Items for Preparing a Bill of Quantities**

1. These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the Tender Documents. Priced Bills of Quantities shall be part and parcel of the Contract Documents.
2. The objectives and purpose of the Bills of Quantities are to provide sufficient information on the specifications, descriptions and quantities of Works to be performed to enable tenders to be prepared efficiently and accurately and when a contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed. In order to attain these objectives, Works should be itemized in the Bill of Quantities insufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and clear as possible.

**3. NOTES TO PREPARING PREAMBLES**

- 4.1 The Preambles should include only those items that constitute the cost of the works but would not be priced separately as they are expected to be included in the unit prices. Care should be taken to ensure that these items are not a part of the conditions of contract. The Preambles should indicate the inclusiveness of the unit prices and should state the methods of measurement that have been adopted in the preparation of the Bill of Quantities, that are to be used for the measurement of any part of the Works. The units of measurement and abbreviations should be defined and any mandatory national units defined and described. The methods of and procedure for re-measurement should be described in the Preambles.
- 4.4 The rates and prices tender in the priced Bills of Quantities shall, except in so far as it is otherwise provided under the Contract, include all Constructional Plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
- 4.5 A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
- 4.6 The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bills of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
- 4.7 General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bills of Quantities. References to the relevant sections of the Contract documents shall be made before entering prices against each item in the priced Bills of Quantities.
- 4.9 Provisional Sums and contingency sums included and so designated in the Bills of Quantities shall be expended in whole or in part at the direction and discretion of the Architect in accordance with Sub-Clause 13.5 and Clause 13.6 of the General Conditions of contract.

- 4.10 In preparing the Bills of Quantities, notes should be removed as they are intended to guide the person preparing the Tender Documents. The Contractor must allow in his rates for any costs associated with and complying with the requirements in the Preambles.
- 4.11 Should a tenderer/contractor not price any item in any section of the Bills of Quantities including Preliminary items, it will be assumed that he/she has spread its cost in other areas that he/she will have priced. Therefore, the item or items will be executed without any additional costs or without being treated like variations.

#### **4. NOTES ON PREPARING BILLS OF QUANTITIES**

- 5.1 The Preliminary Items should be limited to tangible items that should be priced by the tenderer, are identifiable and can be priced separately and included in the interim valuations precisely. Such items may include such items as site office, notice boards, and other temporary works, otherwise items such as security for the Works which are primarily part of the Contractor's obligations should be included in the Contractor's rates.
- 5.2 The work items in the Bills of Quantities should be grouped into sections to distinguish between those parts of the Works which by nature, location, access, timing, or any other special characteristics may give rise to different methods of construction, or phasing of the Works, or considerations of cost. Such groups could be ground excavations, structures, external works, services, etc. General items common to all parts of the Works may be grouped as a separate section in the Bill of Quantities.
- 5.3 Quantities should be computed net from the Drawings, unless directed otherwise in the Contract, and no allowance should be made for bulking, shrinkage or waste. Quantities should be rounded up where appropriate.
- 5.4 Where the measured items are deemed not to be exact because of the likelihood that the scope can change during the execution of the works, such items could be subject to re-measurement, the word "**provisional**" should be used to identify such cases. Where whole sections of the work items fall in this class, for example foundations, they should be labelled "Provisional Quantities" or "Provisional Items" so that the Tenderer/Contractor is advised up front that such items are subject to re-measurement to be done before such work is cover-up.
- 5.5 All items that have not been measured and therefore not subject to tenders pricing should be listed in the Bills of Quantities as **Provisional Sums** for particular item or class of Work, which may be subject to a nominated subcontract or separate measurements at a later date during the execution of the works. For example, if it is deemed not possible to measure electrical works before going to tender because detail designs are not ready, a provisional sum can be allowed in the Bills of Quantities for "Installation of Electrical Works" to be executed later when actual design details are completed. To the extent not covered above, there should be in the Bills of Quantities a general provision for physical and financial contingencies made as a "Provisional Sum for Contingencies" and "Provisional Sum for Fluctuations".

## PREAMBLES

1. The method of measurement of completed work for payment shall be in accordance with *The Standard Method of Measurements for Building Works and Associated Civil Works for Eastern Africa (2<sup>nd</sup> edition) of 2008 prepared by The Architectural Association of Kenya (Quantity Surveyors Chapter)*
2. The Site is situated at **The Kenya Utalii College – Nairobi County**. It is approximately **within Nairobi City**. Access to the site shall be through **Thika Highway**. Which is an existing public road. Any damage caused to the surfaces of this road shall be made good at the Contractor's expense. The Contractor shall visit the site and acquaint itself with its nature and position, the nature of the ground, substrata and other local conditions, positions of existing power, water and other services, access roads or any other limitations that might affect his cost or progress. No claim for extras shall be considered on account of lack of knowledge in this respect.
3. The Contractor shall obtain the Architect's approval on the siting of all temporary buildings, spoil heaps, temporary access path, and storage of materials. The Contractor shall also obtain the Architect approval and direction regarding the use of any materials found on the Site.
4. The drawings used in the preparation of these Bills of Quantities can be inspected at the offices of the Procuring Entity or Procuring Entity's Representative during normal working hours. Two sets of the Working Drawings shall be provided to the contractor but additional copies shall be provided at a cost to be determined by the Engineer.
5. The Contractor shall allow for the payment of all bank charges in connection with the procurement of Bank Guarantees and stamp charges in connection with this contract Agreement.
6. The Contractor shall carry out the various sections of the Works in such an order as the Architect May direct. The Procuring Entity reserves the right to occupy the Works by sections on completion provided that such occupation is considered to be both practical and reasonable and will not interfere with the Works. The Contractor shall allow any costs associated with such occupation.
7. The main Contractor will be fully responsible for paying his Sub-Contractor but the Procuring Entity reserves the right in very exceptional circumstances to make such payments direct in the interests of the project where the completion thereof might be jeopardized by any dispute or vicariousness between the Contractor and the Sub-Contractor involve.
8. The Contractor shall complete and deliver the Works in the period inserted in the Form of Tender as his time for completion of the Works from the date for Possession, to be agreed with the Engineer. The Contract Period is presumed to have been calculated making due allowance for seasonal inclement weather conditions. No claim for extension of time due to the normal inclement weather for this area shall be entertained.
9. The Contractor shall, upon receiving instructions to proceed with the Works, draw up a Programme and Progress Chart setting out the order in which the Works are to

be carried out, with the appropriate dates thereof. This Chart shall be agreed with the Architect and no deviation from the order set out in it will be permitted without the written consent of the Engineer. The Contractor will be responsible for arranging the above programme with all his sub-Contractors and Specialties. The Contractor shall allow in his rates for carrying out this exercise, and for updating it as required.

10. The Contractor shall submit to the Architect on the first day of each week or such longer period as the Architect from time to time direct, a Progress Report and any information for the proceeding period, showing the progress during the period and the up-to-date cumulative progress on all important items of each section or portion of the Works.
11. The Contractor shall arrange for photographs of the Site to be taken by a professional photographer approved by the Engineer. The Photographs shall provide a record of the Site and adjacent area as prior to the commencement of the Works and shall cover such portion of the works in progress and completion as the Architect shall direct. All prints shall be full plate size, unmounted, and marked on the reverse side with the date of exposure, identification reference and brief description. The copyright of all photographs shall be vested in the Procuring Entity. The negatives and four prints from each negative shall be delivered to the Architect within two weeks of exposure.
12. Figured dimensions are to be followed in preference to dimensions scaled from the Drawings, but whenever possible dimensions are to be taken on the Site or from the buildings. Before any work is commenced by Sub-Contractors or Specialist Firms, dimensions must be checked on the site comparable dimensions shown on the drawings. The Contractor shall be responsible for the accuracy of such dimensions.
13. Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any services shall be reported immediately to the Architect and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense. Where appropriate the Contractor shall open up the ground in advance of the main work by hand digging, if necessary, to locate precisely the position and details of the services which are likely to affect his operations.
14. The Contractor shall include in his prices for the transport of materials, workmen, etc./, to and from the site of the proposed works, at such hours and by such route as are permitted by the Authorities.
15. The Contractor will be required to make good, at his own expense and damage he may cause to the present road surface and pavements within or beyond the boundary of the Site, during the period of the works. All existing paths, storm water channels, etc., that may be destroyed or damaged during the progress of the Works shall be reinstated by the Contractor to the satisfaction of the Engineer.
16. The Contractor is to allow for complying with all instructions and regulations of the Police Authorities.
17. All water shall be fresh, clean and pure, free from earthly, vegetable or organic matter, acid or alkaline substance in solution. The Contractor shall provide at his own risk and cost all water for use in connection with the Works, (including works

of sub-contractors). If need be, he shall make arrangements with the Local Water Authority for the installation of a separate meter for all water used by him throughout the Contract and pay all cost and fees in connection therewith. He shall also provide temporary storage tanks and tubing, etc., as may be necessary, and clear away at completion.

18. The Contractor shall provide all artificial lighting and power for his own use on the Works, (including Sub – Contractor's) including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection there with.
19. 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 time to the superintendence of the works. (Including works of sub – contractors). Such Agent or Representative shall receive on behalf of the Contractor directions and instruction from the Engineer, and such directions and instructions shall be deemed to be given to the contractor in accordance with the Conditions of Contract. The Agent shall not be replaced without the specific approval of the Engineer.
20. The Contractor shall ensure that the safety of his work people and all authorized visitors to the site are protected at all times. In particular, there shall be the proper provision of guard-rails to scaffolding, protection against falling materials, tools on site, dust, nail and other sharp objects. The site shall be kept tidy and clear of dangerous rubbish. The Architect shall be empowered to suspend work on site should it be considered this condition is not being observed and no claim arising from such suspension will be allowed.
21. They are as available to the Contractor for work yards, offices and other facilities shall be directed by the Architect and any existing features to remain shall be protected from damage throughout the Contract Period and handed back in good condition when they are vacated at the end of the Contract. If additional areas are required, the contractor shall source then at own cost.
22. The Contractor shall give the Architect reasonable notice of the intention to set out or take levels for any part of the Works so that arrangements may be made for checking the work. The accuracy of setting out and leveling shall be within the tolerances specified in the Specifications or on the Drawings. The checking of setting out or leveling by the Architect shall not relieve the Contractor of his duties or responsibilities under the Contract.
23. The Contractor must take steps necessary to safe guard and shall beheld fully responsible for any damage caused to existing and adjacent property, including buildings that are not a subject of demolition. He shall make good at his own cost damage to persons and property caused there on, and he shall indemnify the Procuring Entity against any loss or claim that may arise.
24. The Contractor shall take such steps and exercise such care and diligence as to minimize nuisance arising from dust, noise or any other cause to the occupiers of the existing and adjacent property. He must provide such temporary and special screens and tarpaulins or gummy bags, hoarding, barriers, warning signs etc. as he considers necessary and sufficient for the protection of the existing and adjacent property and or prevention of nuisance etc. as directed by Engineer.
25. The Contractors attention is drawn to the standards levy order which was amended

on 15<sup>th</sup> October 1998. Legal notice No.154 of 1998. The Contractor is required to pay a monthly level of 0.2% of his factory price of construction works with effect from January 1999. Tenderer shall allow for this in the build-up his rates.

26. The Contractor shall provide temporary sheds, offices mess rooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting furniture equipment and attendance.
27. Contractor shall provide/build labor camp sat areas to be agreed with the Engineer. Labor camps shall be complete with sanitary accommodation and fencing gates.
28. The Contractor must provide the necessary toilet facilities to the requirement and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.
29. The Contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, Plant and materials against damage and theft.
30. The Contractor shall provide all necessary hoists, tackle, plant, equipment, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove the same on completion. All such plant, tools and equipment shall comply with all regulations in force throughout the period of the Contract and shall be altered or adopted during the Contract period as may be necessary to comply with any amendments in or additions to such regulations.
31. Provide, erect and maintain all necessary scaffolding, sufficiently strong and efficient for the due performance of the works, including Sub-Contract Works, provide special scaffolding as required by Sub-Contractors, alter and adopt all scaffolding as and when required during the Works, and remove on completion. No scaffolding is measured here in after and the Contractor must allow in his rates for this.
32. The Contractor shall take all necessary precautions such as temporary fencing, hoarding fans, planked footways, guard-rails gantries screen, etc., for the safe custody of the Works, materials and public protection and adjacent properties.
33. Cover up all and protect from damage, including damage from inclement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Architect until the completion of the Contract.
34. The Contractor shall, after completion of the works, at his own expense, remove and clear away all surplus excavated demolition materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Engineer, sheds, camps, etc. Particular care shall be taken to leave clean all floors and windows and to remove all paint and cement all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection there with.
35. Concrete test cubes shall be prepared in a set of three, as described including testing fees, labor and materials, making molds, transport, handling, etc. Allow in your rates for making at least four cubes on each occasion, from different batches; the concrete being taken from the point of deposit.
36. The Contractors shall furnish at the earliest possible opportunity before work commences, and at his own cost, any samples of materials and workmanship that



may be called for by the Architect for the approval or rejection, and any further samples in the case of rejection, until such samples are approved by the Engineer. Such samples, when approved, shall be the minimum standard for the work to which they apply. The procedure for submitting samples of materials for testing or approval and the method of marking for identification shall be as laid down by the Engineer. The Contractor shall allow in his Tender for such samples and tests, including those in connection with his Sub-Contractors work.

37. The Contractors attention is drawn to the Finance Bill of the year 2000/2001 on withholding tax on contractual payment section 35(7)(i)(ii) which became effective on 1<sup>st</sup> July 2000. A 3% withholding tax will be applicable to all interim payments exceeding Kshs..... for work done in respect of building or civil works. The contractor shall allow for any costs arising resulting there from in the build-up of rates.
38. Blasting will only be allowed with the express permission of the Architect in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost, in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Architect governing the use and storage of explosives.
39. The National Construction Authority is a state corporation established under the national construction authority Act No.14 of 2011. The broad Mandate of the Authority is to oversee the construction industry and coordinate its development. The National Construction Authority Regulations 2014 with an effective date of 6<sup>th</sup> June 2014, regulation 25, - Allow 0.5% of the tender sum/contract sum for construction levy.
40. The Contractor attention is drawn to Finance Bill of 1993 where VAT was introduced in all contracts for construction services. The tenderer is also drawn to VAT Act Cap 476 clause 19(9). The tenderer must allow for VAT 1.19 as instructed elsewhere.
41. The contractor shall allow and pay for all insurance to cover risks and indemnities required Items 17 and 18 of the Conditions of contract and also specified in the Special Conditions of Contract.

**BILL NO. 2.10 - PRELIMINARY ITEMS**

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	<p>Discrepancies: The Contractor shall include all work either shown on the Contract Drawings or detailed in the specification. No claim or extra cost shall be considered for works which has been shown on the drawings or in the specification alone.</p> <p>Should the drawing and the specification appear to conflict, the Sub-contractor shall query the points at the time of tendering and satisfy himself that he has included for the work intended, as no claim for extra payment on this account shall be considered after the contract is awarded.</p>				
2	<p>Conditions of sub-contract Agreement: The Contractor shall be required to enter into a Sub-contract with the Main Contractor.</p>				
3	<p>Payments: Payment will be made through certificates to the Main Contractor, All payments will be less retention as specified in the Main Contract. No payment will become due until materials are delivered to site.</p>				
4	<p>Site location: The site of the Contract Works is situated in <b>Utalii College</b> along <b>Thika Highway, Nairobi County</b>. The tenderer is recommended to visit the site and shall be deemed to have satisfied himself with regard to access, possible conditions, the risk of injury or damage to property on/or adjacent to the site, and the conditions under which the sub-contract Works shall have to be carried out and no claims for extras will be considered on account of lack of knowledge in this respect.</p>				
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ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
5	<p>Scope of Contract Works: The contractor shall supply, deliver, unload, hoist, fix, test, commission and hand-over in satisfactory working order the complete installations specified hereinafter and/or as shown on the Contract Drawings attached hereto, including the provision of labour, transport and plant for unloading material and storage, and handling into position and fixing, also the supply of ladders, scaffolding the other mechanical devices to plant, installation, painting, testing, setting to work, the removal from site from time to time of all superfluous material and rubbish caused by the works.</p> <p>The contractor shall supply all accessories, whether of items or equipment supplied by the Sub-Contractor but to be fixed and commissioned under this contract.</p>				
6	<p>Extent of the Contractor's Duties: At the commencement of the works, the contractor shall investigate and report to the Engineer if all materials and equipment to be used in the work and not specified as supplied by the others are available locally. If these materials and equipment are not available locally, the contractor shall at this stage place orders for the materials in question and copy the orders to the Engineer.</p>				
7	<p>Firm price contract: Unless specifically stated in the documents or the invitation to tender, this is a firm-price Contract and the contractor must allow in his tender for the increase in the cost of labour and/or materials during the duration of the contract.</p>				
8	<p>Variation: No alteration to the Contract Works shall be carried out until receipt by the Contractor of written instructions from the Project Manager.</p>				
9	<p>Prime cost and provisional sum: A specialist Sub-contractor may be nominated by the Project Manager to supply and/or install any equipment covered by the Prime Cost or Provisional Sums contained within the Contract documents (insert profit and attendance which is a percentage of expended PC or provisional sum.)</p>				
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ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
10	Bond: The tenderer must submit with his tender the name of one Surety who must be an established Bank only who will be willing to be bound to the Government for an amount equal to 7½ % of the Contract amount				
11	Government Legislation and Regulations: The Contractor's attention is called to the provision of the Factory Act 1972 and subsequent amendments and revisions, and allowance must be made in his tender for compliance therewith, in so far as they are applicable. The Contractor must also make himself acquainted with current legislation and any Government regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc.				
12	Import Duty and Value Added Tax: The Sub-contractor will be required to pay full Import Duty and Value Added Tax on all items of equipment, fittings and plant, whether imported or locally manufactured. The tenderer shall make full allowance in his tender for all such taxes. (Note this clause applies for materials supplied only. VAT will also be paid by the sub-contractor as allowed in the summary page)				
13	Insurance company Fees: Attention is drawn to the tenderers to allow for all necessary fees, where known, that may be payable in respect of any fees imposed by Insurance Companies or statutory authorities for testing or inspection.				
14	Provision of services by the Main contractor: In accordance with Clause 1.08 of this Specification the Contractor shall make the following facilities available to the Sub-contractor: a) Attendance on the Sub-Contractor and the carrying out of all work affecting the structure of the building which may be necessary, including all chasing, cutting away and making good brickwork,				
	<b>Sub-total carried forward to page .....</b>			<b>407</b>	

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>etc., except that all plugging for fixing, fittings, machinery, fan ducting, etc., and all drilling and tapping of steel work shall be the responsibility of the Sub-contractor. Any purpose made fixing brackets shall not constitute Builder's Work and shall be provided and installed by the Sub-contractor unless stated hereinafter otherwise.</p> <p>b) The provision of temporary water, lighting and power: the Contractor pay for all these services utilized.</p> <p>c) Fixing of anchorage and pipe supports in the shuttering, shall be supplied by the Contractor who shall also supply the Project Manager with fully dimensioned drawings detailing the exact locations.</p> <p>d) i) Provision of scaffolding, cranes, etc. It shall be the Contractor's responsibility to liaise with the Project Manager to ensure that there is maximum co-operation with other nominated Sub-contractors in the use of scaffolding, cranes, etc.</p> <p>ii) Any specialist scaffolding, cranes, etc. by the Contractor for his own exclusive use shall be paid for by the Sub-contractor.</p> <p>15 Samples and Materials Generally: The Contractor shall, when required, provide for approval at no extra cost, samples of all materials to be incorporated in the works. Such samples, when approved, shall be retained by the Engineer and shall form the standard for all such materials incorporated.</p> <p>16 Supplies: The Contractor shall submit names of any supplier for the materials to be incorporated, to the Engineer for approval. The information regarding the names of the suppliers may be submitted at different times, as may be convenient, but no sources of supply will be changed without prior approval. Each supplier must be willing to admit the Engineer or his representative to his premises during working hours for the purpose of examining or obtaining samples of the materials in question.</p>				
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ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
17	<p>Bills of Quantities: The Bills of Quantities have been prepared in accordance with the standard method of measurement of Building Works for East Africa, first Edition, Metric, 1970. All the Quantities are based on the Contract Drawings and are provisional and they shall not be held to gauge or to limit the amount or description of the work to be executed by the Contractor but the value thereof shall be deducted from the Contract Sum and the value of the work ordered by the Engineer and executed thereunder shall be measured and valued by the Engineer in accordance with the conditions of the Contract.</p>				
18	<p>Contractor's Office in Kenya: The Contractor shall maintain (after first establishing if necessary) in Kenya an office staffed with competent Engineer Manager and such supporting technical and clerical staff as necessary to control and coordinate the execution and completion of the Contract Works.</p>				
19	<p>Builder's Work: All chasing, cutting away and making good will be done by the Contractor. The Contractor shall mark out in advance and shall be responsible for accuracy of the size and position of all holes and chases required.</p> <p>The Contractor shall drill and plug holes in floors, walls, ceiling and roof for securing services and equipment requiring screw or bolt fixings.</p> <p>Any purpose made fixing brackets shall be provided and installed by the Contractor.</p>				
20	<p>Setting to work and Regulating system: The Contractor shall carry out such tests of the Contract Works as required by British Standard Specifications, or equal and approved codes as specified hereinafter and as customary.</p>				
<b>Sub-total carried forward to page ..... 407</b>					

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>No testing or commissioning shall be undertaken except in the presence of and to the satisfaction of the Engineer unless otherwise stated by him (Contractor's own preliminary and proving tests excepted). It will be deemed that the Contractor has included in the Contract Sum for the costs of all fuel, power, water and the like, for testing and commissioning as required as part of the Contract Works. He shall submit for approval to the Engineer a suitable programme for testing and commissioning. The Engineer and Employer shall be given ample warning in writing, as to the date on which testing and commissioning will take place.</p> <p>21 Identification of plant components: The Contractor shall supply and fix identification labels to all plant, starters, switches and items of control equipment including valves, with white traffolyte or equal labels engraved in red lettering denoting its name, function and section controlled. The labels shall be mounted on equipment and in the most convenient positions. Care shall be taken to ensure the labels can be read without difficulty. This requirement shall apply also to major components of items of control equipment. Details of the lettering of the labels and the method of mounting or supporting shall be forwarded to the Engineer for approval prior to manufacture.</p> <p>22 Working Drawings: The Contractor shall prepare such Working Drawings as may be necessary. The Working Drawings shall be complete in such detail not only that the Contract Works can be executed on site but also that the Engineer can approve the Contractor's proposals, detailed designs and intentions in the execution of the Contract Works.</p>				
	<b>Sub-total carried forward to page ..... 407</b>				

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>If the Contractor requires any further instructions, details, Contract Drawings or information drawings to enable him to prepare his Working Drawings or proposals, the Contractor shall accept at his own cost, the risk that any work, commenced or which he intends to commence at site may be rejected.</p> <p>23 Record Drawings (As Installed) and Instructions: During the execution of the Contract Works the Contractor shall, in a manner approved by the Engineer record on Working or other Drawings at site all information necessary for preparing Record Drawings of the installed Contract Works. Marked-up Working or other Drawings and other documents shall be made available to the Engineer as he may require for inspection and checking. Record Drawings, may, subject to the approval of the Engineer, include approved Working Drawings adjusted as necessary and certified by the Contractor as a correct record of the installation of the Contract Works.</p> <p>24 Maintenance Manual: Upon Practical Completion of the Contract Works, the Contractor shall furnish the Engineer four copies of a Maintenance Manual relating to the installation forming part of all of the Contract Works.</p> <p>The manual shall be loose-leaf type, International A4 size with stiff covers and cloth bound. It may be in several volumes and shall be sub-divided into sections, each section covering one Engineering service system. It shall have a ready means of reference and a detailed index.</p> <p>There shall be a separate volume dealing with Air Conditioning and Mechanical Ventilation installation where such installations are included in the Contract Works.</p>				
	<b>Sub-total carried forward to page ..... 407</b>				



ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
25	The manual is to be specially prepared for the Contract Works and manufacturer's standard descriptive literature and plant operating instruction cards will not be accepted for inclusion unless exceptionally approved by the Engineer. The Contractor shall, however, affix such cards, if suitable, adjacent to plant and apparatus. One spare set of all such cards shall be furnished to the Engineer.				
26	Hand over: The Contract Works shall be considered complete and the Maintenance and Defects Liability Period shall commence only when the Contract Works and supporting services have been tested, commissioned and operated to the satisfaction of the Engineer and officially approved and accepted by the Employer.				
27	Painting: It will be deemed that the Contractor allowed for all protective and finish painting in the Contract Sum for the Contract Works, including colour coding of service pipework to the approval of the Engineer. Any special requirements are described in the text of the Specifications				
28	Testing and Inspection – manufactured plant: The Engineer reserves the right to inspect and test or witness of all manufactured plant equipment and materials. The right of the Engineer relating to the inspection, examination and testing of plant during manufacture shall be applicable to Insurance companies and inspection authorities so nominated by the Engineer. The Contractor shall give two weeks' notice to the Engineer of his intention to carry out any inspection or tests and the Engineer or his representative shall be entitled to witness such tests and inspections.				
29	Testing and Inspection – Installation: Allow for testing each section of the Contract Works installation as described hereinafter to the satisfaction of the Engineer.				
<b>Sub-total carried forward to page .....</b>					<b>407</b>

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
30	<p>Storage of Materials: The Contractor shall provide storerooms and workshop where required. He shall also provide space for storage to nominated sub-contractors who shall be responsible for these lock-up shades or stores provided.</p> <p>Nominated Sub-contractors are to be made liable for the cost of any storage accommodation provided specially for their use. No materials shall be stored or stacked on suspended slabs without the prior approval of the Project manager</p>				
31	<p>Initial Maintenance: The Contractor shall make routine maintenance once a month during the liability for the Defects Period and shall carry out all necessary adjustments and repairs, cleaning and oiling of moving parts. A monthly report of the inspection and any works done upon the installation shall be supplied to the Engineer.</p>				
32	<p>The Contractor shall also provide a 24 -hour break-down service to attend to faults on or malfunctioning of the installation between the routine visits of inspection.</p>				
33	<p>Attendance Upon Tradesmen, 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 the use of ordinary scaffolding. The contractor however, shall not be required to erect any special scaffolding for them.</p>				
34	<p>Temporary Works Where temporal works shall be deemed necessary, such as Temporary lighting, the contractor shall take precaution to prevent damage to such works.</p> <p>The contractor shall include for the cost of and make necessary arrangements with the Project Manager for such temporary works. For temporary lighting, electricity shall be metered and paid for by the contract</p>				
35					
<b>Sub-total carried forward to page .....</b>					<b>407</b>

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>his programme and schedule of work. He shall ensure equipment.  optimum presence and utilization of labour, plant and equipment. He should not pay and maintain unnecessary labour force or maintain and service idle plant and</p>				
36	<p>Extended Preliminaries: Where it shall be necessary to extend the contract period by the Project manager the contractor shall still ensure availability on site, optimum labour, materials, plant and equipment. The contractor shall make provision for extended preliminaries, should the contract period be extended and this shall be in a form of a percentage of the total Contractor works.</p>				
37	<p>Supervision by Engineer and Site: A competent Project Engineer appointed by the Engineer as his representative shall supervise the Contract works. The Project Engineer shall be responsible for issuing all the site instructions in any variations to the works and these shall be delivered through the Contractor with the authority of the Project Manager. Any instructions given verbal shall be confirmed in writing.  The project engineer and (or) the Engineer shall attend management meetings arranged by the Project Manager and for which the Contractor or his representative shall also attend. For the purpose of supervising the project, provisional sums are provided to cover for transport and allowances. The Contractor shall in his tender allow for the provision of management meetings and site inspections, as instructed by the Engineer, and also profit and attendance on these funds. The funds shall be expended according to Project Manager's instructions to the contractor</p>				
38	<p>Allow for profit and Attendance for the above</p>				
39	<p>Amendment to Scope of Sub-contract Works No amendment to scope of sub-contract works is expected and in case of amendment or modification to scope of work, these shall be communicated to all tenderers in</p>				
<b>Sub-total carried forward to page .....</b>				<b>407</b>	

ITEM No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
40	<p>sufficient time before the deadline of the tender submission. However, during the contract period and as the works progress the Project Manager may vary the works as per conditions of contract by issuing site instructions</p> <p>Contractor Obligation and Employers Obligation: The sub-contractor will finance all activities as part of his obligation to this contract. The employer shall pay interim payment for materials and work completed on site as his obligation in this contract, as the works progresses. The contractor shall, where called upon, insert his price to compensate for any of the occurrence stated here (premature termination, reduction or increase of works), as a percentage of the contract sum.</p>				
41	Any other preliminaries;				
Sub-total above					
Sub-total brought forward from page .....					397
Sub-total brought forward from page .....					398
Sub-total brought forward from page .....					399
Sub-total brought forward from page .....					400
Sub-total brought forward from page .....					401
Sub-total brought forward from page .....					402
Sub-total brought forward from page .....					403
Sub-total brought forward from page .....					404
Sub-total brought forward from page .....					405
Sub-total brought forward from page .....					406
<b>TOTAL FOR BILL NO. 1- PRELIMINARIES CARRIED FORWARD TO PRICE MAIN SUMMARY PAGE .....</b>					<b>420</b>

**Bill No. 2: Low Level Water Tanks**

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Low Level Water Tank</b>				
A	<p>Low level water storage tank as "Braithwaite" or approved equivalent made of <b>6mm thick</b> pressed, <b>hot-dip galvanised</b> mild steel sectional plates of size <b>1220mm x 1220mm</b>.</p> <p>ree board capacity of tank to be 131,437 Litres of preferred dimensions 6,100 x 6,100 by 3,660mm high. All pipe connections namely: supply inlet pipe, outlet pipe, overflow pipe, tank washout, warning pipe to be in place. The tank to be complete with:</p> <ul style="list-style-type: none"> <li>- 1 No. Highly visible Water Level Indicator</li> <li>- 2 No. Lockable, hinged Steel Cover Manhole</li> <li>- 1 No. internal Ladder</li> <li>- Appropriate float valve chamber</li> <li>- 1 No. External Ladder to ground Level with safety cage</li> <li>- Pitched dustproof and weatherproof tank cover made of hot-dip galvanised 3mm thick steel sheets capable of withstanding loading imposed by the maintenance personnel.</li> <li>- All necessary cleats, stays, braces, rafters and reinforcements</li> <li>- All necessary bolts, nuts, washers, sealing and insulation material.</li> </ul> <p>The tank to come accompanied by 9 No., 4mm thick, 50mm wide flate plate 8,200mm long for laying above the dwarf walls before tank placement. Tank connections include 50mm inlet, 75mm outlet, 100mm overflow, 100mm washout, 100mm hydrant outlet</p>	2	Item		
	<b>Builders Works</b>				
B	<p>Allow for builders works associated with the installation of the above pressed steel sectional ground tank. This shall include but not limited to site and ground clearance and levelling, building of 9 no. concrete support dwarf walls along the seams of the tank in one direction. The dwarf walls to have a 300mm wide footing, and to be 200mm wide with a tapering top. To be 500mm above ground and 6,500mm long.</p>	1	Item		
<b>Sub-total carried forward to collection page 411</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b><u>Water Tanks Associated Pipework</u></b>				
	<i>Supply and installation of Galvanised mild steel piping and fittings with screwed &amp; socketed joint to medium grade class "B" to BS. 1387.</i>				
	<b><u>GMS Pipework</u></b>				
A	100mm diameter pipe	200	LM		
B	75mm ditto	50	LM		
C	65mm ditto	50	LM		
	<b><u>Extra over Pipework</u></b>				
D	100mm diameter elbow	8	No		
E	75mm -ditto-	6	No		
F	50mm -ditto-	6	No		
G	100mm equal tee	3	No		
H	75 x 75 x 65mm reducing tee	3	No		
	<b><u>Valves</u></b>				
I	100mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 1952, with wheel and head joints to steel tubing. The gate valve to be as 'PEGLER' or equal.	2	No.		
J	75mm ditto	1	No.		
K	50mm ditto	1	No.		
	<b><u>Valve Chamber</u></b>				
L	Standard precast concrete valve chamber of size 450 x 450 x 450mm deep made of concrete (1:3:6) base, including formwork, excavations backfilling and disposal.	2	No		
	<b><u>Water Connection</u></b>				
M	Allow for connection from water supply line, borehole supply line, to the utiliiies and fire systems	1	Item		
<b>Sub-total carried forward to collection page 411</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b><u>Water Transfer Pumpset</u></b>				
A	Supply and install a water transfer pumpset comprising the following components: - Two identical centrifugal pumps, one duty, the other standby mounted on a common base frame together with the other components.				
	Each pump shall have a duty of 5 m <sup>3</sup> /hr. against a 30m head as 'Grundfos CR 15-3' series or equal. - 60 L diaphragm tank (pressure vessel) as Varem or approved equivalent). - Pressure switch and pressure gauge - GMS Pipe work connections including tank connections, 50mm foot valve with strainer, suction & discharge manifold, isolating valves, non-return valves Control shall be effected via a pressure switch through a pre-wired control panel which shall give automatic change-over from duty to standby pump within 5 seconds should the duty pump fail to deliver for any reason. - Control panel mounted on the same base frame as pumpset and presure vessel with contactors, over voltage and under voltage protection relays, MCBs, phase failure protection, timer, All these shall be housed in a lockable cabinet (with integral isolator) made from SWG 18 mild steel sheet in oven baked 'white' powder coated colour c/w with indicator lights. It should include a change-over switch to enable the pumps to work alternately	1	Set		
	<b><u>Electrical Works</u></b>				
B	Allow for electrical works incuding wiring and fitting to all pumps, control panel and float switches, from power room within 50 metres distance.	1	Item		
	<b><u>Sterilization</u></b>				
C	Allow for flushing out and sterilizing the whole system with chlorine to approval	1	Item		
	<b><u>Testing and commissioning</u></b>				
D	Allow for testing and commissioning of the Tanks and associated pipework installations	1	Item		
<b>Sub-total carried forward to collection page 411</b>					

Water Tanks Collection Page

Item	Description	Amount (Kshs)
A	Sub-total brought forward from page 408	
B	Sub-total brought forward from page 409	
C	Sub-total brought forward from page 410	
<b>Total for Low Level Water Tanks carried forward to the Storage Collection Page 415</b>		



**1 Low Level Water Tanks**

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>HIGH LEVEL WATER TANKS</b>				
A	High level water storage tank as " <b>Braithwaite</b> " or equal made of <b>6mm thick</b> pressed, <b>hot-dip galvanised</b> mild steel sectional plates, and of size <b>1220mm x 1220mm</b> .	1	Item		
	Free board capacity of tank to be 84,956 Litres of preferred dimensions 6,100 x 6,100 by 2,440mm high. All pipe connections namely: supply inlet pipe, outlet pipe, overflow pipe, tank washout, warning pipe to be in place. The tank to be complete with: <ul style="list-style-type: none"> <li>- 1 No. Highly visible Water Level Indicator</li> <li>- 1 No. Lockable, hinged Steel Manhole Cover</li> <li>- 1 No. internal Ladder</li> <li>- Appropriate float valve chamber</li> <li>- 1 No. External Ladder to platform level with safety cage</li> <li>- Pitched dustproof and weatherproof tank cover made of hot-dip galvanised 3mm steel sheets capable of withstanding loading imposed by the maintenance personnel.</li> <li>- All necessary clests, stays, braces, rafters and reinforcements</li> <li>- All necessary bolts, nuts, washers, sealing and insulation material.</li> </ul> Tank connections include 50mm inlet, 75mm outlet, 100mm overflow and 100mm washout The tank to come accompanied by 4 No. 6mm thick, 50mm wide flate plate 3,660mm long for laying below tank flanges.				
	<b>24 Meter Steel Tower - Galvanised</b>				
B	Hot Dip Galvanized steel tower <b>24 metres</b> high from GROUND to BOTTOM of HIGH LEVEL TANK. The tower is fit and carry the <b>84,956</b> Litres high level water tank of preferred dimensions 6,100 x 6,100 by 2,440mm high The tower structure to comprise of: <ul style="list-style-type: none"> <li>- Reinforced concrete stub columns to carry tower stancheons complete with fixing bolts</li> <li>- Galvanised steel structure comprising SHS stancheons bolted to stub columns, diagonal bracings, I-beams, SHS platform bedding and chequered plate</li> <li>- Ballustrading made of SHS ballusters, CHS top railing welded and finished in metallic grey gloss oil</li> </ul>	1	Item		
<b>Total for High Level Water Tank carried forward to the Storage Collection Page 415</b>					

**Bill No. 4: Water Treatment Plant**

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>Water treatment plant</b>				
A	Carry out a bacteriological and chemical analysis of the raw water as directed by the engineer	1	Item		
B	<p>Supply a water treatment plant for rain water harvesting that is to be used for domestic purpose. The raw water quality is that containing suspended particles, silt and bacteria. The water treatment process desired from the plant is flocculation, settlement, filtration and chlorination. The plant output capacity of <b>500 l/hr.</b></p> <p>The plant to have the following items:</p> <ul style="list-style-type: none"> <li>- a <b>1200 L</b> sedimentation basin of upward flow with a conical base and sludge bleed capable of achieving a retention time of 2.4 hrs.,</li> <li>- an inline flow meter to adjust and monitor the plant's output,</li> <li>- a chemical tank,</li> <li>- a chemical pump to allow for chemical dosage automatically that shall be set at 2% dosage rate from a 100l concentrate tank,</li> <li>- a balance tank of capacity 150L,</li> <li>- a transfer pump with a maximum delivery pressure of 3bars and flow rate to match output desired from the plant such as Pedrollo PKm 60 with 0.37kW and 240VAC or equal,</li> <li>- a filter suitable for pumped installation deep bed GRP pressure sand filter with simple to use multiport valve</li> </ul> <p>and all pipework for satisfactory functioning</p>	1	Item		
	<b>Builders Works</b>				
C	Allow for the building of a platform for the above treatment plant and its foundation as will be directed by the structural engineer once the plant to be supplied has been approved by the engineer.	1	Item		
	<b>Electrical Works</b>				
D	Allow for electrical works including wiring and fitting to all pumps, control panel and float switches, from power room within 50 metres distance.	1	Item		
<b>Total for Water Treatment Plant carried forward to the Storage Collection Page</b>					
<b>415</b>					

**Rainwater goods**

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	Allow for a standard 300 x 300 x 450mm masonry gully trap complete with concrete cover.	15	No.		
	<b>Manholes and Inspection Chambers</b>				
B	Construct inspection chamber size 600 x 450mm and averaging 750mm deep constructed in 100mm thick concrete base (1:3:6), approved 150mm block sides rendered all around in cement and sand (1:4). It shall have an approved heavy duty cast iron cover and frame as manufactured by E.A Foundry works. Include all necessary excavations, disposal and form work. To be as manhole type 'A'.	2	No.		
	<b>Rainwater Items</b>				
C	Gutter 3 metre	1	No.		
D	Gutter 6 metre	1	No.		
E	Internal gutter angle	1	No.		
F	External gutter angle	1	No.		
G	Union clip	1	No.		
H	Fascia bracket	1	No.		
I	Gutter outlet	1	No.		
J	Downpipe bend 90 degrees	1	No.		
K	Plain down pipe 3 metre	1	No.		
L	Downpipe clip	1	No.		
M	Downpipe shoe	1	No.		
N	Stopend	1	No.		
O	Loose pipe socket	1	No.		
	<b>Testing and Commissioning</b>				
P	Allow for testing and commissioning of the plumbing and drainage installations to the	1	Item		
<b>Total for Rain Water Goods carried forward to the Storage Collection Page 415</b>					

**Water Storage and Rain Water Harvesting Collection Page**

<b>Item</b>	<b>Description</b>	<b>Amount (Ksh)</b>
A	Total for Low Level Water Tanks b/f from 411	
B	Total for High Level Water Tanks b/f from 412	
C	Total for Water Treatment Plant b/f from 413	
D	Total for Rain Water Goods b/f from 414	
	<b>Total for Water Storage, Rain Water Harvesting, Water Treatment Plant Works carried forward to the Summary Page 420</b>	

**Bill No. 3.8: SOLAR WATER HEATING INSTALLATIONS**

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	<b>SOLAR WATER HEATING INSTALLATIONS</b>				
	Supply, delivery, installation, testing and commissioning of the solar hot water system appliances complete with all accessories including connections to the services, jointing to water supply, overflows, supports and all plugging and screwing to walls & frames.				
	The system has been designed for a direct heating pump circulation solar water heater. An indirect system is acceptable provided the supplier provides the calculation data and the system componenets but the supplier has to price on these bills schedule (if in doubt ask the Chief Engineer Mechanical (BS) before returning the tender. note that providing your own bill will be deemed as a counter offer)				
A	<b><u>Solar hot water storage cylinder (Calorifier)</u></b>	4	No		
	The storage cylinder shall be high pressure fabricated from 5.0mm thick mild steel plate and hot dipped galvanised after manufacture, suitable for vertical mounting. The insulation shall be polyurethane foam 50mm thick injected in the void between outer wall of the storage tank and the outer casings. The outer casing shall be mild steel sheet 24 gauge finished in two coats gloss paint with a red oxide undercoat.The cylinder capacity and connections shall be as follows:-				
	Capacity: <b>2000 Litres</b>				
	<b>connections;</b>				
	-40m diameter water supply feed				
	-50mm diameter hot water outlet				
	-25mm diameter water supply to solar panels				
	-50mm dia. Hot water return from solar panels				
	-40mm diameter drain				
	-65mm diameter automatic air release valve				
	-3No. heating element of 5 kW				
<b>Sub total carried forward to collection page 419</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	<b>Solar Panels</b>				
	Solar panels shall be as 'Thermafin' solar panels manufactured by solatec ltd or equal with heat exchanger of copper tubes, 50mm fibre glass insulation, copper sheet absorber plate and all the necessary inter connetors, dielectric union, washout valves,inlet and outlet valves etc with approximately 2.0 M <sup>2</sup> nett absorbing area.	62	No.		
B	<b>Supporting Frames</b>				
	Allow for support 3mm hollow tubes mild steel angle iron fixed on roof for the above solar panels	62	No.		
C	<b>Wiring</b>				
	Allow for all wiring to booster heater from local isolator 10m from tank supplied by others for the solar heating system	1	Item		
D	Temperature/pressure safety valve set to release when the water in the tanks exceed 85°C as manufactured by Spirax Sarco Model No. SV11 Pop Type or equal and approved.	4	No.		
E	<b>Non- Return Valves</b>				
	40mm diameter screwed -in cap, lift type disc bronze non-return valve to BS 5154 PN 32 for series 'B' ratings.	4	No.		
F	<b>Insulation</b>				
	Insulation/Gladding of pipes on the roof space and ducts.	120	Lm.		
G	<b>Dial Thermometer</b>				
	Dial Thermometer with 100mm diameter dial chart and graduated from 0°c to 100°c to be fitted to Engineer's approval.	8	No		
H	<b>Automatic Air Eliminator</b>				
	Air relief valve as manufactured by "Spirax Sarco" model No. AES 50 Air Eliminators for use on hot water services.	2	No		
<b>Sub total carried forward to collection page 419</b>					

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	<b>Pressure gauge</b>				
	Pressure gauge as manufactured by Honeywell to be fitted as instructed by the Engineer	4	No		
B	<b>Pipework</b>				
	Associated solar flexible pipework and pipework fittings/accessories suitable for the system and to sanitary fittings in the building (check plumbing drawings for hot water supply).	120	Lm		
C	<b><u>Circulation Pumps</u></b>				
	Circulation pumpset, one duty, the other standby mounted on a frame with a mild steel base plate. Each pump shall have a duty 0.2 m <sup>3</sup> /hr. against 15m head as Grundfos hot water circulation pumps or approved equivalent. In addition, the pump shall be supplied complete with electric contactors fitted with overloads and automatic change-over from duty to standby pump within 5 seconds should the duty pump fail to deliver for any reason. The pumpset shall include all non-returns valves, timer, isolating valves and pipe connections.	4	Set		
D	<b><u>Temperature differential controls</u></b>				
	The circulation pumps shall be controlled by temperature differential control unit as manufactured by 'fieldway ltd', with adjustable time delay circuit suitable for control of pump. The unit shall have a robust electric temperature sensing device for measuring temperature differences between two points. The sensing circuit of the unit should be stable over 5°c to 60°c temperature range. Allow for wiring from the service isolator to differential control to sensors in solar cylinder and pump.	8	No		
E	Allow for all electrical works associated with entire solar system	1	Item		
F	<b>Control Panel</b>				
	Solar Contoller with 7 Sensor for accuracy between wide area of panels. Heavy duty 3-Phase Water Poof solar controllers that will control the pumps circulate the thermal fluid at appropriate times together with functions to contrl bacteria bulid up and over heating + contactor box	4	No		
G	Allow for flushing out and sterilizing the whole system with chlorine.	1	Item		
H	Testing and Commissioning of the solar water heating installations	1	Item		
<b>Sub total carried forward to collection page 419</b>					

**SOLAR WATER HEATING COLLECTION PAGE**

Item	Description	Amount (Ksh)
1	sub total brought forward from page 416	
2	sub total brought forward from page 417	
3	sub total brought forward from page 418	
<p align="center"><b>Totals for Solar Water Heating Installation Works Carried to the Summary Page 420</b></p>		



**MAIN SUMMARY PAGE**

ITEM	DESCRIPTION	AMOUNT (KSHS)
A	Total for preliminaries brought forward from Collection Page... <b>407</b>	
B	Total for Water Storage, Rain Water Harvesting, Water Treatment Plant Works brought forward from the Collection Page..... <b>415</b>	
C	Total for Solar Water Heating Installation Works brought forward from the Collection Page..... <b>419</b>	
<p align="center"><b>TOTAL FOR RAIN WATER HARVESTING, WATER STORAGE, WATER TREATMENT PLANT AND SOLAR WATERHEATING CARRIED FORWARD TO VOLUME 1 OF 3 SUMMARY PAGE 160</b></p>		

Amount in Kenya Shillings .....

.....

.....

Period of Execution of the works.....

Tenderers Name & Stamp.....

.....

SIGNATURE.....

DATE.....

IN NO.....

VAT CERTIFICATE

NO.....

(Provide copy)

(Provide copy)

WITNESS' NAME.....

OCCUPATION.....

SIGNATURE.....

DATE.....

**SCHEDULE OF UNIT RATES**

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorized variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted

ITEM	DESCRIPTION	UNIT	RATE (Kshs)
A	Painted Pressed sectional steel tank of 120m <sup>3</sup> and 6mm plate	Item	
B	100mm HDPE pipe, PN 10	LM	
C	50mm Ditto	LM	
D	15m <sup>3</sup> /hr Grundfos Pumpset	Item	
E	75mm PPR pipe	LM	
F	63mm –ditto	LM	
G	1,000 l/hr. Water treatment plant	Item	
H	1,000 litre calorifier	Item	
I	2m <sup>2</sup> Vacuum tube Solar Water collector with copper heat tube	Item	

### TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

1. The technical schedule shall be submitted by tenderers to facilitate and enable the Project Manager to evaluate the tenders, especially where the tenderer intends to supply or has based his tender sum on equipment which differs in manufacture, type or performance from the specifications indicated by the Project Manager/Engineer.
2. This schedule shall form part of the technical evaluation criterion, and tenderers are therefore advised to complete the schedule as they shall be considered non responsive.

**NB.** The tenderer must complete in full the technical schedule. Apart from the information required in the technical schedule, the tenderer **MUST SUBMIT LEGIBLE** comprehensive manufacturer's technical brochures and performance details for all items listed in this schedule and **CLEARLY HIGHLIGHT THE SPECIFIC REQUIRED ITEM ONLY.**

S/NO	DESCRIPTION	MANUFACTURER	COUNTRY OF ORIGIN	REMARKS (Catalogue No. etc.)
A	Pressed Steel Tank			
B	GMS Pipe			
C	Gate Valve			
D	Water Transfer Pump set			
E	Water Treatment Plant			
F	Gutters			
G	Calorifier			
H	Solar Water Heating Panel			
I	Circulator Pump			

**Catalogue must be attached for all the items in the schedule of material above**

SECTION F:  
STANDARD FORMS

**NOTE:**

ALL FORMS IN THIS SECTION MUST BE FILLED AS THEY SHALL BE PART OF THE  
EVALUATION CRITERIA

*STANDARD FORMS*

**CONTENTS**

<u>FORM</u>	<u>PAGE</u>
1. KEY PERSONNEL.....	62
2. CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS.....	63
3. SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS.....	65

**1 KEY PERSONNEL**

Qualifications and experience of key personnel proposed for administration and execution of the Contract.

POSITION	NAME	YEARS OF EXPERIENCE (GENERAL)	YEARS OF EXPERIENCE IN PROPOSED POSITION
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

I certify that the above information is correct.

.....  
Title

.....  
Signature

.....  
Date

**2 CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS**

Work performed on works of a similar nature and volume over the last five years.

PROJECT NAME	NAME OF CLIENT	TYPE OF WORK AND YEAR OF COMPLETION	VALUE OF CONTRACT (Kshs.)

I certify that the above works were successfully carried out and completed by ourselves.

.....  
Title

.....  
Signature

.....  
Date

**3 SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR CARRYING OUT THE WORKS**

ITEM OF EQUIPMENT	DESCRIPTION, MAKE AND AGE (Years)	CONDITION (New, good, poor) and number available	OWNED, LEASED (From whom?), or to be purchased (From whom?)