KENYA FORESTRY RESEARCH INSTITUTE (KEFRI)
MUGUGA,
OFF NAIROBI – NAIVASHA ROAD

P.O. Box 20412-00200
NAIROBI
Email: tenders@kefri.org

TENDER NAME: PROPOSED BOREHOLE DRILLING AND EQUIPING, SOLARIZATION AND INSTALLATION OF 3M³/H REVERSE OSMOSIS (RO) PLANT AT TIVA AND KITUI

TENDER REFERENCE NO. KEFRI/ONT/007/2024-2025

Lot No.	Location	Estimated Borehole Depth
LOT 1	KEFRI-DERP -REGIONAL OFFICE - KITUI TOWN AREA	220 M
LOT 2	KEFRI-DERP REGIONAL OFFICE - TIVA CENTRE-KWAVONZA	250 M

RELEASE DATE: THURSDAY 6TH FEBRUARY 2024

CLOSING DATE: THURSDAY 20TH FEBRUARY 2025 AT 11:30 AM

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INVITATION TO TENDER

1. The *Error! Reference source not found.*(KEFRI), invites sealed Tenders from eligible Kenyan contractors, r egistered in **category NCA 7 and above** and **licensed by the Ministry of Water, Sanitation and Irrigation under drilling, equipping and servicing of boreholes class D** for **Borehole Drilling and Equipping, Solarization and Installation of 3m^3/h Reverse Osmosis (ro) plant for the Kenya Forestry Research Institute (KEFRI) at Tiva and Kitui sub-centers**

2. Tendering will be conducted under open competitive method (National) using a standardized tender document. Tenderng 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 **0800hrs to 1700hrs** atthe address given below.

The Kenya Forestry research Institute Headquarters - Muguga,
Off Nairobi – Naivasha Road
Supply Chain Management Office
Manager – Supply Chain Management
P.O. Box 20412-00200
NAIROBI
Email: tenders@kefri.org

Tel: 0722157414/0724259781/0734251888

4. A complete set of tender documents may be purchased or obtained by interested tenderers upon payment of a non-refundable fee of KES 1000 in cash or banker's cheque payable to the address given below. Tender Documents can also be obtained electronically from the Website(s) https://www.kefri.org/components/tenders/tenders.html or https://tenders.go.ke/ . Tender documents obtained electronically will be free of charge.

5. Tenderers who download the tender document and intend to submit the tender MUST forward their particulars immediately to tenders@kefri.org to facilitate any further clarification or addendum. Tenderers shall indicate the following; Tender reference number including the Lot number, Tender name, Official email address and Telephone number, Full name and designation of the person to be contacted. *The Procuring Entity* will not be liable for failure of delivery of the Clarification /Addenda to the indicated contacts, therefore the tenderers are reminded to reconfirm their contacts before emailing. For Clarification of Tender purposes only, the Procuring Entity's address is:

   Attention: **Manager, Supply Chain Management Office**
   Postal Address: **P.O. Box 20412-00200 Nairobi**
   Physical Address: *Error! Reference source not found.*, **Muguga, Off Nairobi – Naivasha R oad**

   Electronic mail address: tenders@kefri.org

6. Tenders shall be quoted in Kenya Shillings and shall include all Levies & taxes. Tenders shall remain valid for 120 days from the date of opening of tenders.

7. All Tenders must be accompanied by a **Tender Security or Tender-Securing Declaration** of Kshs 200,000.00 Tender Security shall be in the form of cash, a bank guarantee, a guarantee by an insurance company registered and licensed by the insurance regulatory authority listed by the Public Procurement Regulatory Authority (PPRA) or a guarantee issued by a financial institution approved and licensed by the Central bank of Kenya and be **valid for 120 days from the date of tender opening.** Tender Securing Declaration for youth, women and persons with disability is mandatory.

8. **A tenderer can bid for one or more lots. Each Tender should clearly indicate the tender number and the lot number. A tenderer can be awarded contracts for more than one lot depending on the Best Evaluated**

Tender for each lot. A tenderer having more than one bid for one lot will be disqualified.

9. The Tenderer shall chronologically serialize all pages of the tender documents submitted.

10. Completed tenders must be delivered to the address below on or before tender closing date on or before **Thursday, 20th February 2025 at 11:30 AM. Bids shall be** opened immediately after the deadline date and time specified above or any deadline 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

The Kenya Forestry Research Institute Headquarters - Muguga,
Off Nairobi – Naivasha Road
Supply Chain Management Office
Manger – Supply Chain Management
P.O. Box 20412-00200
NAIROBI

Email: tenders@kefri.org

Tel: 0722157414/0724259781/0734251888

B. Address for Submission of Tenders.

The Director
The Kenya Forestry Research Institute,
P.O. Box 20412-00200
NAIROBI

Large tenders that cannot be dropped in the tender box shall be received and registered in the tender register on or before the tender closing date and time.

C. Address for Opening of Tenders.

The Kenya Forestry Research Institute,
Auditorium Hall
Designation; Manager – Supply Chain Management

For: Director KEFRI

PART 1 - TENDERING PROCEDURES

SECTION I: INSTRUCTIONS TO TENDERERS

A General Provisions

1. 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.**

2. 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 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.

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 being tendered for. The Procuring Entity shall indicate in the **TDS** firms (if any) that provided consulting services for the contract being tendered for. The Procuring Entity shall check whether the owners or controllers of the Tenderer are same as those that provided consulting services. The Procuring Entity shall, upon request, make available to any tenderer information that would give such firm unfair competitive advantage over competing firms.

3. Eligible Tenderers

3.1. A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.7 or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. Public employees and their close relatives *(spouses, children, brothers, sisters and uncles and aunts)* are not eligible to participate in the tender. 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. 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; or

b) Receives or has received any direct or indirect subsidy from another tenderer; or

c) Has the same legal representative as another tenderer; or 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; or

d) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender; or

e) any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Engineer for the Contract implementation; or

f) 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 or

g) Has a close business or family relationship with a professional staff of the Procuring Entity who:

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. would be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.

4.4 A tenderer shall not be involved in corrupt, coercive, obstructive, collusive, or fraudulent practice. A tenderer that is proven to have been involved any of these practices shall be automatically disqualified.

4.5 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. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender. 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.

4.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.8.A 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 subcontractors or sub- consultants for any part of the Contract including related Services.

4.7 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.

4.8 Tenderers that are state-owned enterprises or institutions may be eligible to compete and be awarded a Contract(s) only if they are accredited by PPRA to be (i) a legal public entity of the state 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.

4.9 A Firms and individuals may be ineligible if their countries of origin (a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country, or (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.

4.10 Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, subcontracts, and labour) from national 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 in for this purpose is be provided in *"SECTION III - EVALUATION AND QUALIFICATION CRITERIA, Item 9".*

4.11 Pursuant to the eligibility requirements of ITT 4.10, a tender is considered a foreign tenderer, if the tenderer is not registered in Kenya or if the tenderer is registered in Kenya and has less than 51 percent ownership by Kenya

4.12 Citizens. JVs are considered as foreign tenderers if the individual member firms are not registered in Kenya or if are registered in Kenya and have less than 51 percent ownership by Kenyan citizens. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.

4.13 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.

4.14 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

4.15 A Kenyan tenderer shall provide evidence of having fulfilled his/her tax obligations by producing a valid tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority.

5. 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 eligible 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. 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 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 at 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 all 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 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. 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 8.

PART 1 Tendering Procedures

i. Section I - Instructions to Tenderers (ITT)
ii. Section II - Tender Data Sheet (TDS)
iii. Section III - Evaluation and Qualification Criteria
iv. Section IV - Tendering Forms

PART 2 Works Requirements

i. Section V - Drawings
ii. Section VI - Specifications
iii. Section VII - Bills of Quantities

PART 3 Conditions of Contract and Contract Forms

i. Section VIII - General Conditions of Contract (GCC)
ii. Section IX - Special Conditions of Contract (SC)
iii. Section X - Contract Forms

6.2 The Invitation to Tender Document (ITT) issued by the Procuring Entity is not part of the Contract documents.

6.3 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 the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 8. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

6.4 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.

7. Site Visit

7.1 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the Site of the Required Services and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for the Services. The costs of visiting the Site shall be at the Tenderer's own expense.

8. Pre-Tender Meeting

8.1 The Procuring Entity shall specify in the **TDS** if a pre-tender meeting will be held, when and where. The Procuring Entity shall also specify in the **TDS** if a pre-arranged pretender site visit will be held and when. The Tenderer's designated representative is invited to attend a pre-arranged pretender visit of the site of the works. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

8.2 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.

8.3 Minutes of the pre-Tender meeting and the pre-arranged pretender site visit of the site of the works, 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 in accordance with ITT 6.3. Minutes shall not identify the source of the questions asked.

8.4 The Procuring Entity shall also promptly publish anonym zed (*no names*) Minutes of the pre-Tender meeting and the pre-arranged pretender visit of the site of the works at the web page identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-tender meeting and the pre-arranged pretender site visit, 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. Nonattendance at the pre-Tender meeting will not be a cause for disqualification of a Tenderer.

9. Clarification and amendments of Tender Documents

9.1 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 and the pre-arranged pretender visit of the site of the works if provided for in accordance with ITT 8.4. 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 6.3, including a description of the inquiry but without identifying its source. If 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 appropriately following the procedure under ITT 8.4.

10. Amendment of Tendering Document

10.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tendering document by issuing addenda.

10.2 Any addendum issued shall be part of the tendering document and shall be communicated in writing to all who have obtained the tendering document from the Procuring Entity in accordance with ITT 6.3. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's web page in accordance with ITT 8.4.

10.3 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity shall extend, as necessary, the deadline for submission of Tenders, in accordance with ITT 25.2 below**.**

C. Preparation of Tenders

11. Cost of Tendering

11.1 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.

12. Language of Tender

12.1 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.

13. Documents Comprising the Tender

13.1 The Tender shall comprise the following:

i. Form of Tender prepared in accordance with ITT 14;
ii. Schedules including priced Bill of Quantities, completed in accordance with ITT 14 and ITT 16;
iii. Tender Security or Tender-Securing Declaration, in accordance with ITT 21.1;
iv. Alternative Tender, if permissible, in accordance with ITT 15;
v. Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 22.3;
vi. Qualifications: documentary evidence in accordance with ITT 19establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
vii. Conformity: a technical proposal in accordance with ITT 18;
viii. Any other document required in the **TDS**.

13.2 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 Agreement. The Tenderer shall chronologically serialize pages of all tender documents submitted.

13.3 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**.**

14. Form of Tender and Schedules

14.1 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.

15. Alternative Tenders

15.1 Unless otherwise specified in the **TDS**, alternative Tenders shall not be considered.

15.2 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.

15.3 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. 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.

16. Tender Prices and Discounts

16.1 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.

16.2 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.

16.3 The price to be quoted in the Form of Tender, in accordance with ITT 14.1, shall be the total price of the Tender, including any discounts offered.

16.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 14.1.

16.5 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.

16.6 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 16.4, provided the Tenders for all lots (contracts) are opened

at the same time.

16.7 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.

17. Currencies of Tender and Payment

17.1 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 Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya shall device own ways of getting foreign currency to meet those expenditures.

18. Documents Comprising the Technical Proposal

18.1 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, in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

19. Documents Establishing the Eligibility and Qualifications of the Tenderer

19.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT 4.

19.2 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.

19.3 A margin of preference will not be allowed. Preference and reservations will be allowed, individually or in joint ventures. Applying for eligibility for Preference and reservations shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.

19.4 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 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.

19.5 The purpose of the information described in ITT 19.4 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.

19.6 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 6.3. 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.

19.7 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.

19.8 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.

19.9 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,
iii. the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other persons have committed any criminal offence.

19.10 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 ITT 6.7 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 tenderer.

20. Period of Validity of Tenders

20.1 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 24). A Tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

20.2 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. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 21.1, 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, except as provided in ITT 20.3.

20.3 If the award is delayed by a period exceeding the number of days to be specified in the **TDS** days beyond the expiry of the initial tender validity period, the Contract price shall be determined as follows**:**

i. in the case of **fixed price** contracts, the Contract price shall be the tender price adjusted by the factor specified in the **TDS**;
ii. in the case of **adjustable price** contracts, no adjustment shall be made; or in any case, tender evaluation shall be based on the tender price without taking into consideration the applicable correction from those indicated above.

21. Tender Security

21.1 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**.**

21.2 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:

a) an unconditional Bank Guarantee issued by reputable commercial bank); or
b) an irrevocable letter of credit;
c) a Banker's cheque issued by a reputable commercial bank; or
d) another security specified **in the TDS**,

21.3 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 20.2.

21.4 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.

21.5 If a Tender Security is specified pursuant to ITT 21.1, 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 nonresponsive or a bidder declines to extend tender validity period.

21.6 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**.

21.7 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 thereto provided by the Tenderer; or

b) if the successful Tenderer fails to:

i. sign the Contract in accordance with ITT 50; or

ii. furnish a Performance Security and if required in the **TDS**, and any other documents required in the **TDS**.

21.8 Where tender securing declaration is executed, the Procuring Entity shall recommend to the PPRA that PPRA debars the Tenderer from participating in public procurement as provided in the law.

21.9 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.

21.10 A tenderer shall not issue a tender security to guarantee itself.

22. Format and Signing of Tender

22.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 13 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 15, 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.

22.2 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.

22.3 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.

22.4 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 to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

22.5 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

23. Sealing and Marking of Tenders

23.1 Depending on the sizes or quantities or weight of the tender documents, a tenderer may use an envelope, package, or container. 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 15, 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.

23.2 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 that are misplaced or opened prematurely will not be accepted.

24. Deadline for Submission of Tenders

24.1 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**.

24.2 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.

25. Late Tenders

25.1 The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 24. 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.

26. Withdrawal, Substitution, and Modification of Tenders

26.1 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 22.3, (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 22 and ITT 23 (except that withdrawals 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 24.

26.2 Tenders requested to be withdrawn in accordance with ITT 26.1 shall be returned unopened to the Tenderers.

26.3 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.

27. Tender Opening

27.1 Except in the cases specified in ITT 23 and ITT 26.2, 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 24.1, shall be as specified in the **TDS**.

27.2 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.

27.3 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.

27.4 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.

27.5 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.

27.6 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 Bills of Quantities are to be initialed by the members of the tender opening committee attending the opening. The number of representatives of the Procuring Entity to sign shall be specified in the **TDS**.

27.7 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 25.1).

27.8 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 one was required.
e) number of pages of each tender document submitted.

27.9 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 upon request.

E. Evaluation and Comparison of Tenders

28. Confidentiality

28.1 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 46.**

28.2 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.

28.3 Notwithstanding ITT 28.2, 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.**

29. Clarification of Tenders

29.1 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 33.

29.2 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.

30. Deviations, Reservations, and Omissions

30.1 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.

31. Determination of Responsiveness

31.1 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 13.

31.2 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; or

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; or

c) if rectified, would unfairly affect the competitive position of other tenderers presenting substantially responsive tenders.

31.3 The Procuring Entity shall examine the technical aspects of the tender submitted in accordance with ITT 18, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation, or omission.

31.4 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.

32. Non-material non-conformities

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

32.2 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, to rectify nonmaterial 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.

32.3 Provided that a tender is substantially responsive, the Procuring Entity shall rectify quantifiable nonmaterial 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.**

33. Arithmetical Errors

33.1 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.

33.2 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, and 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

33.3 Tenderers shall be notified of any error detected in their bid during the notification of a ward.

34. Currency provisions

34.1 Tenders will priced be in Kenya Shillings only. Tenderers quoting in currencies other than in Kenya shillings will be determined non-responsive and rejected.

35. Margin of Preference and Reservations

35.1 No margin of preference shall be allowed on contracts for small works.

35.2 Where it is intended to reserve the contract to specific groups under Small and Medium Enterprises, or enterprise of women, youth and/or persons living with disability, 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/firms belonging to those specified groups are the only ones eligible to tender. Otherwise if no so stated, the invitation will be open to all tenderers.

36. Nominated Subcontractors

36.1 Unless otherwise stated in the **TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Procuring Entity.

36.2 Tenderers may propose subcontracting 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.

36.3 The 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 by the Procuring Entity in the **TDS** as can 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.

37. Evaluation of Tenders

37.1 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 Best Evaluated Tender in accordance with ITT 40.

37.2 To evaluate a Tender, the Procuring Entity shall consider the following:

a) price adjustment due to discounts offered in accordance with ITT 16;
b) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT39;
c) price adjustment due to quantifiable nonmaterial non-conformities in accordance with ITT 30.3; and
d) any additional evaluation factors specified **in the TDS** and Section III, Evaluation and Qualification Criteria.

37.3 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.

37.4 In the case of multiple contracts or lots, Tenderers shall be allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the **Form of Tender, is specified in Section III, Evaluation and Qualification Criteria.**

38. Comparison of Tenders

38.1 The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders established in accordance with ITT 38.2 to determine the Tender that has the lowest evaluated cost.

39. Abnormally Low Tenders

39.1 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.

39.2 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.

39.3 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.

40. Abnormally High Tenders

40.1 An abnormally high 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.

40.2 In case of an abnormally high tender 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:

a) 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.
b) 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.

40.3 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**.**

41. Unbalanced and/or Front-Loaded Tenders

41.1 If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or front loaded, 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.

41.2 After the evaluation of the information and detailed price analyses presented by the Tenderer, the Procuring Entity may as appropriate:

a) accept the Tender; or
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; or
c) agree on a payment mode that eliminates the inherent risk of the Procuring Entity paying too much for undelivered works; or
d) reject the Tender,

42. Qualifications of the Tenderer

42.1 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.

42.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 19. 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 Subcontractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.

42.3 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.

42.4 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.

42.5 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.

42.6 After evaluation of the price analyses, if 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.

43. Best Evaluated Tender

43.1 Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Best Evaluated Tender. The Best 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.

44. Procuring Entity's Right to Accept Any Tender, and to Reject Any or All Tenders.

44.1 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 thereby incurring any liability to Tenderers. In case of annulment, all Tenderers shall be notified with reasons and all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

F. Award of Contract

45. Award Criteria

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

Contract

or to the expiry of the Tender Validity Period the Procuring Entity shall issue a Notification of Intention to Enter into a Contract / ers 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) instructions on how to request a debriefing and/or submit a complaint during the standstill period;

earlier than the expiry of a Stand still Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one l Period shall not apply.

, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter **into a derer.**

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's Notification of Intention to Enter into a Contract referred to in ITT 46, an unsuccessful tenderer may make a written request to ng on specific issues or concerns regarding their tender. The Procuring Entity shall provide the debriefing within five days of

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

alidity Period and upon expiry of the Standstill Period specified in ITT 42.1, upon addressing a complaint that has been filed ocuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer y within 21days of the date of the letter.

ays of the Notification of Intention to enter into contract and upon the parties meeting their respective statutory requirements, the ccessful Tenderer the Contract Agreement.

pt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.

ed into within the period specified in the notification of award and before expiry of the tender validity period

person named in the **TDS** to be appointed as Adjudicator under the Contract, at the hourly fee specified in the **TDS**, plus derer disagrees with this proposal, the Tenderer should so state in his Tender. If, in the Letter of Acceptance, the Procuring Entity of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the Special Conditions of Contract he General Conditions of Contract (GCC), to appoint the Adjudicator.

receipt of the Letter of Acceptance from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, he **TDS**, in accordance with the General Conditions of Contract, subject to ITT 40.2 (b), using the Performance Security and X, Contract Forms, or another form acceptable to the Procuring Entity. A foreign institution providing a bank guarantee shall have on located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent bank is not required.

Failure of the successful Tenderer to submit the above-mentioned Performance Security and other documents Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Contract to the Tenderer offering the next Best Evaluated Tender.

required for contracts estimated to cost less than Kenya shillings **five million shillings.**

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the contract, the Procuring Entity shall publish the awarded contract at its notice boards and websites; and on the Website of the otice 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 read out at Tender opening.

s and Administrative Review

ement-related Complaints are as specified in the **TDS**.

w 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.

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	A. General
ITT 1.1	The name of the contract is **PROPOSED BOREHOLE DRILLING AND EQUIPING, SOLARIZATION AND INSTALLATION OF 3M³/H REVERSE OSMOSIS (RO) PLANT AT TIVA AND KITUI SUB-CENTRES** The reference number of the Contract is TENDER NO**. KEFRI/ONT/007/2024-2025** The number and identification of lots (contracts) comprising this Tender are; LOT 1- KEFRI- KITUI REGIONAL OFFICE LOT2 -KEFRI -KITUI -TIVA CENTRE
ITT 2.3	The Information made available on competing firms is as follows: **Specifications, descriptions, and bills of quantities in these tender documents**
ITT 2.4	The firms that provided consulting services for the contract being tendered for are: Ministry of Water, sanitation and Irrigation -**State Department for Irrigation**_____
ITT 3.1	Maximum number of members in the Joint Venture (JV) shall be: ***N/A***
B. Contents of Tender Document	
ITT8.1	(A) Pre-Tender conference *"shall not"* take place. (B) A pre-arranged pretender visits of the site of the works *"shall not"* take place. If demanded by the contractor then it will be at the contractors' expenses
ITT 8.2	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than **3** days prior to opening of tenders
ITT 8.4	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender site visit will be __ **N/A**_____
ITT 9.1	For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is: **Manager, Supply Chain Management.** **Email address: tenders@kefri.org** Postal Address: **THE KENYA FORESTRY RESEARCH INSTITUTE, P.O. Box 20412-00200 Nairobi** Physical Address: *Error! Reference source not found.* **THE KENYA F ORESTRY RESEARCH INSTITUTE Muguga, Off Nairobi – Naivasha Road**
C. Preparation of Tenders	
ITT 13.1 (h)	**The Tenderer shall submit the following additional documents in its Tender: All documents required in the evaluation criteria**
ITT 15.1	Alternative Tenders **shall not be** considered.
ITT 15.2	Alternative times for completion **shall not be** permitted.
ITT 15.4	Alternative technical solutions shall be permitted for the following parts of the

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	Works: _____**N/A**_____
ITT 16.5	The prices quoted by the Tenderer shall be: **FIXED**
ITT 20.1	The Tender validity period shall be __**120**_____ days.
ITT 20.3 (a)	(a) The delayed to exceeding _____**30**_____number of days. (b) The Tender price shall be adjusted by the following percentages of the tender price: (i) By **_N/A__**% of *the local currency portion of the Contract price adjusted to reflect local inflation during the period of extension,* *and* *(ii) By___* **N/A** *___% the foreign currency portion of the Contract price adjusted to reflect the international inflation during the period of extension.*
ITT 21.1	A Tender Security of Kshs. 200,000.00 shall **be** required. A Tender-Securing Declaration **shall not be** required. If a Tender Security shall be required, the amount and currency of the Tender Security shall be Kshs. 200,000.00
ITT 21.2 (d)	The other Tender Security shall be ___**N/A**_____
ITT 21.5	On the Performance Security, other documents required shall be_____ **N/A**
ITT 22.1	In addition to the **original** of the Tender, the number of copies is: **ONE Copy**
ITT 22.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: **Power of attorney/ Authorization Letter duly signed (should be signed by directors appearing in CR12/13) or by the director(s) of the firm with the highest shares, giving the name of person who has been authorized to submit/execute this agreement as a binding document and this person should sign all the documents related to this tender.**
D. Submission and Opening of Tenders	
ITT 24.1	(A) For Tender submission purposes only, the Procuring Entity's address is: The Kenya Forestry Research Institute Headquarters, Muguga, Off Nairobi – Naivasha Road Supply Chain Management Office Manager – Supply Chain Management P.O. Box 20412-00200 **NAIROBI** Email: tenders@kefri.org Tel: 0722157414/0724259781/0734251888 Date and time for submission of Tenders: **Thursday, 20h February 2025 at 11:30am** Tenderers **shall not submit** tenders electronically.
ITT 27.1	The Tender opening shall take place at the time and the address for Opening of Tenders provided below: (1) Name of Procuring Entity: Kenya Forestry Research Institute (KEFRI) (2) Physical address for the location: Auditorium Room, Kenya Forestry

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	Research Institute (KEFRI) Headquarters P.O Box 20412-00200 Nairobi, Muguga, Off Nairobi – Naivasha Highway (3) State date and time of tender opening. **Thursday, 20th February 2025 at 11:30am**
ITT 27.1	If Tenderers are allowed to submit Tenders electronically, they shall follow the electronic tender submission procedures specified -**N/A**
ITT 27.6	The number of representatives of the Procuring Entity to sign shall be as **per the Appointment of the Tender Opening Committee by the Accounting Officer/Director KEFRI**_____.
E. Evaluation, and Comparison of Tenders	
ITT 32.3	The adjustment shall be based on the average 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. **N/A**
ITT 35.2	The invitation to tender is extended to the following groups that qualify for Reservations: Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability _____
ITT 36.1	At this time, the Procuring Entity **does not intend** to execute certain specific parts of the Works by subcontractors selected in advance.
ITT 36.2	Contractor's may propose subcontracting: Maximum percentage of subcontracting permitted is: ___**N/A**___*% of the total contract amount.* Tenderers planning to subcontract more than **N/A** 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 36.3	The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows: **__N/A**
ITT 37.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
ITT 51.1	The person named to be appointed as Adjudicator is **Chattered Institute of Arbitrators (Kenya Branch) or as jointly agreed between the Procuring Entity and the contractor**
ITT 52.2	Other documents required are *relevant technical brochure/catalogues* and all **documents required in the tender evaluation criteria**
ITT 54.1	The procedures for making a Procurement-related Complaints are detailed in the "Regulations" available from the PPRA Website www.ppra.go.ke or email complaints@ppra.go.ke. 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: For the attention: **THE DIRECTOR** **THE KENYA FORESTRY RESEARCH INSTITUTE** **P.O. BOX 20412-00200.** **NAIROBI** Email address*:* **tenders@kefri.org** In summary, a Procurement-related Complaint may challenge any of the following: (i) the terms of the Tender Documents; and (ii) the Procuring Entity's decision to award the contract (iii) names of all Tenderers that submitted Tenders, and their Tender prices as read out at Tender opening.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1. General Provisions

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 as appropriate. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.

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 should use **the Standard Tender Evaluation Document for Goods and Works** for evaluating Tenders.

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.

(i) Preliminary/Mandatory Evaluation-Stage 1

(ii) Vendor Evaluation-Stage 2

(iii) Compliance To Technical Specification Evaluation Stage -Stage 3

(iv) Financial Evaluation- Stage 4

2. 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 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. 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 irresponsive and will not be considered further.

PRELIMINARY/MANDATORY EVALUATION-STAGE 1

		Responsiveness	
S/N	Mandatory Eligibility criteria	***Yes***	***No***
MR1	Must submit **one original** copy of the Tender Document and **one copy** to be properly **TAPE BOUND (Spiral Binding and use of Spring or box files will not be accepted and will lead to automatic disqualification**		
MR2	Submit a Properly **serialized tender/Bid document** (each page of the tender/Bid must have a number, and the numbers must be in chronological order) **i.e. 1,2,3,4,5,6,7,8,9,10…..n** (n being the last numerical page of the tender document)		

MR3	Signing of the Tender/Bid – Submit a power of attorney or Authorization letter of the person dully authorized to sign the tender on behalf of the Tenderer, the Authorized person to sign or initialled all pages of the Tender where entries or amendments have been made N/B: The power of attorney /authorization letter must indicate the name, position and signature of the authorized person.		
MR4	Submit a copy of Certificate of Incorporation / Registration from the Registrar of Companies		
MR5	Submit a copy of CR 12/CR 13 not more than one year old from the date of issue by Registrar of Companies.		
MR6	Submit a Valid Current Tax Compliance Certificate (verifiable from KRA's website) from Bidding Company, and if Consortium, from each member of the consortium		
MR7	Submit a Copy of valid Single Business Permit for the year 2025		
MR8	Submit a Valid Registration and current annual NCA practicing license (Water works) for either category 7 or above		
MR9	Submit an **Original Tender Security** in accordance with ITT 19.1; issued by a Bank or insurance company approved by Public Procurement Regulatory Authority (PPRA) in the amount of **Kenya shillings 200,000.00 valid for 120 days from the date of tender opening for each site**		
MR10	Dully Fill the Bill of Quantities/Price Schedule, in accordance with ITT 16.2, the total amount to be carried to Form of Tender (Tenderers to fill the Bill of Quantities for the Lots they are		
MR11	Dully filled and signed Form of Tender prepared in accordance with ITT 14		
MR12	Dully filled and signed Confidential Business Questionnaire		
MR13	Dully filled and signed certificate of independent tender determination		
MR14	Duly filled Self-declaration forms; ix. Form SD1 ii) Form SD2 iii) Declaration and Commitment to the Code of Ethics- duly filled and signed		

Bidders who do not meet any of the above requirements will be disqualified and shall not be evaluated further.

VENDOR EVALUATION-STAGE 2

S/No	Requirement	Comment
1.	**Qualifications and technical experience of site personnel to manage and execute the works on the site.** ✓ **Must Fully fill sign and stamp Form PER –1 and PER-2** **Bidders shall submit the following documents which shall be certified by the employer as true copies of the original to be used for evaluation:** Must attach Copies of academic certificates and /or professional certificates Must attach Individual Curriculum vitae/Resume signed by the nominee (Form PER-2 signed by the nominee confirming his/her availability to carry out the assignment upon winning the bid.) **i) Project Manager -Must have** ✓ At least a Diploma in any of the following: Geology, Civil/structural, Water engineering, Agricultural Engineering, Groundwater, Drilling, Project Management/Building Construction or any other equivalent and acceptable qualification. ✓ Experience in borehole installation works– Minimum **Five (5)** years **ii) Site Foreman / Agent Must have** ✓ At least Diploma in any of the following technical fields: Civil/structural, Building construction, water, geology, ground water, Drilling, Mechanical, Electrical or other relevant Engineering field ✓ Experience in borehole installation works– Minimum **Three (3)** years **iii) Technician – Electrical Must have** ✓ At least a certificate in any relevant Electrical Engineering field ✓ Experience in electrical installation works– Minimum **three (3)** years **iv) Technician – Mechanical/Driller Must have** ✓ At least a certificate in any relevant Mechanical Engineering field ✓ Experience in plant installation/Drilling/ borehole installation works– Minimum **three (3)** years	**Must Meet**
2.	**Equipment and Machinery** Must demonstrate access to the following key minimum equipment (invoices, receipts, leased or hire agreement) necessary to undertake the work; i) Drilling Rig capable of drilling to the required depth ii) Pick-up or Tipper iii) Hydraulic Pressure testing Equipment with a pump of higher capacity than the estimated yield during development **The Tenderer Must ensure.** a) If the equipment is owned, provide **CLEAR** copies of logbook or proof of ownership. b) If equipment is hired or leased provide a commitment letter from the lessor of the equipment indicating that the lessor shall avail the equipment upon award of the tender and submit a copy of a written agreement to lease between lessee and lessor indicating list of equipment and their corresponding copies of logbooks or proof of ownership by lessor. c) Fully fill sign and stamp Form EQU: EQUIPMENT for each equipment. N/B: The equipment listed shall be available on site when required.	**Must Meet**

S/No	Requirement	Comment
3.	**Specific construction experience** in borehole drilling and installation works in the role of contractor, subcontractor, or management contractor in the last five (5) years Provide a minimum of 2No. Contracts each of a minimum value of Kenya shillings 8 million) Submit Contract Agreements and/or Completion Certificate clearly indicating the contract amount	**Must Meet**
4.	**Specific construction experience** in electrical works /Pump Installation and or Solar in the last five (5) years Provide Minimum of 1 No. Contract each of minimum value of Kenya shillings 2 million) Submit Contract Agreement and/or Completion Certificate clearly indicating the contract amount. **Fully fill FORM EXP.4.2(b)**	**Must Meet**
5.	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 construction cash flow requirements of a minimum of **KES 15,000,000.00** equivalent for the subject contract(s) net of the Tenderer's other commitments. Submit a letter of credit from the Bank indicating lines of credit-Kshs 15,000,000.00	**Must Meet**
6.	Submit Audited Accounts for the year 2023 - Average Annual Turnover **of KES 8,000,000.00** equivalent calculated as total certified payments received for contracts in progress and/or completed within the last 2 years	**Must Meet**

NB: Bidders who do not meet any of the above requirements will be disqualified and shall not be evaluated further.

COMPLIANCE TO TECHNICAL SPECIFICATION EVALUATION STAGE -STAGE 3

S/No	Requirement	Comment
1.	**Compliance with technical specifications** **i)** Tender Evaluation Committee shall evaluate compliance to all technical specifications as detailed in the specifications Section of this document **ii)** Bidders who do not highlight catalogue number and model of the proposed items shall be considered non-compliant. **iii)** Non-compliance to any of the specifications shall render the whole system non-compliant **N/B: See notes on compliance with technical specifications below**	Must Meet

Notes on compliance to technical specification evaluation:

In order to comply the tenderers shall be required;

a) To fill the Standard Forms provided in the bid document for the purposes of providing the required information. The tenderers may also attach the required information if they so desire;

b) *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 analysed, 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 who do not complying with **any** of the key Technical Schedule specifications shall be **discontinued from further evaluation** while those meeting all the key technical specifications shall be **evaluated further**

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

Compliance to Technical Specifications as Captured in the Tender Document-Stage 3

SN/o.	DESCRIPTION	DATA SHEET PAGE NO.	COMPLIANCE	
			√	×
1	**PUMPS** • Borehole pump • Motor • Water supply pump (booster pump)			
2	**BOREHOLE FITTINGS** • Well head • Water meter • Level regulator • Air valve • Gate valve • Ball valve • Control panel			
3	**PIPEWORK** • PPR pipe • CPVC pipe • PVC pipe/HDPE • GMS pipe • GI pipe			
4	**ELECTRICAL WORKS** • Power cable • Submissible cable • Junction box			
5.	**ELECTRICAL AND SOLAR INSTALLATION WORKS** • Lighting Fittings • Accessories (Switches, Sockets, TV outlet plates etc) • Cables • Copper Armoured cable • Single Core PVC insulated Cables • Solar Cable • Solar Panel • Inverter • Distribution Board/ Consumer Unit • PVC Heavy Gauge Conduit • Lightning Protection System • Copper Tape • Air Termination Spike • Earth Rod • TPN & SPN Isolating Switches • Circuit Breakers i) A/C ii) DC			
6	**REVERSE OSMOSIS PLANT** • Low energy consumption. • High efficiency DOW filmtec or approved equivalent RO membranes housed in strong corrosion proof FRP pressure vessels.			

SN/o.	DESCRIPTION	DATA SHEET PAGE NO.	COMPLIANCE	
			√	×
	• High treatment performance with up to 98% salt rejection. • High pressure in line multi-stage stainless steel vertical mounted feed pump, 3 phase 415 vac rated at 3 kw (3.75 hp) mounted to have a maximum head of 20 m and deliver $3m^3$/hr. • Operating pressure of between 12 – 20 bar • System monitoring accessories including inlet and outlet flow meters, pressure gauges and conductivity meter. • Electronic controller for fully automated plant operation including start up, periodic flush cycle and shut down as well as various system alarms • Sediment removal and carbon cartridge pre filters and post filters and with Semi permeable membrane capable of removing up to 98% of total dissolved solids (TDS) down to 0.001 microns. • Corrosion resistant stainless steel high pressure and plastic low-pressure pipes and pipe fittings. • Safety margin of the net positive suction head of 1 meter • 3 Kw, 3 phase, 415 vac Direct On-Line starter with Thermal over load range shall be 23-32 amps set at 32 amps **c/w control unit**			
	RESPONSIVENESS			

Methodology Evaluation Criteria

SN/o.	DESCRIPTION	DATA SHEET PAGE NO.	COMPLIANCE	
			√	×
1	**Method Statement** Detailed method of construction Environmental and Social Management Plan			
2	**Programme of Works** Detailing, scope of works, identifying time scales, lead times, development phases and durations, sequence of activities, critical path and human and material resource needed to reach each milestone.			

Note: At this stage, the tenderer's submission will either be responsive or non-responsive. The non- responsive submissions will be eliminated from the entire evaluation process and will not be considered further.

FINANCIAL EVALUATION- STAGE 4

Upon completion of the technical evaluation a detailed financial evaluation shall follow. The financial evaluation shall proceed in the manner described in the Public Procurement and Disposal Act (2015) of the Public Procurement and Asset Disposal Act.

The financial evaluation shall be as follows**;**

a) Checking for arithmetic errors
b) Consistency of the Rates.

A. Arithmetic errors

Any error, if considered a major deviation that will affect the substance of the tender shall lead to disqualification of the bidder from further evaluation.

The tender sum shall not be corrected and tenderer shall be notified of errors detected in their bid via the notification/intention of/to award letter.

B. **Consistency of the Rates**

The evaluation committee will compare the consistency of rates for similar items and note all inconsistencies of the rates for similar items.

iv) Multiple Contracts

a. Multiple contracts will be permitted in accordance with ITT 37.4. Tenderers are evaluated on basis of Lots and the 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

If a tenderer wins only one Lot, the tenderer will be awarded a contract for that Lot, provided the tenderer meets the aggregate Eligibility and Qualification Criteria for the Lot.

OPTION 2

If a tenderer wins more than one Lot, the tender will be awarded contracts for all won Lots, provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the Lots.

v) Alternative Tenders (ITT 13.1)

An alternative if permitted under ITT 13.1, 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.

vi) **Margin of Preference** is not applicable

7. Post qualification and contract award ITT 38 and ITT 39

An evaluation committee **MAY**, after tender evaluation, but prior to the award of the tender, conduct due diligence and present the report in writing to confirm and verify the qualifications of the tenderer who submitted the lowest evaluated responsive tender to be awarded the contract in accordance with the Act.

The conduct of due diligence may include obtaining confidential references from persons with whom the tenderer has had prior engagement.

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 construction cash flow of Kenya Shillings 15,000,000

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ii) Minimum average annual construction turnover of Kenya Shillings 15,000,000 /equivalent calculated as total certified payments received for contracts in progress and/or completed within the last *3* years.

iii) At least two of contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value Kenya shillings 8 million equivalent.

Contractor's Representative and Key Personnel, which are specified for Vendor evaluation

iv) Contractors' key equipment listed on the table "Contractor's Equipment" below and more specifically listed in the Qualification Form summary

v) 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 3 *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 *years.* All parties to the contract shall furnish the information in the appropriate form about any litigation or arbitration resulting from contracts completed or ongoing 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.

AWARD CRITERIA

The firm achieving the lowest evaluated tender price will be recommended to be awarded the contract in line with Section 83 of the Public Procurement and Disposal Act, 2015

SECTION IV – TENDERING FORMS

1. QUALIFICATION FORM SUMMARY—Refer to Section III -Evaluation Criteria

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)- Refer to Section III -Evaluation Criteria**
	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 the Kenya Revenue Authority in accordance with ITT 3.14.	Attach valid tax compliance certificate	
	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 3.8	Form of Tender	
	5 State- owned Enterprise	Meets conditions of ITT 3.7	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 1st January **2022**.	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	

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)- Refer to Section III -Evaluation Criteria**
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	
1	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer since 1st January **2022**	Form CON – 2	
1	Financial Capabilities	(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 requirements as indicated in the TDS (Ksh 15 million) and the subject contract (s). (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. (iii) The audited accounts for the last **three** years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.	Form FIN – 3.1, with attachments	
1	Average Annual Construction Turnover	Minimum average annual construction turnover of Kenya Shillings 15 **million** equivalent calculated as total certified payments received for contracts in progress and/or completed within the last three years, divided by **three (3)** years	Form FIN – 3.2 **Attach Audited Accounts for the last 3 years**	
1	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least three **(3)** years in the last five (5) years	Form EXP – 4.1 **Attach Award letter, Contract Agreement and/or Completion Certificate**	
1	Specific Construction & Contract Management	A minimum number of works that have been satisfactorily and substantially completed **(at least 70% complete)** as a prime contractor, joint venture member, management contractor or sub-contractor between **2020 to date** i.e.	Form EXP 4.2(a) **Attach Award letter, Contract Agreement and/or Completion Certificate**	

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)- Refer to Section III -Evaluation Criteria**
	Experience	**2No. borehole drilling and equipping works each of minimum value of 8 million and above** **2 No. Electrical/pump and solar installation works valued at 2 million and above within the last Five (5) years** The similarity of the contracts shall be based on the following: scope and monetary value of the works	**Attach payment certificates for substantially complete projects**	
1	Contractor's Key Equipment	The tenderer must demonstrate access to the following key minimum equipment (invoices, receipts, leased or hire agreement) necessary to undertake the work; 1. Drilling Rig capable of drilling to the required depth 2. Pick-up or Tipper 3. Hydraulic Pressure testing Equipment with a pump of higher capacity than the estimated yield during development	Form EQU Provide **CLEAR** copies of log book or proof of ownership; **OR** If equipment is hired or leased Provide a commitment letter from the lessor of the equipment indicating that the lessor shall avail the equipment upon award of the tender	
1	Contractor's representative and key personnel	**Project Manager** 1. At least a Diploma in any of the following: Geology, Civil/structural, Water engineering, Agricultural Engineering, Groundwater, Drilling, Project Management/Building Construction or any other equivalent and acceptable qualification. **2.** Specific experience in Construction works – **5 years.** **Site Foreman / Agent** 1. At least Diploma in any of the following technical fields: Civil/structural, Building construction, water, geology, ground water, Mechanical, Drilling, Electrical or other relevant Engineering field 2. Experience in borehole installation works–	Curriculum vitae signed by the nominee (Fill Form PER-1 signed by the nominee confirming his/her availability to carry out the assignment upon winning the bid.) Copies of academic certificates **AND/OR** Copies of professional certificates Fill Form PER- 2	

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)- Refer to Section III -Evaluation Criteria**
		Minimum **Five (5)** years **Technician - Electrical** 1. At least a certificate in any relevant Electrical Engineering field 2. Experience in electrical installation works– Minimum **Five (5)** years **Technician – Mechanical/Drilling** 1. At least a certificate in any relevant Mechanical Engineering field 2. Experience in borehole installation works– Minimum **Five (5)** years		
	1 Compliance with technical specifications for mechanical and Electrical installations	1)Tender Evaluation Committee shall check whether '**Compliance to Technical Specifications as Captured in the Tender Document'** is duly filled and that the tenderer has submitted comprehensive manufacturer's technical brochures and performance details of the items listed in the technical schedule 2)Bidders who do not highlight catalogue number and model of the proposed items shall be considered non-compliant. 3) Non-compliance to any of the specifications shall render the whole system non-compliant	Fill the Standard Forms provided in the bid document Submit relevant technical brochure/catalogues with the tender document, highlighting (using a mark-pen or highlighter) the Catalogue Number/Model of the proposed items	
	1 Methodology Evaluation Criteria	Tender Evaluation Committee shall check on the Method Statement -Method statement Detailed method of construction, Environmental and Social Management Plan -Programme of Works Detailing, scope of works, identifying time scales, lead times, development phases and durations, sequence of	Attach Method statement Attach Programme of works	

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)-** Refer to Section III -Evaluation Criteria
		activities, critical path and human and material resource needed to reach each milestone.		

2.FORM EQU: 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 ☐ Owned ☐ Rented ☐ Leased ☐ 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	**Title of position: Contractor's Representative**	
	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*]
2	**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*]
3	**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*]
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.

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

Name of Tenderer

Position [*#1*]: [*title of position from Form PER-1*]		
Personel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: *[language and levels of speaking, reading, and writing skills]*	
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**
[main project details]	*[role and responsibilities on the project]*	*[time in role]*	*[describe the experience relevant to this position]*

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:

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

I understand that any misrepresentation or omission in this Form may:
be taken into consideration during Tender evaluation;
result in my disqualification from participating in the Tender;
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): _____

TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

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.

a. 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: *[indicate country of Constitution]*
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 ☐ 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 ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 ☐ In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: Legal and financial autonomy Operation under commercial law Establishing that the Tenderer is not under the supervision of the Procuring Entity 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

b. 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 ☐ 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. ☐ 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 3.8. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

c. 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			
☐ Contract non-performance did not occur since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1. ☐ Contract(s) not performed since 1st January *[insert year]* 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)**
[insert year]	*[insert amount and percentage]*	Contract Identification: *[indicate complete contract name/ number, and any other identification]* Name of Procuring Entity: *[insert full name]* Address of Procuring Entity: *[insert street/city/country]* Reason(s) for nonperformance: *[indicate main reason(s)]*	*[insert amount]*
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
☐ No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3. ☐ 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:	

Litigation History in accordance with Section III, Evaluation and Qualification Criteria

☐ No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4.

☐ Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.

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

d. FORM FIN – 3.1:

Financial Situation and Performance

Tenderer's Name: _____
Date: _____
JV Member's Name_____
ITT No. and title: _____

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

Sources of Finance

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

	Source of finance	**Amount (Kenya Shilling equivalent)**

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[1] for the _____years required above; and complying with the requirements

[1] 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.

e. **FORM FIN – 3.2:**

Average Annual Construction Turnover

Tenderer's Name: _____
Date: _____
JV Member's Name_____
ITT No. and title: _____

	Annual turnover data (construction only)		
Year	**Amount Currency**	**Exchange rate**	**Kenya Shilling equivalent**
[indicate year]	*[insert amount and indicate currency]*		
Average Annual Construction Turnover *			

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

f. 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 construction cash flow demands of the subject contract or contracts as specified in Section III, Evaluation and Qualification Criteria

Financial Resources		
No.	**Source of financing**	**Amount (Kenya Shilling equivalent)**
1		
2		
3		

g. 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.

Current Contract Commitments					
	Name of Contract	**Procuring Entity's Contact Address, Tel,**	**Value of Outstanding Work [Current Kenya Shilling /month Equivalent]**	**Estimated Completion Date**	**Average Monthly Invoicing Over Last Six Months [Kenya Shilling /month)]**

h. FORM EXP - 4.1

General Construction 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: _____	

i. FORM EXP - 4.2(a)

Specific Construction 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 ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
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:				

j. FORM EXP - 4.2 (a) (cont.)

Specific Construction 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. Construction rate for key activities	
6. Other Characteristics	

k. FORM EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____
Date: _____
Tenderer's JV Member Name: _____
Sub-contractor's Name[2] (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 ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
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:				

[2] If applicable

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

2. Activity No. Two
3. ……

OTHER FORMS

FORM OF TENDER

INSTRUCTIONS TO TENDERERS

i. *All italicized text is to help Tenderer in preparing this form.*

ii. *Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER attached to this Form of Tender.*

iii. *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 of Kenya Shillings: [*[Amount in figures]*_____Kenya Shillings *[amount in words]*_____.

   The above amount includes foreign currency amount (s) of [*state figure or a percentage and currency*] [figures]_____[words]_____.

   The percentage or amount quoted above does not include provisional sums, and only allows not more than two foreign currencies.

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager's 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. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive.

5. We, the undersigned, 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 construction 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]*

lots:

a) Lot 1 - KEFRI-DERP -Regional office - Kitui Town Area - Total price [*insert the total price in words and figures, indicating the various amounts and the respective currencies*]

b) Lot 2 - KEFRI-DERP Regional Office - Tiva Centre-Kwavonza. Total price [*insert the total price in words and figures, indicating the various amounts and the respective currencies*]

vi. *Discounts:* The discounts offered and the methodology for their application are:

vii. The discounts offered are: [*Specify in detail each discount offered.*]

viii. 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*];

ix. *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;

xi. *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 subcontractor, and meet the requirements of ITT 3.4, other than alternative Tenders submitted in accordance with ITT 13.3;

xii. *Suspension and Debarment:* We, along with any of our subcontractors, suppliers, Project Manager, 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.

xiii. *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 ITT 3.8*];

xiv. *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**	**Amou nt**

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

xv. 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;

xvi. 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;

xvii. Fraud and Corruption: We hereby 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;

xviii. 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.

xix. 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.

xx. 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.
c) 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**

	ITEM	**DESCRIPTION**
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.	Country City Location Building Floor Postal Address Name and email of contact person.
6	Current Trade License Registration Number and Expiring date	
7	Name, country, and full address (*postal and physical addresses, email, and telephone number*) 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 (*postal and physical addresses, email, and telephone number*) 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.

Private or public Company_____

State the nominal and issued capital of the Company_____

Nominal Kenya Shillings (Equivalent)..... Issued Kenya Shillings

(Equivalent).....

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.

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			

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 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		

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
	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 such 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.		

f)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:

I have read and I understand the contents of this Certificate;

I understand that the Tender will be disqualified if this Certificate is found not to be true and complete in every respect;

I am the authorized representative of the Tenderer with authority to sign this Certificate, and to submit the Tender on behalf of the Tenderer;

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:
has been requested to submit a Tender in response to this request for tenders;
could potentially submit a tender in response to this request for tenders, based on their qualifications, abilities or experience;

The Tenderer discloses that [check one of the following, as applicable:
The Tenderer has arrived at the Tender independently from, and without consultation, communication, agreement, or arrangement with, any competitor;
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;

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:
prices;
methods, factors, or formulas used to calculate prices;
the intention or decision to submit, or not to submit, a tender; or
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;

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;

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 PROCUREMENTAND ASSET DISPOSALACT 2015.

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

THAT I am the Company Secretary/ 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.

THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.

THAT what is deponed to herein above is true to the best of my knowledge, information, and belief.

……. ……. …… (Title)
(Signature) (Date)

Bidder Official Stamp

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: -

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.

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.

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)

THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender

THAT what is deponed to herein above is true to the best of my knowledge information and belief.

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

Bidder's 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 hereby 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

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

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.

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: - 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 asset disposal proceeding;

a) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;

b) Without limiting the generality of the subsection (1) and (2), the person shall be: -

   i. disqualified from entering into a contract for a procurement or asset disposal proceeding; or

   ii. if a contract has already been entered into with the person, the contract shall be voidable;

c) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;

d) 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: -

   i. shall not take part in the procurement proceedings;

   ii. shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and

e) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.

f) 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;

g) 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.

In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:

a) 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 misrepresentation, 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;
iv. "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;
v. "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.

b) 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.

c) Rejects a proposal for award[1] 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;

d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction or recommend to appropriate authority (ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;

e) 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[2] 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

f) 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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[1] *For the avoidance of doubt, a party's ineligibility 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.*

[2] *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 forTenders No:_Date:__
_____ TENDER GUARANTEE No.:__
_____
Guarantor: _____

1. We have been informed that_____(here inafter called "the Applicant") has submitted or will submit to the Beneficiary its Tender (here inafter 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 there to 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 onor before that date.

_____
[signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

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.

_____	_____
[Date]	*[Signature of the Guarantor]*
_____	_____
[Witness]	*[Seal]*

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

TENDER-SECURING DECLARATION FORM

[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]*

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

PART II - WORK REQUIREMENTS

SECTION V - DRAWINGS

Some drawings have been annexed (Annex 3) on this document. Others will be provided after award of tender but before commencement of works by the project manager as a separate booklet.

SECTION VI – SPECIFICATIONS

GENERAL

Implementation of these works shall meet the mandatory regulatory requirements as stipulated in the laws of Kenya.
All works and materials used shall meet the applicable regulations and standards recognised in Kenya.

The contractor shall meet all the legal requirements to practice as a contractor in order to undertake the works.

The contractor shall provide Detailed methodology of construction and the Environmental and Social Management plan to assist in the evaluation process.

The contractor shall provide the intended programme of works detailing, scope of works, identifying time scales, lead times, development phases and durations, sequence of activities, critical path and human and material resource needed to reach each milestone. This will assist in the evaluation process.

TECHNICAL SPECIFICATIONS

A. BOREHOLE DRILLING

1.1 GENERAL

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be accepted subject to the Project Manager's prior review and written consent.

This contract comprises the drilling, construction, development; test pumping, water quality analysis, installation of Desalination (Reverse Osmosis) plant and solarization. The drill sites as indicated are located at the Kenya Forestry Research Institute Kitui sub-centre (Lot 1) and Tiva sub-centre (Lot 2)

1.2 REGULATIONS AND STANDARDS

The borehole shall be drilled at the location based on the Hydrological Survey reports. Each borehole shall be drilled to a depth specified in the hydrogeological survey reports. It shall be drilled through all strata encountered.

The necessary permits and authorizations are a precondition for the drilling.

1.3 MOBILIZATION, DEMOBILIZATION AND RESTITUTION

1**.3.1** The Contractor shall mobilize to the site in accordance with the Agreed Program. The sum for mobilization/demobilization shall include transportation of machinery, erection, dismantling and preparation of temporary camps as the Contractor deems necessary, provision of drilling and development fluids (bentonite, foam, water), water for camping, personnel sanitary facilities.

1.3.2 The Contractor shall minimize disturbance to neighboring plots. This shall particularly include ensuring that bailed fines and pumped test water are discharged in a manner that does not create a nuisance either to

the public or private property.

1.2.3 Site re-instatement under the conditions of contract shall include the removal of all hydrocarbons spilled, leaked or otherwise released and associated packaging and cotton waste. Site re-instatement is deemed an integral part of mobilization/demobilization. This activity shall be costed considering the items above and expressed as a lump sum.

1.3. DRILLING

1.3.1 Unless otherwise approved by the Project Manager, drilling shall be by the air hammer method, by flush rotary drilling or by the percussion method. Drilling shall continue through all strata encountered. Drilling fluids and additives used must be approved by the Project Manager prior to use. The Contractor shall provide the appropriate tools and equipment and maintain them in good condition capable of operating to the manufacturer's rating to ensure a smooth, a smooth, straight hole.

1.3.2 Drilling shall continue to the stipulated total depth at a minimum diameter of 205mm (8 inches) to provide for a finished borehole of a cased internal diameter of 152mm after allowing for 50mm thick gravel pack and temporary casings as found necessary. The Project Coordinator/supervisor reserves the right to stop drilling operation if he considers that further drilling is unlikely to be advantageous. In this event payment shall only be made for the amount of work actually executed.

1.3.3 All materials used in the borehole construction other than temporary works shall comply with the relevant standard specifications. A tolerance in dimensions will be permitted provided that the material quality is not inferior to specification and work is in no way impaired.

1.3.4 The boreholes shall be drilled straight and vertical.

1.4 SAMPLE COLLECTION, STORAGE AND RECORD KEEPING

1.4.1 Samples of the drill cuttings returned to the surface shall be collected at two (2) meter intervals, dried and bagged. Each bag shall be clearly marked with the sample depth interval and borehole number. The Contractor shall record the depth and any zone of lost circulation for which no sample was taken.

1.4.2 The Contractor shall maintain a log of the penetration rate on a meter-by-meter basis, in minutes per meter drilled. A stopwatch shall be used for this purpose so that only the net drilling time is recorded, excluding any time taken in drilling disruptions.

1.4.3 The depth of any voids, or of particular rapid penetration, or significant changes in rig noise shall also be noted.

1.4.4 Water level shall be measured and recorded at the start and end of every shift, after significant breaks in activity (such as meal breaks), and during periods of plant downtime (as appropriate). The water levels shall be measured using a sounding and/or lighting dipper approved for use by the Project Manager.

1.5 SUPPLY AND INSTALLATION OF CASINGS AND SCREENS

1.5.1 CASING AND SCREEN SPECIFICATIONS

a). Casings shall be new, 152mm (6 inches) internal diameter, black pipe class B, with a minimum wall thickness of 4.0mm in 6-meter lengths.

b). Mill slotted screens shall be constructed from new 152mm internal diameter black pipe class B with a minimum wall thickness of 4.0mm. Slots shall not exceed 1.0 mm in width, and should constitute not less than 6.0% open space area. Gas slotted casing screens are not acceptable.

1.5.2 CASINGS AND SCREEN INSTALLATION

a). Before installation of the casings and screens, the Contractor shall ensure that the hole is clear to the total depth and shall flush out any backfilled materials present. The Project Manager shall provide the design of the casings and screens string prior to installation by the Contractor.

b). Casing jointing shall be by either flush square-section threading or tree pass electric arc welding. Screens may be welded to casing, or screw-jointed by means of flush square-section threads. Externally socket joints may be welded to the casing, or screw-jointed by means of flush square-section threads. Externally socketed joints will not be accepted. Where screwed joints are deemed by the Project Manager to be below standard, joint shoulders shall be spot welded at 900mm interval around the casing circumference at no extra cost. If screens and casing are to be welded, the appropriate welding electrode must be used.

c). During welding, casing and screen lengths must be held absolutely vertical in order to ensure a plumb installation. All joints to be welded must be beveled at the butt end; three continuous weld passes must be made to ensure a sound joint and the oxide coating be removed before the second and third passes.

d). Burn-through and subsequent deposition of metal on the inside of the casings and screens must be avoided. The base of the casing shall be sealed, unless otherwise directed by the Project Manager, with a circular plate of black pipe class B of thickness not less than 4.0mm (^{1}/4 inch) fixed with a continuous weld to the casing strip. The appropriate welding electrode shall be used. The weld passes will be made, with oxide coating removed prior to the second and third passes. The top of the casing straight shall terminate not less than 600mm above the highest recorded level of ground at the site.

e). The contractor shall be responsible for the provision of temporary casings as necessary, including the insertion and removal. Where the Project Manager deems it necessary to have temporary casings left in the borehole as a measure of securing the borehole, this will be indicated in the item for other works in the bill of quantity.

1.5.3 ADMISSIBLE RATES

a). Rates shall be expressed as supply and installation of casing or screen per Unit Linear Meter.

1.6 SUPPLY AND INSTALLATION OF GRAVEL PACK

1.6.1 SPECIFICATIONS

a). The Contractor shall supply and install filter pack/formation stabilizer. The material shall be 2-4 mm diameter, clean well-rounded riverbed siliceous gravel with no more than 5.0% non-siliceous material. The pack must be approved by the Project Manager prior to installation. Granular calcium hypochlorite will be introduced into the annular space along the pack material at a concentration of 500 grams per cubic meter of pack.

The gravel pack shall be placed in the production boreholes to a thickness of 50mm around the casing up to where all screen zones are covered with the gravel as per the Project Manager's satisfaction.

This will initiate the process of sterilizing the wellbore. The Contractor shall provide the Project Manager with the bulk density of the pack material (Kg/M^3).

b). Installation of the filter pack/formation stabilizer may be water wash down or reverse circulation methods. In the latter case a pump set or airlift string shall be installed in the bore so as to encourage material settlement. The filter pack shall terminate not less than 3.0 meters above the uppermost screen when stabilized, or as otherwise directed by the Project Manager. The Contractor shall provide a means by which this level shall be measured.

1.6.2 ADMISSIBLE RATES

Rates shall be expressed as supply and installation of gravel pack per Unit Cubic Meter.

1.7 INSTALLATION OF BACKFILL

1.7.1 SPECIFICATIONS

a). Backfill material shall comprise of fine clayey drill cuttings and shall be installed from the top of the filter pack to 3.0 meters below ground level unless otherwise directed by the Project Manager. The installation method must ensure that no bridging occurs within the annular space.

b). The Contractor shall measure the depth to the top of the backfill and provide the means by which this level may be measured.

1.7.2 ADMISSIBLE RATES

Rates shall be expressed as installation of backfill per Unit Linear Meter.

1.8 DEVELOPMENT

Development shall comprise both Physical and Chemical development, and shall include the following operations: -

1.8.1 BOREHOLE CLEANING

a). The Contractor shall clean the borehole to its "completed depth" using any of the methods listed below or as otherwise authorized by the Project Coordinator-

- By bailer with percussion drilling rig
- By means of airlift, which may use a light or stable foam to assist in the removal of materials from the borehole.
- By means of educator airlift, with or without light or stable foam.

b). Bailers and other down hole plant shall adopt diameter limits of half a normal size or smaller (12.5mm or ½ inch) than the smallest casing or screen diameter.

c). Water levels shall be measured and recorded at the start and end of every shift, at significant breaks in activity (such as meal breaks), and during periods of plant downtime (as appropriate). Water levels be measured using a sounding and/or lighting dipper previously approved by the Project Manager.

d). The borehole shall be deemed clean when measured drilled depth has been reached and when insignificant or no materials is removed from the base of the borehole. Cleaning costs shall be expressed as a rate Per Hour.

1.8.2 CHEMICAL DEVELOPMENT

a). When the Project Coordinator has deemed the borehole clean; he may instruct the Contractor to commence with Chemical development. Chemical development shall comprise of an approved Polyphosphate as a disaggregate that shall break down the silty concentrations, any build-up clay or silts, or other fine materials within and adjacent to the borehole. The decision as whether chemical development shall be adopted and what dosage rates shall be made by the Project Manager.

b). Typical dosage shall comprise of powdered Sodium Hex metaphosphate dissolve in hot water. The polyphosphate shall be dosed at 10 to 15 Kg/m3 of water depending on the concentration of clays in the aquifer matrix. This shall be mixed with calcium hypochlorite at a dose of 200grammes per cubic meter to inhibit bacteria activity. The volume of polyphosphate dosed water shall be one and a half times the Volume of

water within the screen section.

c) Both polyphosphate and added water shall be introduced by means of a pipe, the bottom end of that shall be located in the middle of the screen section of the borehole. The Contractor may get the liquids into the screened section using a jetting head if he wishes.

d). After dosing, the borehole shall be left overnight to allow disaggregation to occur. The borehole shall then be subject to physical development.

e). Chemical development costs shall be expressed as an Hour rate, and include all labour and materials (including clean water) required for the operation. Chemical development undertaken by a Contractor familiar with the technique shall take no longer than three (3) hours.

1.8.3 PHYSICAL DEVELOPMENT

a). Physical development may adopt any of the commonly used methods, including but not necessarily restricted to the following: -

- Surging
- Bailing
- High Velocity Water Jetting
- Airlift raw hiding
- Airlift raw hiding with educator pipe.

b). Development shall be considered complete when the water discharged is clear and contains no more than an estimated 5 parts per millions of suspended solids and the borehole has been restored to the cleaned total depth or as otherwise directed by the Project Manager.

c) The Contractor shall describe the method he proposes to adopt and the plant required for physical development in his method statement. **Over pumping** shall not be considered a development method. The rate submitted by the Contractor for physical development is deemed to include installation and removal of necessary plant. The quantities given in the bills of quantities only apply to actual development time. Costs for physical development shall be expressed as an Hour Rate.

1.9 AQUIFER TESTING

Borehole testing will be conducted according to British Standard BS 6316 (1992) (Code of Practice for Test Pumping of Water Wells). The following elements are required.

- A pre-test
- A step drawdown test
- A constant discharge test
- A recovery test

1.9.1 INSTALLATION, PLANT AND METHODOLOGY

Pumping plant and dipping tube shall be installed in the borehole to be tested. The Contractor shall investigate and agree with the Project Manager the anticipated discharge and pump intake depth.

PUMPING PLANT

i. Pumps used for test pumping may be electrical submersible or surface-mounted turbine pumps or reciprocating pumps.
ii. Any pump used in tests must have a fully functioning non-return valve either in the pump itself or in the rising main immediately above the top of the pump.
iii. The Contractor must have pumps covering the anticipated discharge range.
iv. The water pumped from the borehole shall be discharged to waste at a distance and in such a manner that it does not pond or flow back towards the borehole.

v. The Contractor must provide a generator or other prime mover for powering the pump, as power is not necessarily available at the sites.

DISCHARGE MEASUREMENT AND CONTROL

Discharge measurements shall be by an approved accurate method, such as an Orifice Plate, calibrated flow meter or a V-notch weir. If volumetric methods are proposed, the Contractor will ensure the container to be used has been calibrated. When time to fill measurements is made, each discharge measurement shall be calculated from the average of three-time measurements. Discharge shall vary by no more than 15%across each step of step drawdown test, and across the constant discharge test.

WATER LEVEL MEASUREMENT

Water level measurements shall be by electric sounding and/or lighting dipper, and shall be made in a dipper tube installed alongside the test pump rising main and tied securely to it. The Project Manager will check the dipper for stretch and any other inaccuracies prior to accepting its use. Accuracy measurements must not be less than 1.0 cm. Water level measurements using an airline will not be acceptable on the grounds of poor precision.

TIME MEASUREMENT

All times shall be measured by means of a stopwatch. The Contractor shall ensure that spare batteries etc. for all equipment are available prior to commencing tests.

i) PRE-TEST

The pre-test will check all equipment, determine the range of discharge for the step drawdown test and set the globe values for the first step discharge rate. Pre-test shall not exceed three (3).

ii) STEP DRAWDOWN TEST

- The step drawdown test will comprise five (5) steps tests of sixty (60) minutes each, with no recovery phase between successive steps. The step drawdown test shall not start until water level has returned to the true static water level, unless otherwise directed by the Project Manager.
- Typically, individual step discharges would comprise 25%, 50%, 75%, 100% and 125% of the anticipated production discharge rate.
- Discharge increments shall be effected as nearly instantaneously as possible and once set shall not be changed except by instruction of the Project Manager.
- Discharge variations and measurement shall be effected by means of the globe valve and manometer gauge as follows;

A globe valve of suitable diameter shall control the discharge and on the upstream side of this, not closer than six (6) pipe diameters from the valve, a manometer tapping and gauge will be installed such that it can be clearly seen by any person using the valve. This will be used during the step drawdown tests for the flow control purposes.

iii) CONSTANT DISCHARGE TEST

Constant discharge test shall typically last not less than twenty-four (24) hours, or as otherwise determined by the Project Manager. A water sample will be procured towards the end of the test for subsequent analysis by a competent laboratory.

iv) RECOVERY TEST AND REMOVAL OF PLANT

Recovery tests shall not continue for more than twenty-four (24) hours, or as otherwise directed by the Project Manager. Only after the completion of recovery data collection may pumping and ancillary plant be removed from the borehole, though above ground components may be dismantled during the recovering phase.

v) **ADMISSIBLE RATES**

Rates of pumping and recovery are deemed to include the cost of plant installation and removal. The rates are deemed inclusive of installation, removal, plant use, testing and data collection.

1.10 WATER SAMPLING AND ANALYSIS

- In the closing hour of the constant discharge test a water sample shall be collected for chemical and bacteriological analysis by a competent laboratory. The water samples shall be collected in containers supplied by the laboratory, in the manner conventionally used by the laboratory.
- The Contractor's unit rate of sampling and analysis will include the cost of analysis and transportation to and from the laboratory for the sampling exercise.

1.11 BOREHOLE DISINFECTION

After removal of test equipment, the borehole shall be disinfected with Chlorine/water solution at a concentration of 50 milligrams per litre or greater of free chlorine. This will be sprayed into the borehole so as to ensure that all exposed borehole wall surfaces are coated. In preparing their Tenders, Contractors should allow for one (1) cubic meter of solution for the borehole. This item shall be costed as a unit Lump Sum

1.12 BOREHOLE HEAD WORKS

a) **SANITARY SEAL CASING**

A sanitary seal shall be constructed at the wellhead. This shall comprise the following elements:
- A 3.2-meter length of internal diameter 205 mm (8 inch) plain black pipe class B sanitary steel casing installed around the permanent casing string.
- A grout seal between the 254mm sanitary seal casing and the 152 mm permanent casing string.
- A 1.0x1.0x1.0 meter reinforced concrete block (Y8/1:2:4) cast around the Sanitary seal casings.
- A lockable steel cap.

b). **GROUT SEAL**

A sanitary ground seal shall be installed between the 152 mm (6 inch) and 205 mm (8 inch) casings and grouted into place. Grout shall be a cement slurry, or cement and fine sand and shall have a density of at least 1175 Kg/lt.This shall be introduced into the annular space from the top of the inert backfill to the ground level, using a method that must be approved by the Project Manager.

c) **CONCRETE PLINTH**

The ground surface at the wellhead shall be excavated to a depth of one (1) meter, and be one meter square, to allow s Concrete Plinth to be cast. The 1.0x1.0x1.0-meter pit will be filled with concrete, to be finished flush with the ground surface. Concrete shall be 1:2:4 OPC: sand: half-inch ballast. This must be cast with two 0.8 meter lengths of 12 mm reinforcing steel bar welded to the 205 mm (8 inch) casing, 0.7 meter below ground level.

d). **TEMPORARY CAP**

The top of the borehole shall be sealed with a cap that shall comprise a round plate of mild steel, of thickness not less than 3.0mm. This will be continuously welded in single pass to the mild steel borehole casing or should be lockable.

1.13 RECORDS

After completion of all works at the borehole, the Contractor shall submit to the
Project Manager within four (4) days a complete document with the following additions: -

- Drilling penetration Log

- Geological Log
- WAB 28 Borehole Completion Record (Three Complete Sets of

Completion Reports shall be submitted.

1.14 TECHNICAL LITERATURE

a) A Tenderer **must** submit the following information together with the Tender documents to assist in fair evaluation: -

-Technical specifications on drilling rig and other ancillary equipment (make, model, rated capacity etc.)

-Particulars and specifications of materials used in the construction of the borehole.

Any other information the tenderer may deem is important in evaluation as well as boosting the tenderers chances of winning the tender.

2.PARTICULAR SPECIFICATIONS FOR BOREHOLE DRILLING AND EQUIPPING

2.1. Purpose

The borehole to be drilled, constructed, test pumped, equipped with a submersible pump and solarized under this contract will be to provide water intended for domestic use. The maximum ground water abstraction permitted from the borehole shall be 90m3/day with the maximum abstraction period not exceeding 10 hours per day.

The execution of the works shall be in full compliance with relevant provisions of the Water Act.

The proposed borehole drilling sites will be at Kenya Forestry Research Institute – KEFRI Kitui sub-Centre in Kitui town (Lot 1) and Tiva Sub-Centres in Kitui rural,kwa vonza area(Lot 2). The Contractor is deemed to have visited the site of interest and if unable to locate it or get its details apply to the Director, Kenya Forestry Research Institute, Muguga-Nairobi.

No claims will be allowed for the traveling or other expenses, which may be incurred by the

contractor's works.

2.2 Scope of the Work

The works included in the contract consist of: -

(i) Drilling, construction, equipping and test pumping borehole of sufficient diameter to provide for a finished cased and screened borehole of 152mm (6") diameter to the provisional depth of about 250 meters. The number of boreholes in this tender are two (2) and the contract is divided into two lots of one borehole each. Tenderers can bid for one or two lots using separate bidding documents. A tenderer can use the same information in the separate bid documents whenever necessary and the tenderer can be awarded one or two lots depending on the best evaluated tenders.

(ii) The provision and installation of steel casings, steel screens, and gravel pack, borehole cap, together with cementation works necessary shall be as per the technical specifications.

(iii) The collection of formation samples at 2 Meter interval of drilling progress to the bottom and also water sample at every aquifer struck and at the beginning and at the end of test pumping operation for both chemical and biological analysis.

NOTE: - These depths and any other works can be varied by the Engineer depending on the actual

conditions encountered in the process of executing of the works.

(iv) The supply and installation of 1No. Submersible borehole pump for each borehole, complete with the necessary controls.

(v) For each borehole, installation of a Solar power supply system incorporating a hybrid system to enable use of mains and solar power capable of supplying enough power for both the borehole and the Reverse Osmosis plant.

(vi) Water reticulation system including storage tanks as specified in the Bill of Quantities for the respective boreholes.

2.3 Local Conditions

The borehole will be drilled, constructed and test pump in both unconsolidated and consolidated formation and the contractor must be prepared to carry out the required work through any type of formation in the project area.

2.4 Borehole Data

- ✓ Total estimated depth – 220m (Lot 1) and 250m (Lot 2) from surface (Provisional)
- ✓ Casings to be 152mm diameter and screened depth to be determined after borehole construction.
- ✓ Static water level – not known (To be determined during drilling)
- ✓ Dynamic water level – not known ((To be determined during drilling)
- ✓ Recommended pumping rate – 7 to 7.5m³/hr (for the purpose of quotation but to be confirmed after testing)
- ✓ (Pump) setting level – 200 to 230m (for the purpose of quotation but to be confirmed after testing
- ✓ Total dynamic head to be determined on site after drilling

3. PARTICULAR SPECIFICATIONS FOR INSTALLATION OF 3 M^3/ H REVERSE OSMOSIS (RO) PLANT

3.1 Purpose

The Reverse Osmosis Plant purpose is to desalinate and filter the borehole water which is anticipated to be salty based on existing boreholes in the areas. The aim is to produce fresh drinkable water for domestic use. The contractor shall collect water samples and carry out full water quality analysis (chemical and bacteriological analysis) in a reputable laboratory acceptable to the Project Manager and submit water quality test report. A second sample test may be carried out as directed by the Project coordinator/ Resident Engineer. The works for installation of RO will be done as phase 2 subject to successful completion of phase1 and approval to proceed to phase 2

The Project Manager will give approval for the contractor to proceed to phase two (2) upon successful completion of phase 1 and subject to water quality and quantity based on the water analysis results.

3.2 Scope of the Work

The scope of works shall include but not limited to;

a). Supply and delivery to site of 1 No. Reverse Osmosis Plant for each Lot of output capacity 3 m^3/h.

b) Installation of 1 No unit for each Lot – Water purification / Reverse osmosis (RO) Plant to accommodate purification of 3 m3/h output

c). Construction of plinth for the installation of water purification / reverse osmosis units

d). Installation and interconnection of GI pipes between the water purification / Reverse osmosis unit and the storage tank to facilitate use of the same in the existing reticulation system. Supply and installation of appropriate booster pumps to pump treated water along the pipeline to the storage tanks

e). Construction (Lot1) or renovation (Lot 2) of Pump-house/Plant control/Machine room to accommodate the water purification (RO) Plant and Installation of Solar/Electrical Power supply.

f). Maintenance of the system for a period of six Months

3.3 Specification of the RO Filter Plant

The Reverse Osmosis filter plants to be installed shall be of good quality to satisfaction of the Project Engineer and shall meet the following specifications;

- Frame mounted with all components accessible.
- Low energy consumption.
- High efficiency DOW filmtec or approved equivalent RO membranes housed in strong corrosion proof FRP pressure vessels.
- High treatment performance with up to 98% salt rejection.
- High pressure in line multi-stage stainless steel vertical mounted feed pump, 3 phase 415 vac rated at 3 kw (3.75 hp) mounted to have a maximum head of 20 m and deliver 3m^3/hr.
- operating pressure of between 12 – 20 bar
- system monitoring accessories including inlet and outlet flow meters, pressure gauges and conductivity meter.
- electronic controller for fully automated plant operation including start up, periodic flush cycle and shut down as well as various system alarms
- Sediment removal and carbon cartridge pre filters and post filters and with Semi permeable membrane capable of removing up to 98% of total dissolved solids (TDS) down to 0.001 microns.
- corrosion resistant stainless steel high pressure and plastic low-pressure pipes and pipe fittings.
- Safety margin of the net positive suction head of 1 meter
- 3 Kw, 3 phase, 415 vac Direct On-Line starter with Thermal over load range shall be 23-32 amps set at 32 amps **c/w control unit**

3.4 Construction of RO Plant control/machine room, Installation of the RO Plant and power installation

The construction or renovation of the Reverse Osmosis Plant control/machine room for the lots, installation of the plant and power installation shall be as per the technical specifications from part B to G below and as directed by the Engineer. Reference should be made to the manufacturer's guide, this will show a schematic of the items to be fitted and include an overview of the tools required. Component inter-connection shall be carried out to conform with the existing reticulation system.

3.5 Overall system performance test

Ensure that all necessary connections and installations are in place before the test. Carry out all the electrical type tests on the electrical installation and ensure that the system complies fully with the I.E.T and Kenya Power & Lighting Co. Ltd Regulations and Bye Laws.

Test the whole system (10 hours each day) to the satisfaction of the Engineer. Ensure that the water reaches the clean water storage tank while checking all connections and joints for leaks. Should you find any leaks, switch the water off , tighten/check the connections and ensure there is no leakage.

3.6 Technical literature

A Tenderer **must** submit the following information together with the Tender documents to assist in fair evaluation: -

- Technical specifications on the Reverse Osmosis Filter system (unit) to be installed as per the manufacturer's manual. The RO filtration unit should be of good quality with an operating life of not less than 15 years under normal conditions.

- Installation method, previous experience, use of specialist and/or as per manufacturer's instructions.

Any other information the tenderer may deem is important in evaluation as well as boosting the tenderers chances of winning the tender.

B. ELECTRO – MECHANICAL WORKS SPECIFICATIONS

1. ELECTRICAL WORKS

1.1. REGULATIONS AND STANDARDS

The complete electrical installation shall be carried out by a competent Contractor and in accordance with the specifications and compliance with the following**;**

(a). Kenya Bureau of Standards

(b). Regulations for the Electrical Equipment of Buildings (Latest Edition) issued by the Institution of Electrical Engineers of Great Britain.

(c). IEC standards and Electric Power Act and the Rules made there under.

(e). Kenya Power & Lighting Co. Ltd Regulations and Bye-Laws.

(f). Government Electric Specifications GES 1 and 2 which can be viewed at the office of the Chief Electrical Engineer, Ministry of Roads, Public Works and Housing.

(g). Industrial Safety Regulations currently in force.

1.2. SWITCH GEAR, STARTER PANELS AND OTHER ENCLOSURES

Unless otherwise specified, all shall be surface mounting, water tight, corrosion resistant, vermin-proof, termite-proof, dust-proof and resistant to attack by oils and grease. They shall be fabricated from heavy gauge 16 swg, folded, spangled, galvanized and rust protected sheet steel of minimum thickness 1.5mm. They shall be finished in a two tone, heat resistant, non-peeling-off staved gray enamel paint or epoxy powder coating.

1.3. ELECTRIC CABLES

Unless otherwise specified, all cables shall be made of copper material and conform to BSS 6004, 600/1000 volts' grade.

(i). UNARMOURED CABLES: They shall be pvc insulated.

(ii). ARMOURED CABLES: They shall be PVC SWA PVC copper cables.

(iii). BOREHOLE CABLES

They shall be made from tough flexible rubber material that will not allow water to seep through when submerged in the borehole water.

1.4. GS CABLE TRUNKING

The trunking shall be manufactured from heavy duty hot dip galvanized mild steel sheet of minimum thickness 1.25 mm with screw-in and twist-to lock top lid.

1.5. BOREHOLE MOTOR

The motor shall be the two-pole canned asynchronous, 3 phase, 415 vac, squirrel cage, induction type, continuously rated and of minimum CLASS "B" insulation. The entire body including the shaft shall be made of heavy-duty stainless-steel material. The motor shall be supplied complete with 3 lead copper tail cable.

1.6. BOREHOLE PUMP (AS GRUNDFOS OR EQUIVALENT)

The pumps shall be the high pressure, vertical mounting, multi-stage, centrifugal type running at a full load speed of not less than 2800 rpm. The entire pump body including the strainer, cable guard, non- return valve, impellers, shaft, locking nuts and washers shall be made of heavy-duty stainless-steel material. The bearings shall be the water lubricated type, wear resistant. The impeller(s) shall be hydraulically and dynamically balanced.

1.7. WATER LEVEL CONTROL ELECTRODES

All the electrodes shall be made of stainless-steel material **AISI 304 as Omron F03-01, Londex, Asco** or similar approved quality made of stainless steel. The borehole electrodes shall be of size 6.0 mm diameter and 120mm length (D6x120mm) and in their tough moulded shrouds.

1.8 BOREHOLE COMBINED PIPE AND CASING CLAMP

The clamp shall be the heavy-duty type. It shall comprise of 3 pieces; the bottom half clamps to the borehole casing, while the top portion which rests on the top of the casing clamps to the pipe column and holds it centrally in the casing bore.

1.9. BOREHOLE SUNDRIES

Unless otherwise specified, the words "BOREHOLE SUNDRIES" shall mean the following items to be used in the installation, support and inter-connection of the borehole pump and drop pipes to the rising mains. Unless otherwise specified, the GI fittings shall be of the same diameter as the drop pipes.

- rolls of 6 water proof adhesive rubber tape and cable ties.
- Tee, sockets, nipples, 90° slow bends and plug.
- 2 Litres of Boss black type COLAS RC.

1.10. RC CABLE AND PIPE ROUTE MARKERS

They shall be of size 1100mmLx200mmWx80mmT with the words "POWER CABLE" OR "WATER PIPE" in 40mm height letters mould cast in black indelible colour in the concrete. They shall be caste using Y8 RC concrete of mix ratio (mix ratio 1:3:6).

1.11. HATARI TILES

The tiles shall be used to cover the underground armored cables for protection against mechanical damage. They shall be of size 300mmLx150mmWx30mmT with the word "HATARI" in 40mm height letters mould cast in the concrete. They shall be pre-cast using concrete of mix ratio (mix ratio 1:3:6).

1.12. GS BOREHOLE PROTECTION COVER

The cover shall be all weather-proof, rectangular in shape with pitched top (3°). The cover shall be fabricated from hot dip galvanized heavy gauge (16 swg) sheet steel plate of minimum thickness 1. 75mm.It shall have GS solid handles and pad locking facilities on the opposite sides. The cover shall be in an L-SHAPED steel frame (25x25x2.5mm thick).

1.13. WIRING METHODS OF ELECTRICAL INSTALLATIONS AT MEDIUM AND LOW VOLTAGEE

(i). SYSTEM "A"

Plastic insulated cables enclosed in screwed steel conduit or trucking on the surface of walls and ceilings or in the roof space.

(ii). SYSTEM "B"

Plastic insulated wires armored cables laid on the surface of walls, cable trays, in cable trenches or ducts.

(iii). SYSTEM "C"

Plastic insulated cables clipped to the roof members and run in metal or plastic conduit drops concealed in walls or ducts formed in the fabric of the building.

1.14 SYSTEM BONDING

All non-conducting metallic parts which form part of the electrical system or are within the vicinity/route of the electrical system shall be effectively bonded to the main earthing system.

1.15 EARTHING SYSTEM

All the electrical installation earthing conductors shall be connected to the earth electrode through an earth lead. The earth lead shall be firmly connected to the electrode by means of the clamp, after which a thin film of grease or Vaseline shall be applied at the clamp area for protection against corrosion**.**

1.17 SOLAR HYBRID SYSTEM

The Contractor shall furnish and install the complete solar power system as described in the Tender

Specifications. As directed by the engineer and as appropriate including
Sub Motor, Three Core Ug Cable, 7.5kw Hybrid Inverter, Electrode Cable Dual, Well Probe, Solar Panel Not Less Than 200watts each, Water Meter 2", PV Disconnect C/W Surge Arrestor, 2core U.G Cable, Earth rod Assembly, Solar Mounting Structure, Adaptor Set 1.5"

1.17.1 ENERGY EFFICIENT SOLAR POWERED LED LIGHTING SPECIFICATIONS

MINIMUM SPECIFICATIONS FOR LED LIGHTING FITTINGS

Supply and install Approved Quality, automatic and original brand new solar security street light(Mounting pole and accessories included) of minimum 300w with minimum 2years warranty .
The system should have the following features;

- Waterproof,
- Bright LED light
- Rechargeable lithium battery
  Minimum light hours of 14h and is to be mounted appropriately as directed by the Engineer.

Bidders must provide Technical Brochures to assess their technical compliance with these specifications

1.17.2 SOLAR PANEL

The solar panel to have the following minimum specifications;

- Cell type: Monocrystalline; N-Type
- Dual Glass: 2.0mm anti reflection coating front glass and 2.0mm Heat strengthened back glass
- Frame: Anodized aluminium alloy
- Junction Box: IP68 rated
- Mechanical Load: Withstand wind load of upto 2,400Pascal
- Maximum Power (Pmax): 300 to 580W
- Open Circuit Voltage (Voc): 51.47V(STC); 48.89V(NOCT)
- Short Circuit Current (Isc): 14.37A(STC); 11.6A(NOCT)
- Module efficiency: 22.45%
- Compliance to standards: IEC61215(2016); IEC61730(2016;ISO9001:2015; ISO14001:2015; ISO45001:2018
- Atleast 25years power output warranty

1.17.3 HYBRID MPPT INVERTER

- Max. Output/Rated Output Power: 30KW/33KVA
- Output Current: 43A(Rated); 47A(Max. output)
- Input AC Voltage, VAC: 415V/3ph
- Max. PV Input Power, W: N/A
- Max. PV Input Voltage, VDC: 1,100V
- Operating Voltage Range, VDC: 200-100
- Rated Input Voltage, V: 600V
- Number of MPPT Inputs: 8
- MPP Trackers: 4
- Maximum Input Current per MPPT, A: 26
- MPPT Operating Voltage Range: 200-1000V
- Rated Output Voltage, Vac: 230Vac/400Vac,3W/N+PE
- Peak Efficiency, %: 98
- Inverter to be complete with Input-side Disconnection Device, Anti-islanding Protection, AC Overcorrect Protection, DC Reverse-polarity Protection, PV-array String Fault Monitoring, DC Surge Arrester, AC Surge Arrester, DC Insulation Resistance Detection, Residual Current Monitoring Unit, Arc Fault Protection, Ripple Receiver Control, Integrated PID Recovery.
- Inverter to convert the PV generated DC power to AC three phase and feed to the applied load prioritizing the PV output, supplementing with AC mains power if there is insufficient PV generated output/ Solar Low power - using a sufficiently rated power sensor.
- The Inverter to be fitted with MPPT trackers to optimise output efficiency and they are designed to be connected in parallel, each fed from dedicated solar arrays that can provide power outputs of limitless size.

- Hybrid function – support solar power, grid power/generator dual input. Multi power sources work as complementary to achieve system working 24 hours per day

- EN/IEC 62109-1, EN/IEC 62109-2, IEC 62116, IEC 60068, IEC 61683, IEC 61727 Certifications.

QUALITY AND WARRANTEE:

i) All the components and parts used in the solar power systems should be corrosion proof

ii) All the components and parts used in the solar street lighting systems should conform to the latest BIS or IEC specifications, wherever such specifications are available and applicable.

iii) The PV module(s) will be warranted for a minimum period of 10 years from the date of supply. The PV modules must be warranted for their output peak watt capacity, which should not be less than 90% at the end of five (5) years and 80% at the end of Ten (10) years.

iv) The Warranty Card to be supplied with the system must contain the details of the system.

OPERATION AND MAINTENANCE MANUAL:
An Operation, Instruction and Maintenance Manual, in English and/or the National Language -Kiswahili, should be provided with the Solar power System. The following minimum details must be provided in the Manual:

- Basic principles of Photovoltaic.
- A small write-up (with a block diagram) on Solar power System - its components, PV module, inverter, electronics and expected performance.
- Type, Model number, Voltage & capacity of the battery, used in the system.
- About solar power generation and Significance of indicators.
- Clear instructions about erection and mounting of PV module (s) assembly
- Clear instructions on regular maintenance and troubleshooting of the Solar power System.
- Name and address of the contact person for repair and maintenance, in case of non-functionality of the solar power system.

1.18 TECHNICAL LITERATURE

(a). The bidder **MUST** submit adequate technical literature to assist in evaluation.
The literature information shall INCLUDE;
- Performance curves for the pump set
-Make, type model and country of origin of the generator, pump, motor, pump starter etc

(b). **THE WINNER OF THE BID MUST SUBMIT THE FOLLOWING;**

1 No. set of the User manual for the pump set.
Written Warranty document of minimum 12 months for the pump set, starter etc.
1 No. SET of original film and
3 No. SETS each of as-fitted electrical schematic drawings, control wiring drawings for main switch gear, pump starter, cabling and water pipe lay out between borehole and tank.

C. SITE CLEARANCE

1. Clearance of Trees, Bushes, Scrub, etc.

The contractor shall unless otherwise directed cut down all trees remove bushes, plantations, crops and other vegetable growth and grub up all roots, take down all huts, buildings, wall fence and any other obstruction and handle and transport salvaged usable materials to a site approved by the Engineer. All salvaged and usable materials are the property of the respective owners. The clearing and demolition here-in

described shall be carried out to a width of the minimum excavation plus 1.50 m on either side.

With exception of the salvaged material fore-mentioned, the Contractor shall destroy or otherwise remove the whole of the rubbish from the site to an approved tip or number of tips provided by him.

Trees shall be cut down to as near the ground level as possible and the rate entered in the Bill of Quantities shall include for cutting down, removing branches and foliage, cutting into suitable lengths, grubbing up stumps and roots, stacking up, burning or disposing off as directed.

Before commencing any site clearance, general clearance, clearance of pipelines etc., the contractor shall inform the Engineer's Representative of his intention. The Engineer's Representative will by visiting the section of works concerned, determine the extent of the clearance expressly required.

Payment for clearance will be authorized on the basis of what is expressly required and at the discretion of the Engineer's Representative.

2. <u>Damage to Land, etc.</u>

Except where necessary for the proper execution of the Works, the Contractor shall not interfere with any fence, hedge, trees, land or crop forming the boundary of the site, or elsewhere. In the event of any interference, the Contractor shall make good any damage to such fence, hedges, trees, land or crop to the satisfaction of the Engineer and the owner thereof.

Where the work is to be executed in private land, the Employer will be responsible for negotiating and obtaining rights of way and the serving of all notices as may be required upon the owners and/or occupiers of the land and it shall be the obligation of the Contractor to keep the Procuring Entity and the Engineer fully informed concerning the rate of progress and of his intention to enter and begin work with any way leave as provided for under the Conditions of Contract and required by this Specification.

3. Clearing the Site on Completion

On completion of the Work, the Contractor shall clear the Site of all plant, building, spoils, dumps, rubbish, etc. and leave the Site to the satisfaction of the Procuring Entity.

Borrow pits and temporary quarries shall be made good and covered with vegetable soil. Dumps for waste materials shall be covered with at least 0.5 m of soil of which at least a 0.1m layer in top shall be
vegetable soil

D. CONCRETE WORKS

1.0 Concrete works - All materials and workmanship for concrete shall comply with BS 8110 and BS 8007 where applicable.

1.1 Cement - Cement shall be ordinary Building cement complying with BS 12. The cement shall be delivered in properly sealed, unbroken bags.

1.2 Aggregates for Concrete - The aggregates shall comply in all respects with the requirements of BS 882.The aggregates shall be free from dust, decomposed material, clay, earthly matter, and foreign substances or friable or laminated material. The fine aggregate shall be approved river sand. Coarse and fine aggregates shall be stored on the sites in separate heaps so that no possibility of any intermixing of the two shall occur. Any materials, which have become intermixed, shall be removed by the Contactor forthwith.

1.3 Water - All water to be used for concrete, mortar and curing shall be of good drinkable quality, free from humus acid, chemicals, salts or other matters that in any way whatsoever may be harmful to the concrete either by diminishing the strength or causing a discoloration of the concrete.

1.4 Concrete Mixture - Concrete shall be "Normal Mixes for mass concrete" to BS 8110 and used as shown on the drawings and in the Bills of Quantities. The concrete mixes, maximum aggregates sizes, maximum water/cement ratio and minimum cement shall be in accordance with the the standard as directed by the resident enigeer

1.5 Precast Concrete Units

Precast concrete shall be cast in properly made strong moulds true to the shape required. For work described "Finished Fair" the moulds shall be lined hardboard, sheet metal or other approved material.

The Concrete shall be thoroughly tamped in the moulds and shall not be removed
from then until 7 days after placing the concrete, but the sides may be removed after 3 days, provided the moulds are such that the sides are easily removable without damaging the concrete.

2.0 Workmanship

2.1 Mixing of Concrete - Concrete for grade 20 and grade 25 shall be mixed by weight batching only, unless approval has been obtained from the Engineer for the concrete materials to be mixed by volume. Concrete for grade 10 and 15 can be mixed by volume. The weight of coarse and fine aggregates in each batch shall be so computed that each batch contains one or more full 50kg bags of cement. The dry materials for concrete shall be mixed manually until a uniform colour is obtained after which the gauged quantity of water shall be gradually added. After all the water has been added, the mixer shall continue to mix for a period of not less than two minutes.

2.2 Compaction - After the concrete has been placed in a position it shall be compacted manually. The concrete shall be worked well up against the form, joints and around the reinforcement and be free from voids and other imperfections.

2.3 Curing and Protection of Concrete - Curing shall begin as soon as the surface of the concrete has hardened sufficiently. All exposed concrete surfaces shall be cured for a period of seven days by covering them with a layer of sand, hessian canvas or other approved materials kept damp. Concrete shall be protected from sun, wind, heavy rains and flowing water for at least three days after placing.

2.4 Construction of Formwork - All formwork shall be substantially and rigidly constructed of timber or steel or pre-cast concrete or other approved material and shall be true to the shape, line, level and dimensions shown on the drawings. Timber shall be well seasoned, free from loose knots and or formwork of exposed concrete faces be planned to thickness. Faces in contact with concrete shall be free from adhering grout, projecting nails, or other defects that will make the concrete surface.

2.5 Form work for foundations and other concealed work may be undresses or rough timber. All joints shall be sufficiently tight to prevent leakages of cement grout and to avoid the formation of fins or other blemishes, and all faulty joints shall be caulked. Connections between formwork elements shall be constructed to allow for easy removal of the formwork, and shall be either nailed, screwed, bolted, clamped, braced or otherwise fixed securing a sufficient strength to retain the correct shape and line during compaction of the concrete. Formwork shall be erected true to line and braced and strutted to prevent deformation under the weight and pressure of the wet concrete, soffits shall be erected with an upward camber as shown on the drawings or as directed by the Engineer or of 2 mm for each 1 m of horizontal span.

2.6 Removal of Formwork - Formwork shall be left in position until the concrete has attained sufficient strength to be self-supporting. The Contactor shall be responsible for the safe removal of the framework without shock or vibration –which would damage the concrete.The precast work shall be cast under sheds and shall remain under same for 7 days in the moulds and further 7 days after removal from the moulds. During the whole of this period the concrete shall be shielded by sacking or other approved materials kept wet. It shall then be removed from the sheds and stacked in the open for at least 7 days to season.All precast work shall be cast in lengths convenient for handling unless otherwise described.Prices are to include for handling reinforcement, hoisting, fixing and bedding in cement mortar, and for finishing exposed surface fair where described.

2.7 Placing of Concrete under Water

Concrete shall only be placed under water with the prior approval of the Engineer who shall likewise approve the method to be used and the precautions necessary to prevent loss of material. In no circumstances shall concrete be dropped or placed in water in a loss condition or be placed in flowing water. In all cases the cementcontent shall be increased by 25 per cent for each class of concrete at the Contractor's Expense.

2.8 Placing of Concrete on Earth Surfaces

Earth surfaces on which concrete is to be placed shall be clean, firm and free from standing or flowing water.

2.9 Admixture

Admixture of any kind of accelerating the setting of cement, plasticisers, water proofers, etc. shall not be used except by written permission of the Engineer. The Contractor must request supply all details of any admixture.

3.0 Steel Reinforcement

Steel for reinforced concrete shall be store under cover clear of ground and shall comply with BS 4449, BS 44111 and BS 4483

All steel reinforcement shall be supplied by an approved manufacturer, and the Contractor may be required to obtain a manufacturer's test certificate in respect of steel reinforcement supplied or provide prove of the source of the steel reinforcement.

3.1 Workmanship

3.1.1. Inspection of Reinforcement and Formwork

No concreting shall commence until the reinforcement and formwork have been inspected and approved by the Engineer, Reinforcement in walls and columns shall be inspected and approved before being enclosed in the formwork. Before concreting
any part of the Work, the Contractor shall give at least 24 hours notice in writing to the Engineer and obtain his approval.At the time of fixing and when concrete is being placed, all reinforcement shall be free from oil, painting, grease, dust and scale or any other coating which would destroy and bond with the concrete. The Contractor must obtain the Engineer's approval of the reinforcement when places, before any concreting is commenced.

E. EARTHWORKS SPECIFICATIONS

1.0 GENERAL

1.1 Method Statements

At least seven (7) days prior to the commencement of any open excavation at any section of the Works,
the Contractor shall submit for the Procuring Entity's Representative's (Engineer's) approval, a statement of the excavation methods and procedures he intends to adopt on that section.

The statement shall include a description of the following, together with any other items which the Contractor considers relevant:

Sequence of operations; - A detailed program of events and any consequent change in the overall program of the Works;

Excavation protection and support, including drainage and temporary works; -
Disposal or re-use of materials, including quantities and locations.

The methods adopted shall provide for the safe and efficient execution of the excavation work in such a way as to conform to the programme for completion of the Works and so that they do not interfere with other operations in progress of the Contractor or others.

The Procuring Entity's Representative's (Engineer's) approval of the Contractor's method of excavation shall not relieve the Contractor of any of his responsibilities or obligations under the Contract.

In the event the Contractor's methods do not provide results which satisfy requirements stated in the Specification, the Contractor will be obliged to change
them and to use techniques and procedures either agreed between the engineer and the Contractor or as indicated by the Engineer. Such changes will not warrant any extra payment to the Contractor.

1.2 Location and Shape of Excavation

The Contractor shall locate the excavations for structures and all other work as shown on the drawings and in accordance with the benchmarks provided to him by the Engineer. The Contractor shall be responsible for correct location, and all extra work caused by his negligence in this matter will be at his expense and shall be corrected at the Engineer's request.

If local survey points or bench marks have been removed or are insufficient, the setting-out shall be related back to other established survey points or bench marks. Excavation shall be to the lines, grades and dimensions shown on the drawings or as established by the Engineer. During the progress of any open excavation work, it may be found necessary or desirable to vary the slopes or the dimensions of the excavations from those shown on the drawings or established by the Engineer. Such adjustment or trimming of the final excavated surface is considered to be a separate operation as defined hereafter.

Any and all over-excavation performed by the Contractor for any purpose or reason, except as may be directed by the Engineer, shall be at the expense of the Contractor. All such over-excavation shall be backfilled with approved material from excavations or concrete as directed by the Engineer, and the cost of furnishing and placing this backfill or concrete shall be at the expense of the Contractor.

The Engineer may direct alternative measures of backfilling, and the cost of such measures shall be at the expense of the Contractor.

Any other excavation performed at the option of the Contractor to secure access to required work, for disposal of material excavated, or for any other purpose, shall be at

the expense of the Contractor.

1.3 Dewatering

The Contractor shall be responsible for the protection of all sections of the Works from effects of surface water run-off and ground water.

Such protection shall include pipes, channels, embankments and pumping arrangements to keep the Works free from any water which may damage the finished quality or impede progress or inspection during construction.

Where local streams or natural drainage channels intersect the Site of the Works, these streams and channels shall be diverted outside the limits of the Works, at the expense of the Contractor.

The Contractor shall be responsible for the design of all such temporary dewatering works, and shall on request, provide the Engineer with drawings, calculations, explanatory reports and any other evidence that their performance will be adequate for their purpose.

Where some part of the Permanent Works can be adopted for such dewatering, the Engineer will instruct the Contractor on any limitations he requires with respect to their temporary use for dewatering during the construction of the Works.

1.4 Trench Excavation

Trench excavations shall be defined as those whose final width is less than 2 meters, or greater than 2 meters when depth is greater than width.

Excavation for trenches (including pits, footings, etc.) shall be performed by the use of hand tools and approved mechanical equipment in such a manner as to prevent shattering of the sides and bottom of the excavation. At the option of the Contractor, and with the approval of the Engineer, blasting may be carried out in accordance with Sub-section 3 hereafter. All planking, strutting and supports necessary to retain the sides of the excavation shall be provided, erected and maintained in a safe condition by the Contractor.

1.5 DISPOSAL AND STOCKPILING AREAS

The Contractor shall maintain appropriate disposal areas in the locations shown on the drawings, or as otherwise approved, for materials unsuitable for fill or aggregate production, surplus material from excavation and other approved waste.

All debris, bush, roots and other combustible material shall be burned or buried. All non-combustible waste shall be buried. Disposal by burying shall be done in such a manner that the material disposed of is buried with a minimum cover of 50 cm of excavation spoil or stripped material. The Contractor shall at no time leave a fire unattended and shall be responsible for any fire damage resulting from his operations.

Should the Contractor wish to form spoil dumps for his own convenience, other than those described, he shall obtain the Engineer's approval before any dumping is started.

Where excavated materials are suitable and are required for use in subsequent work, the Engineer may direct that these are separately stockpiled and will designate the location for such stockpiles within the disposal areas or in separate locations adjacent to the sites of the Works.

Adequate road access to the disposal and stockpile areas shall be established and maintained by the Contractor. Disposal and stockpile areas shall be cleared appropriately and drainage channels shall be formed to remove surface water.

On completion of the Works, the disposal and stockpile areas shall be left in a tidy and safe condition to the satisfaction of the Engineer.

1.6 BACKFILL

The Contractor shall supply, place and compact backfill or selected material in trenches and around concrete structures as shown on the drawings or as directed by the Engineer.

No backfilling shall commence until the foundation and Permanent Works have been inspected and approved by the Engineer.

Backfill shall be placed and compacted in successive layers not exceeding 25 cm in thickness. Compaction of cohesive soils shall continue until the dry density of the material reaches a value of 90% of the AASHTO maximum dry density, as determined in accordance with BS 1377.

The compaction of granular soils shall continue until the dry density of the material reaches a value of not less than 80% of the relative density as determined in accordance with Test 12 of U.S. Bureau of Reclamation Earth Manual (Section Edition, 1974).

In the event of any damage to any structure as a result of the placing or compaction of backfill, the Contractor shall repair the structure at his own expense, to the satisfaction of the Engineer.

1.7 DRAINAGE

Materials for drains shall be sound clean rock or stone, Dmax 80 mm, Dmin 10 mm, with not more than
5% of the material smaller than 10 mm; maximum size of the material may be varied at the discretion of the Engineer. Drain material shall be placed using light compaction and ensuring that the drainage zone is filled entirely.

F. MASONRY AND BLOCKWORK

1.0 General

All masonry work shall be constructed from building stone or approved concrete blockwork For walls, facing and other exposed works the stone shall, unless otherwise specified, be medium chisel-dressed.

1.2 Workmanship

All masonry work is to be constructed in compliance with BS 5.
The Contractor shall provide and use proper setting-out rods for all work.
Stones and blocks shall be well soaked before use and the tops of walls shall be kept wet as the work proceeds. The stones and blocks shall be properly bonded so that no vertical joint in a course is within
115mm of a joint in the previous course. Alternate

courses of walling at angles and intersections shall be carried through the full
thickness of the adjoining walls. All perpends, reveals and other angles of the walling shall be built strictly true and square.
The stones and blocks shall be bedded, jointed and pointed in mortar (1:3) with beds and joints 9mm thick flushed up and grouted solid as the work proceeds.

1.3 Cement

Cement used for making mortar shall be as described in the Engineering specifications for "Materials".

1.4 Lime

The lime for making mortar shall be obtained from an approved source and shall comply with BS 890 Class A for non-hydraulic lime. The lime to be run to putty in an approved lined pit or container. The water to be first run into the pit or container and the lime to be added until it is completely submerged, stirred vigorously until all lumps are disintegrated and shall be kept constantly covered with water and regularly stirred for at least four weeks. The resulting milk-lime then to be run through a fine sieve and run into a pit or other container and kept clean and moist for not less than two weeks before being used in the works.

1.5 Sand

Sand used for making mortar shall be clean well graded siliceous sand of good sharp hard quality equal to samples which shall be deposited with and approved by the Engineer. It shall be free from lumps of stone, earth, loam, dust, salt, organic matter and other deleterious substances, passed through a fine sieve and washed with clean water if so directed by the Engineer.

1.6 Water

Shall be as described in "Concrete Work"

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1.7 Concrete Blocks

Concrete blocks shall comply with the requirements of BS 2028, 1384 except where amended or extended by the following clause. Blocks shall have square arises and corners. For fair faced work damage to arises and corners shall not exceed the removal of 11 mm of the blocks depth or thickness. Concrete blocks shall have a minimum crushing strength of 3.5 N/mm2 except when below the damp course level or in contact with soil when they shall have a minimum crushing strength of 7 N/mm2, unless noted otherwise on drawings. Hollow concrete blocks shall not be used below the damp course level or in contact with soil.
Concrete blocks used for external walls shall be Class 'A' and for internal load bearing walls they shall be at least Class `B'. Class `C' blocks shall only be used for non-load bearing partitions.
No precast blocks shall be incorporated into the works unless approved by the Engineer. The delivery of present blocks from which samples tested do not comply with this specification shall be deemed defective. Any work constructed with block

from which samples tested do not comply with this specification shall be deemed to be defective. From every 1,000 precast concrete blocks delivered to site ten blocks samples shall be provided for testing. The precast block samples shall be selected in accordance with BS 2028, 13114. Samples of precast concrete blocks for testing shall be tested for the following properties in accordance with the methods given in BS 2028, 13114 and the test results shall comply with the requirements of BS 2018, 13114 except where amended by this specification:-

(a) Drying shrinkage (b) Compressive strength or transverse breaking load (as applicable) (c) Wetting expansion * (d) Density (e) Dimensional Tolerance (f) Cavity size

*Test only applicable for concrete blocks made with clinker aggregate.

Blocks shall also be tested to determine the suction rate. The test shall consist of weighing the block, placing in a tray of water such that only 3 mm of the block side is immersed for a period of sixty seconds +/- 2 seconds; quickly wiping off excess water and reweighing. The suction rate is the increase in weight due to water absorbed and shall not exceed 2kg/m2/minute. Blocks which have a suction rate exceeding 2kg/m2/minute may be used if the Contractor uses an approved water reactive additive in the mortar or can show that the blocks are wetted such that the blocks will have a suction rate not exceeding 2kg/m2/minute for a period of 24 hours from being laid and provided the blocks comply with all other requirements.

Concrete blocks shall be stacked on prepared dry areas free of clinker, ashes and sulphate bearing strata. Blocks of different strengths shall be stacked separately and clearly marked to differentiate the strengths.

Blocks shall not be used for a minimum of 7 days after manufacture and shall not be loaded for at least 14 days after laying. For the first 7 days after manufacture, blocks shall be cured by maintaining in a damp condition, e.g. covering with polythene sheeting after wetting blocks.

1.8 Stone

All stone shall comply with the requirements of CP 121.202 for masonry and rubble walls respectively except where amended or extended by the following clauses. Unless otherwise noted, all masonry walls shall be coursed squared rubble walling with mortar joints.

The size of stones for rubble walling shall be such that the length of stone does not exceed three times its height. For coursed squared rubble walls blocks shall not exceed 300 mm in height and shall be not less than 150 mm in height.

Where snecked rubble walls are specified, the snecks shall not be less than 100 mm square on the exposed face.

Stone for masonry shall have a minimum compressive strength of 10 N/mm2. (Stone shall not be required to be tested to failure). The density of stone for masonry shall be not less than 2300 kg/m3. The drying shrinkage of stone shall not exceed 0.05% Samples of stone provided for testing shall be tested for the following in accordance with the methods given in BS 2028, 13114 and the test results shall comply with the requirements of this specification.

(a) Compressive strength (b) Density (c) Drying shrinkage

The colour and texture of stone shall be uniform and consistent. Prior to delivering any stone to site, the Contractor shall supply the Engineer with a sample of stone in order that he may approve the colour and texture. The Contractor shall ensure that sufficient suitable stone is available for the whole of the project prior to ordering the stone.

Where cast stone including stone described as artificial stone, reconstructed stone, etc., is specified the stone shall comply with the requirements of BS 1217. Masonry shall be of stone, having no irregular faces and only the back face if not visible shall be left as from the saw.

Prior to ordering dry stone the Contractor shall demonstrate that the stone is durable. This may be done by supplying details of buildings constructed with stone from the same quarry and which has been exposed to the same environmental condition for at least ten years.

The maximum projection from the face of stone for rubble walls shall be 20 mm beyond the specified face of the wall.

The Contractor shall provide six samples of stone measuring 150 mm x 150 mm for testing prior to delivering any stone to site. As work proceeds the Contractor shall provide six samples 150 x 150 x 150 mm for testing from every 300 m2 of work.

All stone shall be stacked on prepared dry areas free of clinker, ashes and sulphate bearing strata.

1.9 Wall Reinforcement

100mm Thick walls and where described other walls and partitions shall be reinforced with a 25 mm wide strip of No. 20 S.W.G. hoop iron built into alternate horizontal joints in the wall centre. The reinforcement shall be lapped and hooked at running joints, angles and intersections and carried at least 115 mm into abutting walls at junctions.

5.8 Cement Mortar

Mortar described as cement mortar 1:4 shall be composed of 1 cubic metre (1498 Kgs.) of Portland cement and 4 cubic metres of sand. Other mixes such as 1:3, 1:5 etc. shall be similarly construed.

1.10 Mixing of Mortar

The constituent materials shall be measured separately when dry in specially prepared gauge boxes of sizes to give the proportions specified without consolidation of the contents by ramming and shaking.

The mortar shall be mixed in an approved power driven mixer for not less than two minutes per batch and using the minimum quantity of water necessary to obtain a working consistency. The mixer shall be used as close as practicable to the works and mortar shall be used within 30 minutes of mixing. No partially or wholly set mortar will be allowed to be used or re-mixed.

1.11 General Construction

(a) Setting out The Contractor shall provide proper setting out rods and set out all work on same for course, openings, heights etc., and shall build the walls, piers etc., to the widths, depths and heights indicated on the Drawings and as directed by the Engineer.

(b) Building in Wood Frames Openings for doors, ventilators etc., are to be set out and left unbuilt until the wooden frames have been fixed in position.

(c) Building in Metal Windows and Doors Openings for metal frames are to be wide enough for the frames to fit without being forced into position. Build the lugs into the joints of the walling and fill in the space between the walling and frame with cement mortar well tamped into the channel of the frames and point all round externally.

All frames must be set plum and level and free from twist.

(d) Walls to Receive Plaster & Similar Finishes All faces of walls to be plastered etc., to have all projections dressed off and joints raked out as key.

1.12 Building Walling

(a) Laying and Jointing All blocks shall be well wetted before being laid and the top of walling where left off shall be well wetted before commencing building. Walls to be kept wet three days after building. All walls throughout the works shall be carried up evenly in 200 mm courses except where courses of less depth are required to bring walling up to level of floors, windows and the like and where otherwise described, no part being allowed to be carried up more than one metre higher at one time than any other part and in such cases the joining shall be made in long steps so as to prevent cracks arising and all walls shall be levelled round at each stage. Not more than 3 metre height of wall shall be laid in any one day. (b) Bonding the blocks shall be properly bonded together and in such manner that no vertical joint in

any one course shall be within 115 mm of a similar joint in the courses immediately above or below. All walling of 300 mm thickness or less shall be built in single thickness of blocks. Walling exceeding 300 mm in thickness shall

be built with through bonders not more than 1070 mm apart in each course as directed by the Engineer. Alternate courses of walling at all angles and intersections shall be carried through the full thickness of the adjoining wall. All perpends, reveals and other angles of the walling shall be built strictly true and square.

(c) Tolerances All courses of walls shall be level with a maximum deviation of +/- 3 mm in any one metre length and a maximum overall deviation of 10 mm for lengths of wall exceeding 3 metres. Walls shall be plumb with a maximum deviation of +/- 3 mm in any metre height of wall with a maximum deviation of +/- 10 mm in the total height of the wall or any storey.

All corners of walls which are shown as being at right angles shall be square with a maximum deviation of 3 in 1000. All walls shall be straight with a maximum deviation of +/- 3 mm in any one metre length and a maximum overall deviation of 10 mm in any length exceeding 3 metres. All bed and vertical joints shall be an average of 10 mm thick with a maximum deviation of +/- 3 mm of blockwork, and stone
rubble walls. Joints for stone masonry walls shall be 11 mm +/- 1 mm
thick. (d) Curing
All walls shall be maintained in a damp condition for at least 24 hours after laying. Walls under construction shall be dampened by applying water with a brush and no hosing directly on to the wall shall
be permitted. When work ceases on any section of wall polythene or hessian shall be draped over the wall, for at least 24 hours. If hessian is used, it shall be maintained continuously wet.
(e) Backfilling
Earth backfilling against walls shall be carried out such that the level of the backfill is always equal on each side of the wall.
When a wall has filling material on one side only to a fill width of more than three times the wall thickness, the wall shall be continuously supported during backfilling. Backfilling shall not be carried out until at least seven days have elapsed since the laying of the blocks or stone.

Steel reinforcing bars in walls shall be carefully placed and spacers used to ensure that a minimum of 20 mm cover is given to the reinforcement unless otherwise specified. Horizontal reinforcement in mortar joints shall be laid such that the reinforcement is not in contact with the blocks or stone.

1.13 Wall Ties

Wall ties shall be provided to connect walls to steel or concrete columns and beams to connect two unbounded leaves of wall.
Wall ties shall be provided at 450 mm centres both vertically and 900 mm centres horizontally and shall be staggered when used to connect two leaves of unbonded wall. Wall ties shall be embedded into each material by a minimum of 50 mm.

1.14 Fair Face

All concrete and hollow clay blockwork described as finished with a fair face is to be built to a true and even face with the joints finished as specified hereinafter.

1.15 Pointing

Pointing of walls shall be carried out as the work proceeds wherever possible. When coloured mortar is specified for pointing only the pointing shall be carried out after work has been completed.
Existing walls shall be prepared for pointing by raking out all loose friable material to a minimum depth of 15 mm to form a square recess. The joints shall then be wetted and new mortar shall be forced into the joints and finished as directed.

1.16 Holes, Cutting and Chasing

(a) All putlog holes shall be not less than one course deep and carefully filled with a block cut to fit size of opening with beds and joints filled with mortar well tamped in after scaffolding is removed, and if in faced walls to match facing.
(b) Where walling is cut, holed or chased for conduits, pipes and the like all such cuttings etc., shall be filled in solid with cement mortar (1:4) prior to the application of finishes.

2.0 FINISHINGS

2.1 Samples

The Contractor shall prepare at his own cost sample areas of the paving, plastering and rendering as directed until the quality, texture and finish required is obtained and approved by the Engineer

after which all work executed shall conform with the respective approved samples.

2.2 Finished thicknesses

The thicknesses of floor finishes quoted in this section of the specification shall be the minimum requirements.
The finished floor surface will equally have a constant level and any adjustment needed to achieve this effect with the varying floor finish materials is to be made in the screeds beneath the same.

Slabs bearing on the ground may be cast to varying levels, and be of constant thickness with varying formation levels, or have varying thicknesses at the option of the Contractor. This stipulation in no way relieves the Contractor of the requirements of the specification for structural work.

2.3 Materials generally

All materials shall be of high quality, obtained from manufacturer's to be approved by the Engineer. Cement, sand and water shall be as described under Concrete Work and Blockwork.

2.4 Bonding

Bonding compounds, etc., for use in applying plaster and similar finishes direct to surfaces without the use of backings or screeds are only to be used if approved by the Engineer and are to be used strictly in accordance with the manufacturer's printed instructions.

2.5 Chases, openings and holes

All chases, holes and the like which were not formed in the concrete or walling shall be cut, and all service pipes shall be fixed and all holes and chases filled with mortar before paving and plaster work is commenced. In no circumstances will the Contractor be permitted to cut chases, holes and the like in finished paving or plasterwork.

2.6 In situ finishing

2.6.1 General

The term plastering refers to the operation internally and rendering to the same operation externally but for ease of reference the term plastering has generally been used in this specification to describe both operations.

2.6.2 Mixes

The methods of measuring and mixing plaster shall be as laid down under Concrete Work and the proportions and minimum thickness of finished plaster shall be in accordance with drawing or bill of quantities. The following:-

To obtain greater plasticity a small quantity of lime may be added to the mixes for external plastering at the Engineer's discretion but in any case this is not to exceed
1/4 part lime to 1 part cement.
With regard to the lime mortars gauged with cement, the addition just before use, of the cement to small quantities of the lime/sand mix shall preferably take place in a mechanical mixer and mixing shall continue for such time as will ensure uniform distribution of materials and uniform colour and consistency.
It is important to note that the quantity of water used shall be carefully controlled. Plaster may be mixed either in a mechanical mixing machine or by hand.
Hand mixed plaster shall first be mixed in the dry state being turned over at least three times. The required amount of water should then be added and the mix again turned over three times or until

such time as the mass is uniform in colour and homogeneous. The plaster shall be completely used within thirty minutes of mixing and hardened plaster shall not be remixed but removed from the site.

2.6.3 Preparation of surfaces for plaster etc.

Irregularities in the surfaces to be plastered or rendered shall be filled with mortar, without lime, twenty four hours before plastering is commenced. Joints in blockwork, etc., are to be well raked out before plastering to form a good key. Smooth concrete surfaces to be plastered shall be treated with an approved proprietary bonding agent or hacked to provide an adequate key for the plaster.
All surfaces to be plastered or rendered shall be clean and free from dust, loose mortar and all traces of salts.
All surfaces shall be thoroughly sprayed with water and all free water allowed to disappear before plaster is applied.
As far as practical, plastering shall not be commenced until all mechanical and electrical services, conduits, pipes and fixtures have been installed.
Before plastering is commenced all junctions between differing materials shall be reinforced. This shall apply where walls join columns and beams, particularly where flush, and similar situations where cracks are likely to develop and as directed by the Engineer. The reinforcement shall consist of a strip of galvanised wire mesh
'Expamet' or equal approved 15 cm wide which shall be plugged, nailed or stapled as required at intervals not exceeding 45 mm at both edges. The surfaces to which such mesh shall be applied shall be
painted with one coat bituminous paint prior to fixing the mesh.

2.6.4 Application of plaster and render

After preparation of the surfaces a key coat of cement slurry shall be applied to the wetted surface to be plastered. When this coat is dry the plaster coat shall be applied, by means of a trowel, between screeds laid, ruled and plumbed as necessary. This coat which shall be to the required thickness shall be allowed to dry and then cured as described. Surfaces are to be finished with a wood or steel float to a smooth flat surface free from all marks.
All plastering and rendering shall be executed in a neat workmanlike manner. All faces except circular work shall be true and flat and angles shall be straight and level or plumb. Plastering shall be neatly made good around pipes or fittings. Angles shall be rounded to 11 mm radius.
All tools, implements, vessels and surfaces shall be at all times kept scrupulously clean and strict precautions shall be taken to prevent the plaster or other materials from being contaminated by pieces
of partially set material which would tend to retard or accelerate the setting time.

2.6.5 Curing of plaster

Each coat of plaster is to be maintained in a moist condition for at least three days after it has developed enough strength not to be damaged by water.

2.6.6 Angle beads

Where required by the Engineer, salient external angles of plastered walls shall be protected with galvanized mild steel angle beads complying with BS 12411 Fig. 7
Profile C3.
They shall be securely plugged, nailed or stapled as required at intervals not exceeding 450 mm at both edges.

2.6.7 Plaster stops

Where shown on details, plasterwork shall be stopped against "Expamet" galvanized steel plaster stop, reference 5115 which shall be securely nailed to walls in the positions indicated on the drawings.

2.6.8 Cement and sand screeds

Cement screed shall consist of cement and sand mix 1:2 laid in panels and finished with a steel

trowel if not otherwise specified.

Where specified as waterproof "Puddlo" or similar waterproofing compound shall be added to the cement paving or screed strictly in accordance with the Manufacturer's instructions.

Where practicable, screed is to be laid while the concrete is still green. When this is not practicable, the concrete is to be well washed and brushed perfectly clean with a steel wire brush, to remove laitance and to give a roughened face as a key and then kept wet for at least seven days before the screed is laid. On the day of laying the surface is to be only damp with all surplus water removed and has to be painted with cement and sand mix 1:1 grout immediately before commencing laying of the screed. The grout is
to be applied continuously in front of the screed, and not in large areas that will dry out before the screed is applied.

Screed shall be protected during the first stage of hardening from the harmful effects of sunshine, drying winds, rain or water. In exposed positions, the screed shall be covered with a well wetted layer of sawdust, hessian or other approved material, and this layer shall be damp for at least seven days, during which period no traffic is to be allowed over the screed.
Screeds shall be mixed and formed as described.

G. PIPEWORK

1.0 General

All pipes, couplings gaskets lubricants seals, coupling machinery etc; necessary for the proper construction of the pipe work as detailed in the Bill of Quantities and drawings shall be supplied by the contractor.

The contractor shall be responsible for ensuring that the pipes, couplings and other fittings laid or installed on each section of the work are of the standard and pressure classifications specified as appropriate to the circumstances, and are manufactured of the specified materials.

The Engineer reserves his right to refuse any materials that in his opinion is inferior.The Engineer has the right to test any material upon delivery and materials found defective shall be replaced forthwith by the contractor.

If the contractor procures materials of different specifications in respect of flanges and threads etc, he shall at his own cost provide all adaptors and other fittings necessary to make connections to the satisfaction of the Engineer.

All materials shall be marked as specified in the relevant current British or ISO standards for easy identification.

1.1 Handling and Storing of Pipes and Fittings

The method of transportation, handling and storing of pipes and fittings shall be in accordance with the manufacturer’s recommendations.

Pipes valves and other fittings shall be handled, moved, lifted or lowered with the least possible impact. Handling equipment shall be of approved type. In slinging pipes, only flat slings shall be used and the use of chain slings hooks or other devices working on scissors or grab principles shall not be permitted. Pipes shall be slung from two or more points as the Engineer may direct and the slinging, lifting and lowering shall be in the hands of a competent and experienced man.

Pipes storage shall be supported clear of the ground on approved supports adequately braced to prevent rolling. They shall not be stacked more than four tiers high without the approval of the Engineer. Materials of different classification shall be stored separately. All pipes and associated materials shall at all times be protected from sun and dirt to the satisfaction of the Engineer.

No valves shall be lifted by the spindle. Valves and other fittings shall not be stacked more than one tier high without the permission of the Engineer and they shall not be stored in a dirty place or condition.

Shortly before laying or fixing any valve, pipes or fitting the contractor shall in the presence of the Engineer or his representative carefully examine each valve, pipe and fitting to ascertain damage or defect occasioned to the valves, pipes and fittings during loading, unloading, handling, storage and transportation. All damage and all
defects revealed by this examination shall be repaired and remedied by the contractor.

1.2 Laying and Jointing of Pipes

All laying and jointing of pipes except jointing of PVC and polythene pipes shall be in conformity with BS 13700 and BS 8010.

The bottom of the trench or surface of the bed shall be finished to a smooth even surface at the correct level to permit the barrel of the pipe to rest on the surface throughout its whole length between joint and sling holes. If considered necessary by the Engineer, fine-screened material shall be placed and consolidated in the trench bottom to provide such a bed. In general the preparation of the trench bottom and bed shall be completed for a length of one pipe in advance of the pipe-laying.

The bottom of the trench and pipe bed shall be inspected by the Engineer, and only when passed as satisfactory shall pipe-laying commence.

Each pipe shall be laid accurately to line, level and gradient so that, except where otherwise directed, the finished pipeline shall be in a straight line both in horizontal and vertical plans. The levels and gradients shown on the drawings shall be rigidly adhered to unless otherwise ordered by the Engineer.

Notwithstanding any flexibility provided in pipe joints, pipes must be securely positioned to prevent movement during and after the making of a joint. On screw and socket joints, threads shall be coated with an approved tape to ensure water tightness. The contractor shall take care that all pipes and couplings are clean and free of foreign matter before subsequent sections are jointed.

The contractor shall obtain from the manufacturer or other approved supplier the necessary tackle required for the proper jointing of the pipes. The contractor shall make himself and his employers acquainted with and comply with instructions issued by the manufacturers of the various types of proprietary joints and couplings for incorporation on the works. The contractor shall be responsible for obtaining copies of such instructions.

No person shall be employed on the jointing of pipes that is not thoroughly experienced
and skilled in the particular work in hand.

Pipes shall not be cut without the permission of the Engineer. The cut shall be made with an approved mechanical pipe cutter and the edges of the cut shall be clean, true and square. Threading of steel pipes shall be done with an approved device.

Subject to the permission of the Engineer, pipes shall be covered over with approved fill material upon successful completion of laying and jointing. Joints shall be left exposed until completion of the test. The fill for surrounding and cushioning shall consist of uniformly readily compatible material free from tree roots, vegetable matter, building rubbish and excluding clay lumps retained on 75 mm sieve and stone retained on a 25 mm sieve.

The materials for bedding shall, where ordered, consist of suitable selected materials obtained from the excavations or from approved borrow pits and transported to the location where they are required. Upon successful completion of the pressure test the pipeline shall be back-filled as specified.

The contractor shall provide concrete indicator posts at every place where the change in class of pipe occurs with engraved marking on the post indicating class of pipe and direction.

The rate for pipework shall include for supplying, storing, handling, laying and jointing of pipes and

is measured in linear metres. The rates shall also include for leveling of the trench bottom, compacting the foundation, and embedding the pipe together with the materials used for bedding all to the satisfaction of the Engineer.

1.3 Valves and Fittings

Unless otherwise directed all valves and other fittings and specials shall be individually supported and their weight shall not be borne by the pipeline joints or couplings etc. All supports for valves and fittings shall be of concrete grade 20.

Air valves shall be installed at high points in the pipeline as shown on the drawings. Before the valves are installed all the air nozzles shall be probed to see that they are clear. No air valves shall be stored before erection in the open in sunlight, or upside down to expose the balls and air cavities.

Scour valves shall be installed at low points in the pipelines as shown on the drawings. The contractor shall be in agreement with the Engineer on the exact position of scour valves in particular situations. Scour valves shall, where possible, discharge in the direction of natural drainage and at such a distance from the works as to preclude erosional effects.

Unless otherwise directed the controlling valve for a scour shall be installed not more than 1.5m from the main pipeline.

Ends of all scours shall be protected from intrusion of animals and other foreign matter by suitable screening securely fixed to the pipe end.

Valve penstocks and other fittings shall be securely fixed and where required extension spindles and headstocks shall be properly aligned and fixed in a vertical position unless otherwise directed.

Before each valve is put into service all gears bearings and spindles shall be oiled with approved oil as recommended by the valve manufacturers. All valves, fittings specials shall be fixed with proper sealing tape, gaskets, washers etc as necessary to the satisfaction of the Engineer. The valves shall be with non- rising spindle and shall if not otherwise stated be supplied with hand wheels.

The rates in the Bill of Quantities shall cover for the supply, storing, handling, installation and jointing, together with all bolts, washers, gaskets and lubricants, painting of all fittings with 2 coats of approved oil paints etc.

1.4 Flanges

Where flanged joints are used flanges shall be in accordance with the requirements of BS 4504: Part 1 or BS 4772. Where crewed joints are used, thread shall comply with BS 21.

The minimum pressure rating shall be for a working pressure of 1.0 N/mm2 (approximately 100 metres head) corresponding to NP 10 flanges. The hydraulic test pressure shall not exceed 1.13 N/mm2.
Flanges in pipelines with higher-pressure rating shall be for the ratings specified in the Bill of Quantities.

Bolts nuts and washers shall comply with the requirements of BS 4190 and BS 4320. Gaskets shall fulfill the requirements of BS 2494 and shall have a minimum thickness of 2mm. The names of manufacturers and specifications of the products offered shall be provided at the time of tender.

1.5 Ductile Iron

Ductile iron pipes and fittings shall comply with BS 4772 or ISO 2531. The pressure rating of the pipes shall be for a minimum working pressure of 2.5 N/mm2. Care should be taken when testing, not to exceed the permissible test pressure for the fittings installed.

Joints shall be either "Viking Johnson" or flanged joints as specified in the drawings and the bill of quantities.

Before any other joint is used written approval of the Engineer must be obtained. Pipes and fittings shall be coated inside and outside with a hot material complying with the requirements of BS 41134

or with cold applied material complying with BS 34113 type II material.

1.6 Grey Iron or Cast-Iron

Grey iron or cast iron pipes and fittings shall comply with BS 41322 or ISO/R13. The pressure rating of the pipes shall be for a minimum working pressure of 1.0 N/mm2 (approximately 100 metres head) and a hydraulic test pressure of 1.13N/mm2.

Joints, internal and external coatings to be as specified in clause 505, Ductile Iron.

1.7 Steel

Steel pipes and fittings shall comply with BS 534, BS 1387 or BS 361.Pipes complying with BS 1387 shall be of "Medium" or "Heavy" classes as specified in the Bills of Quantities and Drawings.

1.8 Unplasticised Polyvinyl Chloride Pipes

All uPVC pipes and fittings shall comply with KS ISO 1452-2:2009,

Pipes indicated with a pressure class shall conform to the following minimum working pressures:

PN 6 – 0.6 N/mm2

PN 8 – 0.8 N/mm2

PN 10 – 1.0 N/mm2

PN 12.5 – 1.25 N/mm2

PN 16 – 1.60 N/mm2

All fittings shall be of pressure class "PN 113" and be manufactured of cast iron, PVC or steel. Joints to be plain sockets for gluing with solvent cement for nominal sizes equal to or smaller than – 50mm and mechanical joints (Rubber ring) for nominal sizes equal to or bigger than – 90 mm.

For both types of joints the manufacturer's jointing instructions must be strictly adhered to. PVC pipes and fittings shall be stored under cover, which fully protects the material from sunlight.

1.9 High Density Polyethylene (HDPE) water pressure pipes

Standards

All HDPE pipe and fittings shall be from a manufacturer or supplier, who is fully experienced, reputable and qualified in the manufacture or supply of the HDPE pipe to be furnished. The pipe shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with the required standards i.e manufactured to ISO 4427 standards, and carry the KEBS mark of trusted quality.

Installation

High Density Polyethylene (HDPE) Pipe shall be installed in accordance with the instruction of the manufacturer, as shown on the Drawings and as specified herein. A qualified joining technician shall perform all heat fusion joints. HDPE shall be installed either by Open Trench Construction or Directional Bore Method. Care shall be taken in loading, transporting and unloading to prevent damage to the pipe. Pipe or fitting shall not be dropped. All pipe or fitting shall be examined before installation, and no piece shall be installed which is found to be defective. Any damage to the pipe shall be repaired as directed by the Engineer. If any defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner by the contractor, at his own expense.

All HDPE pipe must be at the temperature of the surrounding soil at the time of backfilling and compaction.

TESTING

Pressure testing shall be conducted as per Manufacturer's recommendations and as approved by the Engineer. All HDPE water mains shall be disinfected prior to pressure testing. All HDPE mains shall be field-tested.

Contractor shall supply all labor, equipment, material, gages, pumps, meters and incidentals required for testing. Each main shall be pressure tested upon completion of the pipe laying and backfilling operations, including placement of any required temporary roadway surfacing. All mains shall be tested at 150 percent of the operating design pressure of the pipe unless otherwise approved by the Engineer.

Pressure testing procedure shall be per Manufacturer's recommendations or as directed by the Engineer. If there are no visual leaks or significant pressure drops during the final test period, the installed pipe passes the test. If any test of pipe laid disclosed leakage significant pressure drop greater than the manufacturer's recommended loss, the Contractor shall, at his/her own expense, locate and repair the cause of leakage and retest the line. All visible leaks are to be repaired regardless of the amount of leakage. The Contractor must submit his plan for testing to the Engineer for review at least 5 days before starting the test.

1.10 Precast Concrete

Precast concrete pipes and fittings shall comply with BS 5513: Part 2.

Minimum crushing test loads shall be as specified in Table 2, standard pipes. The laying and jointing of the pipes shall comply with BS 8301.

The contractor shall adopt such measure as may be approved by the Engineer to ensure that every newly laid pipe is concentric with previously laid pipes with which it joins.

Unless otherwise approved by the Engineer pipes shall be laid in an upstream direction and the socket ends shall point upstream.

1.11 Protection of Pipes

The concrete used for bedding, haunching and surrounding the pipes shall be concrete "Grade 10" unless otherwise ordered by the engineer. The concrete protection shall have total dimensions not less than given below:

(i) Bedding concrete shall have a width of at least 300mm bigger than the external diameter of the pipe and shall support at least the bottom quarter of the pipe circumference. It shall have a minimum depth of 150 mm measured under the pipe throughout.

(ii) Bedding and hunching shall comprise a concrete bed with a minimum width of 300 mm more than the external diameter of the pipe and a minimum thickness of 150 mm below the pipe, and haunching with a minimum thickness of 150 mm on both sides of the pipe. The top of the hunching is to be flush with the top of the pipe.

(iii) Surrounding concrete shall comprise a concrete be as described above together with 150 mm concrete on both sides and on top of the pipe, giving a pipe protection of at least 150 mm concrete everywhere around the pipe.

Concreting of bedding, haunching or surround shall not be done until the pipes have been jointed, inspected and tested.

PVC pipes shall be protected with polythene or roofing felt wrapping before concreting.

1.12 Testing of Pressure Mains

Pressure pipelines (together with all fittings and valves incorporated in the mains) shall, before being covered, be tested with water as specified in BS 13700.

At least 5 days' notice must be given in writing to the Engineer before pressure testing is commenced.

1.13 Water Pressure Test

The water test pressure to be applied will be 1.5 times the nominal working pressure for the class of pipe being tested. The Engineer, however, reserves the right to alter this figure.

Main work shall be filled and tested in sections of convenient length which must not exceed 500 metres where pipes are laid with steep gradients the length of pipes tested at any time shall be as directed by the Engineer.

The ends of pipes under test shall be closed by means of caps or blank flanges provided by the contractor. Gate valves must not be used for this purpose. All scour valves and air valves shall be replaced by blank flanges before commencement of the test.

After laying, jointing and anchoring, the main should be slowly and carefully charged with water so that all air is expelled, allowed to stand full for several days and then tested under pressure. The test pressure shall be applied by means of a manually- operated test pump connected to the main and to two parallel installed pressure
gauges calibrated at an approved testing laboratory. The test pressure shall be maintained for 24 hours, and if there is any leakage or any other defects, the contractor should rectify as directed by the Engineer at his own cost. Water drained from the pipes shall be discharged in a way that does not affect the stability of the works or adjacent structures. The contractor shall provide all necessary equipment,
water and labour to test the pipes to the approval of the Engineer.

The contractor shall allow for all expenses in connection with testing in the Bill of Quantities for the appropriate item.

1.14 Cleaning and Sterilization of Water Supply Pipes

The contractor shall before handing over and during the maintenance period clean pipeline, chambers and manholes for all dirt and rubbish.

All pipes shall be thoroughly cleaned and washed out to remove all contamination, and all water from these operations shall be removed and drained away. Sterilization should be carried out in accordance with BS 13700.

Following the satisfactory cleaning the contractor shall with the use of a portable dosage system or by some other approved method introduce a solution of a sterilizing chemical containing chlorine into the pipeline. The solution shall be introduced at a very slow rate and shall be of such strength as to give a chlorine concentration of not less than 50 parts per million throughout the length of the pipelines. The whole system shall then remain charged for 24 hours, after which a test shall be made for residual chlorine. If no residual chlorine is found, the sterilization process will have to be carried out again, until a satisfactory result is obtained.

Finally, the pipes shall be thoroughly flushed out and recharged with supply water. On completion of the sterilization process the pipes shall be left full of water.

The contractor shall in his rates for pipeline sterilization include for all costs of labour, transport, materials, equipment, chemicals and water necessary for the satisfactory completion of the cleansing and sterilization operations.

1.15 Auxiliary Works

(a) Valve Chamber

Unless otherwise directed or detailed all valves, meters and other mechanical fittings shall be housed in chambers with lockable covers. Valve work shall be so placed in chambers as to facilitate operation, meter reading etc. through the cover opening. Chambers are measured in numbers and shall be priced as lump sum items covering all composite work to completion as specified on the drawings or as instructed by the Engineer inclusive of excavations in excess of trench excavation, concrete supports for valves and backfilling around the chambers.

(b) Thrust Blocks and Anchors

The contractor shall provide thrust blocks at all bends, tees and whenever else instructed by the Engineer or indicated in the drawing.

Enlargements shall be excavated in sides and bottom of the trench to accommodate anchorages and thrust blocks.

Concrete thrust and anchor blocks shall be formed in accordance with the typical sections shown on

the drawings or as directed by the Engineer. Additional excavation shall be made after the bends etc. Have been jointed and the concrete shall be placed immediately after the completion of the excavation.

The concrete used for thrust and anchor blocks shall be grade 15 and shall after placing be kept in view for not less than six hours. No pressure shall be applied in any section of mains until the concrete has cured at least three days.

All PVC material shall be wrapped with two layers of bituminous felt for the entire length in contact with concrete. Thrust blocks are measured in numbers and shall be priced as lump sum items covering all necessary works and materials together with excavation, backfilling and formwork.

(c) Road Crossings

When the contractor encounters a road where a "Road Crossing" is indicated on the drawings or where to his opinion, such a crossing is required, he shall immediately inform the Engineer. On the receipt of the above information, the Engineer will issue appropriate instructions. The contractor shall include in his rates any royalty/fees to be paid to the Ministry of Transport and Communication or Local authorities.

(d) Painting

Painting and other protection of the external and internal pipe surfaces shall be in accordance with manufacturer's recommendations. Painting on all other works especially in buildings will be as specified in the Bill of Quantities or as directed by the Engineer.

(e) Indicator Posts

Indicator posts should be erected on the pipeline as per the Engineer's instructions.

All indicator posts for sluice valves, air valves, change in directions for pipeline, change in class of pipes, washouts etc should be painted with blue gloss paint (2 coats). The engraved letters to be painted with orrow pits and temporary quarries shall be made good and covered with vegetable soil. Dumps for waste materials shall be covered with at least 0.5 m of soil of which at least a 0.1m layer in top shall be vegetable soil

1.16 Holes for Pipes, Cast-in Items etc., General

The Contractor shall be responsible for the setting out and fixing of all pipes and holes, pockets and chases for pipes. Sleeves provided are to be accurately set out and cast in and cutting away in completed concrete work is to be minimized.

Details of all holes etc. required in a structural work for services must be submitted to the Engineer who will assess the necessity for extra trimming reinforcement.

No openings, holes, chases, etc., are to be formed in the concrete without the approval of the Engineer and details of fixtures or fixings to be cast in must be approved.

1.17 Pipes through Water Retaining Walls

Pipes passing through water retaining walls and floors shall, wherever possible, be built into the structure in-situ. Shuttering shall be formed closely to the outside of the pipe, and concrete shall be placed and compacted thoroughly round the pipe.

Pipes, bolts or other steel items cast into the concrete in water retaining structures must not in a

When not possible to build in place, pipes shall pass through preformed holes. Holes shall be formed with formwork which shall be stripped cleanly and without shock to the concrete. As soon as the shuttering is stripped, the hole shall be thoroughly wire brushed to expose the aggregate. The hole shall be as neat as possible to allow the pipe to be passed through the wall, while the corners shall be chamfered or rounded.

The pipe shall be set and the hole filled up as soon as possible. Immediately before filling, the hole shall be continuously soaked so as to saturate the concrete, and the surface coated with a stiff mix of 1:1 sand grout. Shutters shall be fixed true to the faces of the wall, and a stiff mix of concrete packed in until the hold is completely filled, particular care to be taken to ensure that the spaces beneath the invert of the pipe and beneath the slopping soffit of the hole are completely filled. Shuttering shall be stripped as soon as possible and the filling rubbed smooth. The filling and the surrounding concrete shall be kept wet for 7 days after filling.

SECTION VII- BILLS OF QUANTITIES

General

1. The Sites are situated in Kitui County, Kitui town Kenya Forestry Reserch Institute-Tiva Sub-center (Lot 2) and DERP Kitui Regional centre(Lot 1). The sites are approximately 162 Kilometers from Nairobi. Access to the sites shall be through Mombasa- Machakos-Kitui road, alternative route exists using thika road. The contractor shall make his/her own arrangement to visit the sites prior to tendering.
The access roads are public roads and any damage caused to the surfaces of these roads shall be made good at the Contractor's expense. The Contractor shall visit the site at own cost for acquaintance 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 the cost or progress. No claim for extras shall be considered on account of lack of knowledge in this respect

2. **NAME OF THE TENDER:** PROPOSED BOREHOLE DRILLING AND EQUIPING, SOLARIZATION AND INSTALLATION OF 3M^3/H REVERSE OSMOSIS (RO) PLANT FOR THE KENYA FORESTRY RESEARCH INSTITUTE(KEFRI) AT TIVA AND KITUI SUB-CENTRES

TENDER REFERENCE NO: KEFRI/ONT/007/2024-2025
LOT 1- KEFRI-DERP -REGIONAL OFFICE - KITUI TOWN AREA
LOT2 - KEFRI DERP REGIONAL OFFICE - TIVA CENTRE-KWAVONZA

THE PROJECTS COMPRISING THIS TENDER ARE;

PROJECT NO.	TENDER NUMBER	PROJECT SITE DESCRIPTI ON	LOCATION	ESTIMATED BOREHOLE DEPTH	REMARKS
LOT 1	KEFRI/ONT/007/2024-2025	KEFRI Kitui Regional Office Borehole	KEFRI-DERP -REGIONAL OFFICE - KITUI TOWN AREA	220 M	1. Exact borehole depth to be determined on site after drilling 2.Construction of a new RO Plant Control/Machine room that doubles as a pump control house
LOT 2	KEFRI/ONT/007/2024-2025	KEFRI Tiva Sub-Centre Borehole	KEFRI-DERP REGIONAL OFFICE - TIVA CENTRE-KWAVONZA	250 M	1. Exact borehole depth to be determined on site after drilling 2. Renovation of an existing pump house for plant control/machine room and power installation that doubles as a pump control house

PREAMBLE TO BILLS OF QUANTITIES

a) Bidding shall be done separately for individual lots and a tenderer can bid for one or more lots. Each Tender should clearly indicate the tender number and the Lot number for a particular bid. Each Lot shall be evaluated separately and a tenderer can be awarded one or two Lots depending on the best evaluated tender per Lot.

b) The works for each of the sites shall be done in phases as specified in the Bills of Quantities. The project manager shall approve the completion of phase one (1) and proceeding to the next phase. Phase one (1) is the drilling, equipping and solarization of the borehole and phase two (2) is installation of Reverse Osmosis plant. Approval to proceed to phase two will be based on successful completion of phase one and subject to the quality and quantity of water from the borehole. Note that if it is found that the water quality is good then approval to proceed with phase 2 will not be granted and the procuring entity is not obliged to the contractor for any cost implications.

c) The Bill of Quantities shall form part of the Contract Documents and is to be read in conjunction with the Instructions to Tenderers, Conditions of Contract Parts I and II, Specifications and Drawings.

d)The brief description of the items in the Bill of Quantities is purely for the purpose of identification, and in no way modifies or supersedes the detailed descriptions given in the conditions of Contract and Specifications for the full direction and description of work and materials.

e) The Quantities set forth in the Bill of Quantities are estimated and provisional, representing substantially the work to be carried out, and are given to provide a common basis for tendering and comparing of Tenders. There is no guarantee to the Contractor that he will be required to carry out all the quantities of work indicated under any one particular item or group of items in the Bill of Quantities. The basis of payment shall be the Contractor's rates and the quantities of work actually done in fulfillment of his obligation under the Contract.

f) The prices and rates inserted in the Bills of Quantities will be used for valuing work executed, and the Engineer will measure the whole of the works executed in accordance with this Contract.

g) A price or rate shall be entered in ink against every item in the Bill of Quantities with the exception of items, which already have provisional sums, affixed thereto. The Tenderers are reminded that no "nil" or "included" rates or "lump-sum" discounts will be accepted. The rates for various items should include discounts if any. Tenderers who fail to comply will be disqualified.

h) Provisional sums (including Day works) in the Bill of Quantities shall be expended in whole or in part at the discretion of the Engineer in accordance with Clause 51 and Clause 58 of part of the Conditions of Contract.

i)The price and rates entered in the Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Constructional plant to be used, labor, insurance, supervision, compliance, testing, materials, erection, maintenance of works, overheads and profits, taxes including input and output VAT and duties together with all general risks, liabilities and obligations set out or implied in the Contract, transport, electricity and telephones, water, use and replenishment of all consumables, including those required under the Contract by the Engineer and his staff.

j) Errors will be corrected by the Employer for any arithmetic errors in computation or summation as follows:

a. Where there is a discrepancy between amount in words and figures, the amount in words will govern; and
b. Where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit price and the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer, there is an obviously gross misplacement of the decimal point in the unit price, in which event the total amount as quoted will govern and the unit rate will be corrected.

k) If a Tenderer does not accept the correction of errors as outlined above, his Tender will be rejected.

l) All prices omitted from any item, section, part of the Bills of Quantities shall be deemed to have been include to another item, section or part thereof. Should the Contractor install any material not specified herein before receiving written approval from the Project Manager, the Contractor shall remove the material in question and, at his/her own cost, install the proper material. The words TAKE CUSTODY' shall be taken to mean delivery, unloading, stocking, getting from the store, transporting, unloading, getting into position for fixing all the materials concerned and all other contingency expenses.

n) The grand total of prices in the price summary page must be carried forward to the Form of Tender/ **Form of Bid for the tender to be valid.**

m)The Bills of Quantities, unless otherwise expressly stated therein, shall be deemed to have been prepared in accordance with the principles of the latest edition of the Civil Engineering Standard Method of Measurement (CESMM).

o) "Authorized" "Directed" or "Approved" shall mean the authority, direction or approval of the Procuring Entity's representative in the contract implementation.

p) Unless otherwise stated, all measurements shall be net taken on the finished work carried out in accordance with the details shown on the drawings or instructed, with no allowance for extra cuts or fills, waste or additional thickness necessary to obtain the minimum finished thickness or dimensions required in this Contract. Any work performed in excess or the requirements of the plans and specifications will not be paid for, unless ordered in writing by the Engineer.

q) Where dimensions are entered: -
mm - means millimetres, LM - means Linear meter, L - means Length
W - means Width, D - means Depth, DN - means Diameter Nominal, PN - means Pressure Nominal, LS - means Lump sum, NO. – means Number, H or HR-means hour
Units of Measurement - The following units of measurement and abbreviations shall be used, unless other national units are mandatory in Kenya.

Unit	**Abbreviation**	**Unit**	**Abbreviation**
cubic meter	m^3 *or* cu m	millimetre	mm
hectare	ha	month	mon
hour	h or hr	number	nr or no.
kilogram	kg	square meter	m^2 *or* sq m
lump sum	ls	square millimeter	mm^2 *or* sq mm
meter	m	week	wk
metric ton	t		

r) Tenderers **MUST** enclose, together with their submitted tender, manufacturer's brochures detailing technical literature and specifications of the equipment that they intend to offer. Where the brochures contain different models and sizes of the equipment, the bidders **MUST** clearly mark out the model and size of equipment they intend to offer by using a **'mark pen'**. **Where brochures are to be used for tender evaluation and the tenderers have not enclosed them in their tenders, then the same shall be sought from the tenderers to assist in the evaluation process.**

STATEMENT OF COMPLIANCE

a) I confirm compliance of all clauses of the General Conditions, Particular Conditions, General Specifications and Particular Specifications in this Tender.

b) I confirm that, I have not made and will not make any payments to any person, who can be perceived as an inducement to win this tender.

Signed…….…… Date…….

FOR: and on behalf of the Tenderer (OFFICIAL RUBBER STAMP)

ANNEX 1

BILL OF QUANTITIES -LOT 1

KITUI REGIONAL OFFICE

ESTIMATED BOREHOLE DEPTH OF 220M

BILL OF QUANTITIES FOR
TENDER NAME: PROPOSED BOREHOLE DRILLING AND EQUIPING, SOLARIZATION AND INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT AT TIVA AND KITUI

TENDER NO: KEFRI/ONT/007/2024-2025 -LOT 1

NAME OF SITE: KITUI REGIONAL OFFICE BOREHOLE

LOCATION : KITUI CENTRAL CONSTITUENCY IN KITUI COUNTY, KITUI TOWNSHIP

PHASE 1

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
BILL NO.1	**PRELIMINARY AND GENERAL ITEMS**					
1.1	Allow provision for insurance in accordance with Clauses 13 of the general conditions of the contract Section VIII	PC	1			
1.2	Provide for Review of Geophysical /Hydrogeological survey and report. (provisional)	LS	1			
1.3	Water Resources Authority fee	LS	1			
1.4	NEMA Fees (including Environmental Impact Assessment reports) provisional	LS	1			
1.5	County Government Fees (where applicable)	LS	1			
1.6	Provide, erect and maintain standard sign boards at locations and sizes as indicated by the Resident Engineer at site of works.	No.	2			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
1.7	Establish, maintain and remove Contractor's camps, offices, facilities, etc. at the end of the contract.	Item	1			
	TOTAL CARRIED TO PRICE SUMMARY PAGE					

BILL NO.2	DRILLING AND CONSTRUCTION, DEVELOPMENT AND TEST PUMPING OF 1 NO. BOREHOLE					
2.1	Mobilization and demolition of contractor's plant and equipment including but not limited to drilling units, tank erection equipment, test pumping equipment, borehole development equipment, materials, personnel and other required supplies.	Item	1			
2.2	Drilling one borehole with finished internal minimum diameter of 203mm (8") to the required maximum depth through all types of strata including disposal of excavated materials, taking any remedial measures to overcome caving-in, or over drilling to accommodate sloughed material and keeping drilling records as specified i) From ground level down to 100m	M	100			
2.3	ii) ditto item 2.2 From 101 to 200m	M	100			
2.4	iii) ditto item 2.2 From 201 to 220m	M	20			
2.5	iii) ditto item 2.2 from 221 m - 250m **(rate only)**	M	Rate Only			
2.6	Allow for Reaming and boring 10" diameter bit	M	10			
2.7	Allow for taking samples of drill cuttings at two (2) meters interval.	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
2.8	Supply and installation of plain steel 6" (152mm) Class B steel casing - 4.5 mm thickness	M	140			
2.9	Supply and installation of slotted steel casings 6" (152mm) Class B diameter - 4.5 mm thickness.	M	80			
2.10	Supply and Installation of 254mm (10") surface casing (To be Retained)	M	10			
2.11	Installation of gravel pack (2-4mm) (not laterite) to at least 3m above top screen.	TON	9			
2.12	Grout between the casing and the borehole for top ten metres	Item	1			
2.13	Carry out borehole sterilization.	Item	1			
2.14	Physical and chemical development of the borehole minimum 4hrs including inserting and removal of development equipment;					
a	Physical development	HR	8			
b	Chemical development	LS	1			
2.15	Undertake constant discharge test as specified (24 hours) for usual test pumping including insertion and removal of test pumping equipment.	HR	24			
2.16	Undertake water level observation and record recovery.	HR	12			
2.17	Collect water samples and carry out full water quality analysis (chemical and bacteriological analysis) for in a reputable laboratory acceptable to the Project Manager and submit water quality test report. A second sample may be carried out as directed by the Resident Engineer	No.	2			
2.18	Install 6" well head steel cap and cement slab of dimensions 1.0MX1.0MX1.0M	Item	1			
2.19	Complete the prescribe WRA Borehole drilling completion report and submit to WRA	Item	1			
2.20	Processing of Water Abstraction Permit	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
2.21	Allow costs for providing water for all requirements of the contract, field camp, drilling works and making good and surface reinstatement at the borehole location to the Project Managers satisfaction	Item	1			
	TOTAL BILL NO 2 -DRILLING AND CONSTRUCTION, DEVELOPMENT AND TEST PUMPING OF THE BOREHOLE CARRIED TO SUMMARY					

BILL 3:	BOREHOLE EQUIPPING					
3.1	**Pump and power supply**					
3.1.1	Provide, install and commission a submersible, multistage centrifugal pump capable of ; • Flow rate 7 m3/hr. • Head 200m or as directed by the Engineer. • Power rating 7.5 kw • Operating speed 2900rpm Size of casing: 152mm (6”). The cost should be inclusive of water tight cable splicing kit for 10.0 mm^2/3 core cable and borehole sundries.	Item	1			
3.1.2	Supply and install Monocrystalline solar modules to power motor of minimum 7.5 KW and 3kWh/m^3 Reverse Osmosis (RO) process as directed by the Engineer	Item	1			
3.1.3	Incorporate a hybrid system to enable use of mains and solar power	Item	1			
3.1.4	Supply and install Solar controller as Lorentz PS15k or equivalent as approved by the Engineer with cable interconnection and earthing.	Item	1			
3.1.5	Supply and install DC PV disconnect switch 440VDC/40A	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	complete with cable interconnection					
3.1.6	Construct and erect a suitable solar structure to accommodate all installed solar arrays. The Structure shall be 4 metres high above ground level complete with lockable enclosure to house the inverter, PV disconnect and mounted below the solar arrays at a level free from interference. The enclosure shall be fabricated from heavy gauge SWG folded, spangled, galvanized and rust protected sheet steel of minimum thickness of 1.5mm finished with a two-tone heat-resistant non-peeling off staved grey enamel paint or epoxy powder coating.	Item	1			
3.1.7	Electrode cable	M	200			
3.1.8	Electrode pencils	No.	2			
3.1.9	Submersible cable rubber sheathed, 10mm^2, 4-core.	M	200			
3.1.10	10mm^2, 4-core underground armoured cable.	M	20			
3.1.11	1.5mm^2, 2core underground armoured cable.	M	20			
3.1.12	Supply, deliver to site and install Hatari tiles (1:3:6) as directed.	No.	40			
3.2	**borehole plumbing works**					
3.2.1	20mm Ø Dipper tube complete	M	200			
3.2.2	2" class B G.I rising main pipe c/w crane with sockets to the surface and pipe locking clamp.	M	200			
3.2.3	Provide and install one 2" bulk flow meter class B (type and make to be approved by the Project Manager) c/w Non-Return Valve at the well head. Rate to include all pipe and fittings at the well head	Item	1			
3.2.4	Supply and install 2" gate valves	No	2			
3.3	Construct a standard 1.5mx1.5mx1.0m borehole protection chamber with Supply, deliver to site and install lockable, water tight chequered steel top	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	lid of dimensions 1200x1200x2.0 mm thickness to fit borehole protection chamber. It shall be in a GS frame c/w heavy-duty stainless-steel padlock					
3.4	Allow for fencing off of borehole and solar structure with reinforced concrete posts, 3 strands of barbed wire and chain link	Item	1			
3.5	Supply and install Approved Quality, automatic and original brand new solar security street light(Mounting pole and accessories included) of minimum 300w with minimum 2years warranty .The system should have the following features; Waterproof, bright LED light ,rechargeable lithium battery, minimum light hours of 14h and is to be mounted appropriately as directed by the Engineer.	Item	1			
	TOTAL BILL NO 3 BOREHOLE EQUIPPING CARRIED TO SUMMARY					

BILL NO.4	STORAGE TANK AND WATER CONVEYANCE					
4.1	**STORAGE TANK**					
4.1.1	Supply, deliver and install as directed by the Engineer vertical close end plastic moulded tank of capacity **10,000litres (2,200 gallons)** and diameter **2,400 x 2,800mm** high. The tank to be installed on an existing plinth is to be assembled complete with cover and having screwed connections for inlet, outlet interconnection, overflow, **32mm high pressure ball valve**, drain pipes and any other necessary item for its proper functioning. The tank shall be as Roto Model or approved equivalent.	Item	1			
4.2	**Water Conveyance System**					

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	Prices to include all the associated fittings, supply deliver and pipe laying cutting and threading where necessary					
4.2.1	Supply deliver and install 50mm HDPE pipe of PN10 pressure gauge to convey water from the borehole/treatment plant to the storage tank as directed by the Engineer.	RM	250			
4.2.2	Excavation Excavate trench 300mm wide and 500mm deep to lay plumbing pipes. The laid pipes to be covered with 50mm thick layers of fine soil, back filled, rammed and excess soil carted away.	M	230			
4.2.3	Valve Chamber 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.	No	2			
4.2.4	Air Valves Supply and install 50mm diameter single orifice air valve, complete with pipe mounting accessories	No	2			
4.2.5	Gate Valve 50mm diameter gate valve complete with pipe mounting accessories as 'Pegler' or approved equivalent	No	2			
4.2.6	Supply and joint including all jointing materials 2" diameter sluice valves to B.S 163.	Item	1			
	TOTAL BILL 4 STORAGE TANK AND WATER CONVEYANCE CARRIED TO SUMMARY.					

PHASE 2

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
BILL NO.5	**INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT**					

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
5.1	Supply, deliver to site, install, inter-connect, wire and test a reverse osmosis plant. Component inter-connection shall be carried out to conform with the existing reticulation system and with the following features; - Frame mounted with all components accessible. - Low energy consumption. - High efficiency DOW filmtec or approved equivalent RO membranes housed in strong corrosion proof FRP pressure vessels. - High treatment performance with up to 98% salt rejection. - High pressure in line multi-stage stainless steel vertical mounted feed pump, 3 phase 415 vac rated at 3 kw (3.75 hp) mounted to have a maximum head of 20 m and deliver 3m3/hr. - operating pressure of between 12 – 20 bar - system monitoring accessories including inlet and outlet flow meters, pressure gauges and conductivity meter. - electronic controller for fully automated plant operation including start up, periodic flush cycle and shut down as well as various system alarms - Sediment removal and carbon cartridge pre filters. - corrosion resistant stainless steel high pressure and plastic low-pressure pipes and pipe fittings. - Safety margin of the net positive suction head of 1 meter - 3 Kw, 3 phase, 415 vac Direct On-Line starter with Thermal over load range shall be 23-32 amps set at 32 amps c/w control unit	Item	1			
5.2	**CONSTRUCTION OF RO PLANT CONTROL/MACHINE ROOM AND POWER INSTALLATION**					

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
5.2.1	Supply Dressed machine-cut stones and all building material necessary, deliver to site, prepare and construct and roof a Masonry control room of internal sizes 6 ML x 5.5MW, Standard Machine room height. It shall have burglar-proof steel door and Windows (2.0mm thick plates) with heavy-duty stainless-steel padlock, with insect-proof steel wire gauze ventilation perforations installed in the windward direction. The finished floor shall be 400 mm above the ground level. The floor slab shall be BRD 140:1:2:4.	Item	1			
5.2.2	Supply Deliver and install a Three phase triple pole 415 vac, 32 amperes wall mounted MCCB in a metallic water proof, corrosion resistant enclosure with knock outs to facilitate cable entry.	No.	1			
5.2.3	Install One 10,000 litres PVC ribbed water tank on a 500mm raised concrete platform to facilitate storage of treated Water from the treatment plant. Undertake any necessary plumbing works to interconnect the treated Water storage tank to the RO Plant.	No.	1			
5.2.4	Install One 5,000 litres PVC ribbed water tank on a 500mm raised concrete platform to facilitate storage of waste water from the treatment plant unit and connect the same to the main water or /and sewerage drain. This shall include pipes, sockets and unions installed so as to allow flow via gravity.	No.	1			
5.2.5	Apply 3 coats of emulsion water proof moon light paint to the newly constructed control/Machine room	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
5.2.6	Supply, Install and test Fire/smoke detection alarm system inside the control room and link it to the existing system.	Item	1			
5.2.7	Undertake Power installation works with provision of a hybrid system to the control/Machine room	Item	LS			
5.3	**ASSOCIATED ASSESSORIES AND ADAPTATION TO EXISTING RATICULATON SYSTEM**					
5.3.1	Supply, deliver to site, lay, 16 mm2/3 core pvc swa pvc copper cable, Wire to both the starter and the cable termination box.	RM	40			
5.3.2	Supply, deliver to site cable gland c/w lock-nut and shroud for; 1.5mm2/2 core pvc swa pvc copper cable.	No.	2			
5.3.3	Ditto item 5.3.2 for 10.0 mm2/3 core pvc swa pvc copper cable	No.	2			
5.3.4	Supply, deliver to site and install a DN65 GI class "B" water pipe c/w socket as directed by project Engineer.	RM	20			
5.3.5	Supply, deliver to site and install DN65 high-quality heavy-duty water meter (threaded) with flanged connections type ABB or similar approved quality range 0 – 20 m3/hour made of cast iron, a dry dial for clear reading and a removable measuring mechanism.	No.	1			
5.3.6	Supply, deliver to site and install PN16xDN65 GS heavy duty non-return valve (threaded).	No.	1			
5.3.7	Supply, deliver to site, install and test pressure gauge type Kent or similar approved quality heavy duty of range 0 – 15.0 kg/cm2 c/w all connections and fittings	No.	1			
5.3.8	Supply, deliver to site and install PN16xXDN65 heavy duty gate valve, female threaded (Pegler).	No.	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
5.3.9	Supply, deliver to site, install and test D6x120mm stainless steel electrodes in protection shrouds each c/w 2.0 meters of 1.0mm2 sc rubber submersible electrode cable and wire to the cable termination box. The electrodes shall be in DN20 uPVC class "B" perforated water pipe fixed firmly vertically.	Pair	1			
5.3.10	**Water Supply Pumps** 2 No. solar/electrically operated pumps capable of pumping 3 m^3/h of water against 100m total head (static ,frictional and dynamic)shall be installed. The pumps will be Duty alternate with automatic control system. The pump to be mounted appropriately will be pre-assembled with complete pipework and fittings (unions, strainers, isolation valves, non-return valves) ready for connections to water tank outlet and supply pipework. Shall be inclusive of pump plinth, cage and shade. The pumps to be of a good quality as approved.					

5.4	OVERALL SYSTEM PERFORMANCE TEST AND SITE CLEARANCE					
5.4.1	Carry out electrical earth bonding and wiring Connections	Item	LS			
5.4.2	ELECTRICAL TYPE TESTS Carry out all the electrical type tests on the electrical installation and ensure that the system complies fully with the I.E.T and Kenya Power & Lighting Co. Ltd Regulations and Bye Laws.	Item	LS			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
5.4.3	Test the whole system (10 hours each day) to the satisfaction of the Engineer. Ensure that the water reaches the tank.	Day	3			
5.4.4	Carry out training for staff members.	Day	1			
5.4.5	Prepare and submit to the Engineer; (i). Simple operation Manual - 4No. (ii). As-fitted drawings showing the pipe and cable lay out and connections on A4 paper -4No.	Item	LS			
5.4.6	Allow making good and surface reinstatement at the location to the Project Manager's satisfaction.	Item	LS			
5.5	**Allow for Commissioning of the project and hand-over**	M	Rate Only			
	TOTAL BILL NO 5 - INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT					

BILL OF QUANTITIES PRICE SUMMARY SHEET -LOT 1

S/No.	DESCRIPTION	TOTAL A M O U N T	
		KSHS	CTS
	PHASE 1		
1	PRELIMINARY AND GENERAL ITEMS		
2	DRILLING, DEVELOPMENT OF BORE HOLE AND TEST PUMPING		
3	BOREHOLE EQUIPPING		
4	STORAGE TANK AND WATER CONVEYANCE		
	PHASE 2		
5	INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT		
	TOTAL FOR BILLS NO. 1 to 5		
6	Allow for contingency sum of 5% of Bills total		
	TOTAL CARRIED TO FORM OF TENDER		

AMOUNT KSHS (*WORDS*)

……

……

(AMOUNT IN FIGURES KSHS……) (To be carried to the Form of Tender as Lot 1)

…… ……
SIGNATURE COMPANY OFFICIAL STAMP

ANNEX 2

BILL OF QUANTITIES -LOT 2

TIVA CENTRE-KWAVONZA

ESTIMATED BOREHOLE DEPTH OF 250M

BILL OF QUANTITIES FOR
TENDER NAME: PROPOSED BOREHOLE DRILLING AND EQUIPING, SOLARIZATION AND INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT AT TIVA AND KITUI

TENDER NO: KEFRI/ONT/007/2024-2025- LOT 2

NAME OF SITE: TIVA STATION BOREHOLE

LOCATION : KITUI RURAL CONSTITUENCY IN KITUI COUNTY, KWA VONZA AREA

PHASE 1

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
BILL NO.1	**PRELIMINARY AND GENERAL ITEMS**					
1.1	Allow provision for insurance in accordance with Clauses 13 of the general conditions of the contract Section VIII	PC	1			
1.2	Provide for Review of Geophysical /Hydrogeological survey and report. (provisional)	LS	1			
1.3	Water Resources Authority fee	LS	1			
1.4	NEMA Fees (including Environmental Impact Assessment reports) provisional	LS	1			
1.5	County Government Fees (where applicable)	LS	1			
1.6	Provide, erect and maintain standard sign boards at locations and sizes as indicated by the Resident Engineer at site of works.	No.	2			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
1.7	Establish, maintain and remove Contractor's camps, offices, facilities, etc. at the end of the contract.	Item	1			
	TOTAL CARRIED TO PRICE SUMMARY PAGE					

BILL NO.2	DRILLING AND CONSTRUCTION, DEVELOPMENT AND TEST PUMPING OF 1 NO. BOREHOLE					
2.1	Mobilization and demolition of contractor's plant and equipment including but not limited to drilling units, tank erection equipment, test pumping equipment, borehole development equipment, materials, personnel and other required supplies.	Item	1			
2.2	Drilling one borehole with finished internal minimum diameter of 203mm (8") to the required maximum depth through all types of strata including disposal of excavated materials, taking any remedial measures to overcome caving-in, or over drilling to accommodate sloughed material and keeping drilling records as specified i) From ground level down to 100m	M	100			
2.3	ii) ditto item 2.2 From 101 to 200m	M	100			
2.4	iii) ditto item 2.2 From 201 to 250m	M	50			
2.5	iii) ditto item 2.2 from 251 m - 300m **(rate only)**	M	Rate Only			
2.6	Allow for Reaming and boring 10" diameter bit	M	10			
2.7	Allow for taking samples of drill cuttings at two (2) meters interval.	Item	1			
2.8	Supply and installation of plain steel 6" (152mm) Class B steel casing - 4.5 mm thickness	M	170			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
2.9	Supply and installation of slotted steel casings 6" (152mm) Class B diameter - 4.5 mm thickness.	M	80			
2.10	Supply and Installation of 254mm (10") surface casing (To be Retained)	M	10			
2.11	Installation of gravel pack (2-4mm) (not laterite) to at least 3m above top screen.	TON	10			
2.12	Grout between the casing and the borehole for top ten metres	Item	1			
2.13	Carry out borehole sterilization.	Item	1			
2.14	Physical and chemical development of the borehole minimum 4hrs including inserting and removal of development equipment;					
a	Physical development	HR	8			
b	Chemical development	LS	1			
2.15	Undertake constant discharge test as specified (24 hours) for usual test pumping including insertion and removal of test pumping equipment.	HR	24			
2.16	Undertake water level observation and record recovery.	HR	12			
2.17	Collect water samples and carry out full water quality analysis (chemical and bacteriological analysis) for in a reputable laboratory acceptable to the Project Manager and submit water quality test report. A second sample may be carried out as directed by the Resident Engineer	No.	2			
2.18	Install 6" well head steel cap and cement slab of dimensions 1.0MX1.0MX1.0M	Item	1			
2.19	Complete the prescribed WRA Borehole drilling completion report and submit to WRA	Item	1			
2.20	Processing of Water Abstraction Permit	Item	1			
2.21	Allow costs for providing water for all requirements of the contract, field camp, drilling works and making good and	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	surface reinstatement at the borehole location to the Project Managers satisfaction					
	TOTAL BILL NO 2 -DRILLING AND CONSTRUCTION, DEVELOPMENT AND TEST PUMPING OF THE BOREHOLE CARRIED TO SUMMARY					

BILL 3:	**BOREHOLE EQUIPPING**					
3.1	**pump and power supply**					
3.1.1	Provide, install and commission a submersible, multistage centrifugal pump capable of; • Flow rate 7.5 m3/hr. • Head 200m or as directed by the Engineer. • Power rating 7.5 kw • Operating speed 2900rpm Size of casing: 152mm (6”). The cost should be inclusive of water tight cable splicing kit for 10.0 mm^2/3 core cable and borehole sundries.		1			
3.1.2	Supply and install Monocrystalline solar modules to power motor of minimum 7.5 KW and 3kWh/m^3 Reverse Osmosis (RO) process as directed by the Engineer	Item	1			
3.1.3	Incorporate a hybrid system to enable use of mains and solar power	Item	1			
3.1.4	Supply and install Solar controller as Lorentz PS15k or equivalent as approved by the Engineer with cable interconnection and earthing.	Item	1			
3.1.5	Supply and install DC PV disconnect switch 440VDC/40A complete with cable interconnection	Item	1			
3.1.6	Construct and erect a suitable solar structure to accommodate	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	all installed solar arrays. The Structure shall be 4 metres high above ground level complete with lockable enclosure to house the inverter, PV disconnect and mounted below the solar arrays at a level free from interference. The enclosure shall be fabricated from heavy gauge SWG folded, spangled, galvanized and rust protected sheet steel of minimum thickness of 1.5mm finished with a two-tone heat-resistant non-peeling off staved grey enamel paint or epoxy powder coating.					
3.1.7	Electrode cable	M	200			
3.1.8	Electrode pencils	No.	2			
3.1.9	Submersible cable rubber sheathed, $10mm^2$, 4-core.	M	200			
3.1.10	$10mm^2$, 4-core underground armoured cable.	M	20			
3.1.11	$1.5mm^2$, 2core underground armoured cable.	M	20			
3.1.12	Supply, deliver to site and install Hatari tiles (1:3:6) as directed.	No.	40			
3.2	**borehole plumbing works**					
3.2.1	20mm Ø Dipper tube complete	M	200			
3.2.2	2" class B G.I rising main pipe c/w crane with sockets to the surface and pipe locking clamp.	M	200			
3.2.3	Provide and install one 2" bulk flow meter class B (type and make to be approved by the Project Manager) c/w Non-Return Valve at the well head. Rate to include all pipe and fittings at the well head	Item	1			
3.2.4	Supply and install 2" gate valves	No	2			
3.3	Construct a standard 1.5mx1.5mx1.0m borehole protection chamber with Supply, deliver to site and install lockable, water tight chequered steel top lid of dimensions 1200x1200x2.0 mm thickness to fit borehole protection chamber. It shall be	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	in a GS frame c/w heavy-duty stainless-steel padlock					
3.4	Allow for fencing off of borehole and solar structure with reinforced concrete posts, 3 strands of barbed wire and chain link	Item	1			
3.5	Supply and install Approved Quality, automatic and original brand-new solar security street light (Mounting pole and accessories included) of minimum 300w with minimum 2years warranty. The system should have the following features; Waterproof, bright LED light, rechargeable lithium battery, minimum light hours of 14h and is to be mounted appropriately as directed by the Engineer.	Item	1			
	TOTAL BILL NO 3 BOREHOLE EQUIPPING CARRIED TO SUMMARY					

BILL NO.4	STORAGE TANK AND WATER CONVEYANCE					
4.1	**Storage tank**					
4.1.1	Supply and Install One 5,000 litres PVC ribbed water tank on an existing 10m high steel tank tower which should be reinforced and a chequered plate placed on the base to facilitate storage of water from the Borehole/treatment plant unit and connect the same to the main water conveyance system. This shall include pipes, sockets, unions and other fittings installed so as to allow flow via gravity. The tank shall be as Roto Model or approved equivalent.	Item	1			
4.2	**Water Conveyance System**					
	Prices to include all the associated fittings, supply deliver and pipe laying cutting and threading where necessary					
4.2.1	Supply deliver and install 50mm HDPE pipe of PN10 pressure	RM	260			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	gauge to convey water from the borehole/treatment plant to elevated storage tanks(2No) as directed by the Engineer.					
4.2.2	Supply deliver and install 50mm HDPE pipe of PN10 pressure gauge to convey water from the elevated storage tank (on 10m high steel tower) and distribute to existing plastic tanks (4No.) and water points (2No.) as directed by the Engineer.	RM	230			
4.2.3	Excavation Excavate trench 300mm wide and 500mm deep to lay the HDPE pipes. The laid pipes to be covered with 50mm thick layers of fine soil, back filled, rammed and excess soil carted away.	M	480			
4.2.4	Valve Chamber 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.	No	3			
4.2.5	Air Valves Supply and install 50mm diameter single orifice air valve, complete with pipe mounting accessories	No	2			
4.2.6	Gate Valves 50mm diameter gate valve complete with pipe mounting accessories as 'Pegler' or approved equivalent	No	4			
4.2.7	Supply and joint including all jointing materials 2" diameter sluice valves to B.S 163.	Item	1			
4.2.8	Off-take stand pipes Install appropriate water off-take stand pipes (For field Irrigation) of 25mm diameter enclosed with 150mm by 150mm by 500mm mass concrete along the water conveyance HDPE pipeline as directed by the Engineer	I	5			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
4.2.9	Construction of water point of raised concrete slab with 2 No. Draw offs points connected to the 50mm diameter HDPE and 20mm pipe as directed by the Engineer.	NO	2			
	TOTAL BILL 4 STORAGE TANK AND WATER CONVEYANCE CARRIED TO SUMMARY.					

PHASE 2

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
BILL NO.5	**INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT**					
5.1	Supply, deliver to site, install, inter-connect, wire and test a reverse osmosis plant. Component inter-connection shall be carried out to conform with the existing reticulation system and with the following features; - Frame mounted with all components accessible. - Low energy consumption. - High efficiency DOW filmtec or approved equivalent RO membranes housed in strong corrosion proof FRP pressure vessels. - High treatment performance with up to 98% salt rejection. - High pressure in line multi-stage stainless steel vertical mounted feed pump, 3 phase 415 vac rated at 3 kw (3.75 hp) mounted to have a maximum head of 20 m and deliver 3m3/hr. - operating pressure of between 12 – 20 bar - system monitoring accessories including inlet and outlet flow meters, pressure gauges and conductivity meter.	Item	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	- electronic controller for fully automated plant operation including start up, periodic flush cycle and shut down as well as various system alarms - Sediment removal and carbon cartridge pre filters. - corrosion resistant stainless steel high pressure and plastic low-pressure pipes and pipe fittings. - Safety margin of the net positive suction head of 1 meter - 3 Kw, 3 phase, 415 vac Direct On-Line starter with Thermal over load range shall be 23-32 amps set at 32 amps c/w control unit					
5.2	**RENOVATION OF EXISTING PUMP HOUSE FOR PLANT CONTROL/MACHINE ROOM AND POWER INSTALLATION**					
5.2.1	Supply all building materials necessary, deliver to site, prepare and renovate an existing 8.5m by 4.5m pump house and of Standard Machine room height. Renovation works shall be done on both interior and exterior parts of the wall, roof and floor. The works involve but are not limited to the following; Wall scrubbing and painting works, adaptation to the machine room by removing the old pumping equipment, floor repair and necessary constructions to accommodate the new Reverse Osmosis plant. The renovated room shall have burglar-proof steel door and Windows (2.0mm thick plates) with heavy-duty stainless-steel padlock, with insect-proof steel wire gauze ventilation perforations as directed by the Engineer	Item	1			
5.2.2	Supply Deliver and install a Three phase triple pole 415 vac, 32 amperes wall mounted MCCB in a metallic water proof, corrosion	No.	1			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	resistant enclosure with knock outs to facilitate cable entry.					
5.2.3	Supply and Install One 10,000 litres PVC ribbed water tank on a 500mm raised concrete platform to facilitate storage of treated Water from the treatment plant. Undertake any necessary plumbing works to interconnect the treated Water storage tank to the RO Plant.	No.	1			
5.2.4	Supply and Install One 5,000 litres PVC ribbed water tank on a 500mm raised concrete platform to facilitate storage of waste water from the treatment plant unit and connect the same to the main water or/ and sewerage drain. This shall include pipes, sockets and unions installed so as to allow flow via gravity.	No.	1			
5.2.5	Apply 3 coats of emulsion water proof moon light paint to the newly constructed control/Machine room	Item	1			
5.2.6	Supply, Install and test Fire/smoke detection alarm system inside the control room and link it to the existing system.	Item	1			
5.2.7	Undertake Power installation works with provision of a hybrid system to the control/Machine room	Item	LS			
5.3	**ASSOCIATED ASSESSORIES AND ADAPTATION TO EXISTING RATICULATON SYSTEM**					
5.3.1	Supply, deliver to site, lay, 16 mm2/3 core pvc swa pvc copper cable, Wire to both the starter and the cable termination box.	RM	40			
5.3.2	Supply, deliver to site cable gland c/w lock-nut and shroud for; 1.5mm2/2 core pvc swa pvc copper cable.	No.	2			
5.3.3	Ditto item 5.3.2 for 10.0 mm2/3 core pvc swa pvc copper cable	No.	2			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
5.3.4	Supply, deliver to site and install a DN65 GI class "B" water pipe c/w socket as directed by project Engineer.	RM	20			
5.3.5	Supply, deliver to site and install DN65 high-quality heavy-duty water meter (threaded) with flanged connections type ABB or similar approved quality range 0 – 20 m3/hour made of cast iron, a dry dial for clear reading and a removable measuring mechanism.	No.	1			
5.3.6	Supply, deliver to site and install PN16xDN65 GS heavy duty non-return valve (threaded).	No.	1			
5.3.7	Supply, deliver to site, install and test pressure gauge type Kent or similar approved quality heavy duty of range 0 – 15.0 kg/cm2 c/w all connections and fittings	No.	1			
5.3.8	Supply, deliver to site and install PN16xXDN65 heavy duty gate valve, female threaded (Pegler).	No.	1			
5.3.9	Supply, deliver to site, install and test D6x120mm stainless steel electrodes in protection shrouds each c/w 2.0 meters of 1.0mm2 sc rubber submersible electrode cable and wire to the cable termination box. The electrodes shall be in DN20 uPVC class "B" perforated water pipe fixed firmly vertically.	Pair	1			
5.3.10	**Water Supply Pump** 2 No. solar/electrically operated pumps capable of pumping 3 m^3/h of water against 100m total head (static, frictional and dynamic) shall be installed. The pumps will be Duty alternate with automatic control system. The pump to be mounted appropriately will be pre-assembled with complete pipework and fittings (unions, strainers, isolation valves, non-return valves) ready for	Item	2			

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
					SH	CTS
	connections to water tank outlet and supply pipework. Shall be inclusive of pump plinth, cage and shade. The pumps to be of a good quality as approved.					

5.4	**OVERALL SYSTEM PERFORMANCE TEST AND SITE CLEARANCE**					
5.4.1	Carry out electrical earth bonding and wiring Connections	Item	LS			
5.4.2	ELECTRICAL TYPE TESTS Carry out all the electrical type tests on the electrical installation and ensure that the system complies fully with the I.E.T and Kenya Power & Lighting Co. Ltd Regulations and Bye Laws.	Item	LS			
5.4.3	Test the whole system (10 hours each day) to the satisfaction of the Engineer. Ensure that the water reaches the tank.	Day	3			
5.4.4	Carry out training for staff members.	Day	1			
5.4.5	Prepare and submit to the Engineer; (i). Simple operation Manual - 4No. (ii). As-fitted drawings showing the pipe and cable lay out and connections on A4 paper -4No.	Item	LS			
5.4.6	Allow making good and surface reinstatement at the location to the Project Manager's satisfaction.	Item	LS			
5.5	**Allow for Commissioning of the project and hand-over**	M	Rate Only			
	TOTAL BILL NO 5 - INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT					

BILL OF QUANTITIES PRICE SUMMARY SHEET- LOT 2

S/No.	DESCRIPTION	TOTAL A M O U N T	
		KSHS	CTS
	PHASE 1		
1	PRELIMINARY AND GENERAL ITEMS		
2	DRILLING, DEVELOPMENT OF BORE HOLE AND TEST PUMPING		
3	BOREHOLE EQUIPPING		
4	STORAGE TANK AND WATER CONVEYANCE		
	PHASE 2		
5	INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT		
	TOTAL FOR BILLS NO. 1 to 5		
6	Allow for contingency sum of 5% of Bills total		
	TOTAL CARRIED TO FORM OF TENDER		

AMOUNT KSHS (*WORDS*)

……

……

(AMOUNT IN FIGURES KSHS……) (To be carried to the form of tender)

…… ……
SIGNATURE COMPANY OFFICIAL STAMP

PART III - CONDITIONS OF CONTRACT AND CONTRACT FORMS

These General Conditions of Contract (GCC), read in conjunction with the Special Conditions of Contract (SCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

General Conditions of Contract

A. General

1. Definitions

1.1 Bold face type is used to identify defined terms.

a) **The 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.

b) **The Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.

c) **The Adjudicator** is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.

d) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.

e) **Compensation Events** are those defined in GCC Clause 42 hereunder.

f) **The Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.

g) **The Contract** is the Contract between the Procuring Entity and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.

h) **The Contractor** is the party whose Bid to carry out the Works has been accepted by the Procuring Entity.

i) **The Contractor's Bid** is the completed bidding document submitted by the Contractor to the Procuring Entity.

j) **The Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.

k) **Days** are calendar days; months are calendar months.

l) **Day work**s are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.

m) **A Defect** is any part of the Works not completed in accordance with the Contract.

n) **The Defects** Liability Certificate is the certificate issued by Project Manager upon correction of defects by the Contractor.

o) **The Defects Liability Period** is the period **named in the SCC** pursuant to Sub-Clause 34.1 and calculated from the Completion Date.

p) **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, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

q) **The Procuring Entity** is the party who employs the Contractor to carry out the Works, **as specified in the SCC,** who is also the Procuring Entity.

r) **Equipmen**t is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

s) **"In writing" or "written"** means hand-written, type-written, printed, or electronically made, and resulting in a permanent record;

t) The Initial Contract Price is the Contract Price listed in the Procuring Entity's Letter of Acceptance.

u) **The Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the SCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

v) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.

w) **Plant i**s any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

x) **The Project Manager** is the person **named in the SCC** (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.

y) **SCC** means Special Conditions of Contract.

z) **The Site** is the area of the works as **defined as such in the SCC**.

aa) **Site Investigation Reports** are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.

bb) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.

cc) **The Start Date** is **given in the SCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

dd) **A Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.

ee) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

ff) **A Variation** is an instruction given by the Project Manager which varies the Works.

gg) **The Works** are what the Contract requires the Contractor to construct, install, and turn over to the Procuring Entity, **as defined in the SCC**.

2. Interpretation

2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.

2.2 If sectional completion is specified in the SCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

2.3 The documents forming the Contract shall be interpreted in the following order of priority:

a) Agreement,
b) Letter of Acceptance,
c) Contractor's Bid,
d) Special Conditions of Contract,
e) General Conditions of Contract, including Appendices,
f) Specifications,
g) Drawings,
h) Bill of Quantities[6], and
i) any other document **listed in the SCC** as forming part of the Contract.

[6] *In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."*

3. Language and Law

3.1 The language of the Contract is English Language and the law governing the Contract are the Laws of Kenya.

3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Procuring Entity's Country when

a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country; or

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 from that country or any payments to any country, person, or entity in that country.

4. Project Manager's Decisions

4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Procuring Entity and the Contractor in the role representing the Procuring Entity.

5. Delegation

5.1 Otherwise **specified in the SCC,** the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.

6. Communications

6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

7. Subcontracting

7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Procuring Entity in writing. Subcontracting shall not alter the Contractor's obligations.

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the Schedule of Other Contractors, as **referred to in the SCC.** The Contractor shall also provide facilities and services for them as described in the Schedule. The Procuring Entity may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

9. Personnel and Equipment

9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.

9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

9.3 If the Procuring Entity, Project Manager or Contractor determines, that any employee of the Contractor be determined to have engaged in Fraud and Corruption during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.

10. Procuring Entity's and Contractor's Risks

10.1 The Procuring Entity carries the risks which this Contract states are Procuring Entity's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Procuring Entity's Risks

11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Procuring Entity's risks:

a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to

i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or

ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.

b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is a Procuring Entity's risk except loss or damage due to

aa) a Defect which existed on the Completion Date,

bb) an event occurring before the Completion Date, which was not itself a Procuring Entity's risk, or

cc) the activities of the Contractor on the Site after the Completion Date.

12. Contractor's Risks

12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Procuring Entity's risks are Contractor's risks.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Procuring Entity and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the SCC** for the following events which are due to the Contractor's risks:

a) loss of or damage to the Works, Plant, and Materials;

b) loss of or damage to Equipment;

c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and

d) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Procuring Entity may effect the insurance which the Contractor should have provided and recover the premiums the Procuring Entity has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.

13.5 Both parties shall comply with any conditions of the insurance policies.

14. Site Data

14.1 The Contractor shall be deemed to have examined any Site Data **referred to in the SCC**, supplemented by any information available to the Contractor.

15. Contractor to Construct the Works

15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

16. The Works to Be Completed by the Intended Completion Date

16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance

with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

17. Approval by the Project Manager

17.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.

17.2 The Contractor shall be responsible for design of Temporary Works.

17.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

17.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

17.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

18. Safety

18.1 The Contractor shall be responsible for the safety of all activities on the Site.

19. Discoveries

19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Procuring Entity. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

20. Possession of the Site

20.1 The Procuring Entity shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date **stated in the SCC,** the Procuring Entity shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

21. Access to the Site

21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

22. Instructions, Inspections and Audits

22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.

22.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and sub-consultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.

22.3 The Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Procuring Entity and/or persons appointed by the Public Procurement Regulatory Authority 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 Public Procurement Regulatory Authority. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 25.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Public Procurement Regulatory Authority's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Public Procurement Regulatory Authority's prevailing sanctions procedures).

23. Appointment of the Adjudicator

23.1 The Adjudicator shall be appointed jointly by the Procuring Entity and the Contractor, at the time of the Procuring Entity's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the SCC, to appoint the Adjudicator within 14 days of receipt of such request.

23.2 Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed

by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.

24. Settlement of Claims and Disputes

241 Contractor's Claims

24.1.1 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 Project Manager, 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.

24.1.2 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.

24.1.3 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.

24.1.4 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 Project Manager. Without admitting the Procuring Entity's liability, the Project Manager 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 Project Manager to inspect all these records, and shall (if instructed) submit copies to the Project Manager.

24.1.5 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 Project Manager, the Contractor shall send to the Project Manager a 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 Project Manager 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 Project Manager.

24.1.6 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 Project Manager and approved by the Contractor, the Project Manager 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.

24.1.7 Within the above defined period of 42 days, the Project Manager shall proceed in accordance with Sub-Clause

24.1.8 [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.

24.1.9 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.

24.1.10 If the Project Manager does not respond within the time-frame defined in this Clause, either Party may consider that the claim is rejected by the Project Manager and any of the Parties may refer to Arbitration in accordance with Sub-Clause 24.4 [Arbitration].

24.1.11 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 24.3.

242 Amicable Settlement

24.1.1 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 24.1 above should move to commence arbitration after the fifty-sixth day from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

243 Matters that may be referred to arbitration

24.3.1 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) The appointment of a replacement Project Manager upon the said person ceasing to act.
b) Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.
c) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
e) Any dispute arising in respect of war risks or war damage.
f) 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.

244 Arbitration

24.4.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 24.3 shall be finally settled by arbitration.
24.4.2 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.
24.4.3 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.
24.4.4 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.
24.4.5 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 requirement or notice had been given.
24.4.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion, or valuation of the Project Manager, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Project Manager from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.
24.4.7 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.
24.4.8 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Project Manager shall not be altered by reason of any arbitration being conducted during the progress of the Works.
24.4.9 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.

245 Arbitration with National Contractors

24.5.1 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

24.5.2 The institution written to first by the aggrieved party shall take precedence over all other institutions.

24.6 Alternative Arbitration Proceedings

24.6.1 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.

24.7 Failure to Comply with Arbitrator's Decision

24.7.1 The award of such Arbitrator shall be final and binding upon the parties.

24.7.2 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.

24.8 Contract operations to continue

24.8.1 Notwithstanding any reference to arbitration herein,

a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
b) the Procuring Entity shall pay the Contractor any monies due the Contractor.

25. Fraud and Corruption

25.1 The Government requires compliance with the country's Anti-Corruption laws and its prevailing sanctions policies and procedures as set forth in the Constitution of Kenya and its Statutes.

25.2 The Procuring Entity requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity, or fee.

B. Time Control

26. Program

26.1 Within the time stated in the SCC, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.

26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

26.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.

26.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date

27.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

27.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the

new Intended Completion Date.

28. Acceleration

28.1 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.

28.2 If the Contractor's priced proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

29. Delays Ordered by the Project Manager

29.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

30. Management Meetings

30.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

31. Early Warning

31.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

31.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

C. Quality Control

32. Identifying Defects

32.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

33. Tests

33.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

34. Correction of Defects

34.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

35. Uncorrected Defects

35.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project

Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

36. Contract Price

36.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.

37. Changes in the Contract Price[8]

37.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change. The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Procuring Entity.

37.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

38. Variations

38.1 All Variations shall be included in updated Programs9 produced by the Contractor.

38.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

38.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

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[7] *In lump sum contracts, replace GCC Sub-Clauses 36.1 as follows:*

36.1 The Contractor shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

[8] *In lump sum contracts, replace entire GCC Clause 37 with new GCC Sub-Clause 37.1, as follows:*
The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

[9] *In lump sum contracts, add "and Activity Schedules" after "Programs."* [10] *In lump sum contracts, delete this paragraph*

38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

38.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning

38.6 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 39.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work

38.7 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

a) the proposed change(s), and a description of the difference to the existing contract requirements;
b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Procuring Entity may incur in implementing the value engineering proposal; and
c) a description of any effect(s) of the change on performance/functionality.

38.8 The Procuring Entity may accept the value engineering proposal if the proposal demonstrates benefits that:

a) accelerate the contract completion period; or
b) reduce the Contract Price or the life cycle costs to the Procuring Entity; or
c) improve the quality, efficiency, safety or sustainability of the Facilities; or
d) yield any other benefits to the Procuring Entity, without compromising the functionality of the Works.

38.9 If the value engineering proposal is approved by the Procuring Entity and results in:

a) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the **percentage specified in the SCC** of the reduction in the Contract Price; or
b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

39. Cash Flow Forecasts

39.1 When the Program[11], is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

40. Payment Certificates

40.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

40.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

40.3 The value of work executed shall be determined by the Project Manager.

40.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed12.

40.5 The value of work executed shall include the valuation of Variations and Compensation Events.

40.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

40.7 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*.

41. Payments

41.1 Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of each certificate. If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.

41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

41.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.

41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

42. Compensation Events

42.1 The following shall be Compensation Events:

d) The Procuring Entity does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.

e) The Procuring Entity modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.

f) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.

g) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.

h) The Project Manager unreasonably does not approve a subcontract to be let.

i) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.

j) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons.

k) Other contractors, public authorities, utilities, or the Procuring Entity does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.

l) The advance payment is delayed.

m) The effects on the Contractor of any of the Procuring Entity's Risks.

n) The Project Manager unreasonably delays issuing a Certificate of Completion.

42.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

42.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be

adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

42.4 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

43. Tax

43.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44.

44. Currency y of Payment

44.1 All payments under the contract shall be made in Kenya Shillings

45. Price Adjustment

45.1 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 Im/Io

where: P is the adjustment factor for the portion of the Contract Price payable.

A and B are coefficients[13] **specified in the SCC,** representing the non-adjustable and adjustable portions, respectively, of the Contract Price payable and Im is the index prevailing at the end of the month being invoiced and IOC is the index prevailing 30 days before Bid opening for inputs payable.

45.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

46. Retention

46.1 The Procuring Entity shall retain from each payment due to the Contractor the proportion stated in the **SCC** until Completion of the whole of the Works.

46.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.

47. Liquidated Damages

47.1 The Contractor shall pay liquidated damages to the Procuring Entity at the rate per day stated in the **SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 41.1.

48. Bonus

48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the SCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

[11] *In lump sum contracts, add "or Activity Schedule" after "Program."*

[12] *In lump sum contracts, replace this paragraph with the following: "The value of work executed shall comprise the value of completed activities in the Activity Schedule."*

49. Advance Payment

49.1 The Procuring Entity shall make advance payment to the Contractor of the amounts stated in the **SCC** by the date stated in the **SCC**, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Procuring Entity in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

49.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

49.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

50. Securities

50.1 The Performance Security shall be provided to the Procuring Entity no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the SCC,** by a bank or surety acceptable to the Procuring Entity, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 day from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

51. Dayworks

51.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

51.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.

51.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

52. Cost of Repairs

52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

53. Completion

53.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is completed.

54. Taking Over

54.1 The Procuring Entity shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

55. Final Account

55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor

considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.

[13] *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 non-adjustable components. The sum of the adjustments for each currency are added to the Contract Price.*

56. Operating and Maintenance Manuals

56.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the SCC.

56.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the SCC pursuant to GCC Sub-Clause 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.

57. Termination

The Procuring Entity or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

57.1 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;

b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;

c) the Procuring Entity or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

d) a payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within 84 days of the date of the Project Manager's certificate;

e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;

f) the Contractor does not maintain a Security, which is required;

g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the SCC**; or

h) if the Contractor, in the judgment of the Procuring Entity has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Procuring Entity may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

57.2 Notwithstanding the above, the Procuring Entity may terminate the Contract for convenience.

57.3 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

57.4 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

58. Payment upon Termination

58.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.

58.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

59. Property

59.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Procuring Entity if the Contract is terminated because of the Contractor's default.

60. Release from Performance

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

SECTION IX - SPECIAL CONDITIONS OF CONTRACT

Except where otherwise specified, all Special *Conditions of Contract should be filled in by the Procuring Entity prior to issuance of the bidding document. Schedules and reports to be provided by the Procuring Entity should be annexed.*

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	A. General
GCC 1.1 (q)	THE KENYA FORESTRY RESEARCH INSTITUTE, P.O. Box 20412-00200 Nairobi Physical Address: . THE KENYA FORESTRY RESEARCH INSTITUTE Muguga, Off Nairobi – Naivasha Road
GCC 1.1 (u)	The Intended Completion Date for the whole of the Works shall be **90 DAYS FROM START DATE EXCLUDING THE DEFECTS LIABILITY PERIOD**
GCC 1.1 (x)	The Project Manager is **DIRECTOR, THE KENYA FORESTRY RESEARCH INSTITUTE, P.O. Box 20412-00200 Nairobi**
GCC 1.1 (z)	The Site is located as defined in: **The Tender Data Sheet (TDS)**
GCC 1.1 (cc)	The Start Date shall be **Seven (7) days after the contract signing and site handing over**
GCC 1.1 (gg)	The Works consist of BOREHOLE DRILLING, EQUIPPING, INSTALLATION OF 3M3/H REVERSE OSMOSIS (RO) PLANT AND SOLARIZATION OF BOREHOLE FOR THE KENYA FORESTRY RESEARCH INSTITUTE- LOT 1 AT KITUI SUB-CENTRES AND LOT 2 AT TIVA SUB-CENTRE
GCC 2.2	Sectional Completions are: **Not Applicable,**
GCC 5.1	The Project manager **may** delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: **Not Applicable**
GCC 9.1	**Key Personnel** GCC 9.1 is replaced with the following: Key Personnel are the Contractor's personnel named in this GCC 9.1 of the Special Conditions of Contract. The Contractor shall employ the Key Personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of Key Personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid. [insert the name/s of each Key Personnel agreed by the Procuring Entity prior to Contract signature.]
GCC 13.1	The minimum insurance amounts and deductibles shall be: **As per the laws of Kenya and the Insurance cover, terms and conditions. The insurance shall be for;** a) loss or damage to the Works, Plant and Materials b) For loss or damage to Equipment (c) For loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract . d) For personal injury or death: i) Of the Contractor's employees ii) Of other people

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
GCC 14.1	Site Data are: **As observed during the site visit and provided in these tender documents**
GCC 20.1	The Site Possession Date(s) shall be: **agreed with the Project Manager**
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: **Director, THE KENYA FORESTRY RESEARCH INSTITUTE, P.O. Box 20412-00200 Nairobi**
	Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: **As shall be legally deemed applicable**
B. Time Control	
GCC 26.1	The Contractor shall submit for approval a Program for the Works within **30** days from the date of the Letter of Acceptance.
GCC 26.3	The period between Program updates is **30** days maximum The amount to be withheld for late submission of an updated Program is **whole certificate**
C. Quality Control	
GCC 34.1	The Defects Liability Period is: **180** days.
D. Cost Control	
GCC 38.9	If the value engineering proposal is approved by the Procuring Entity the amount to be paid to the Contractor shall be _0__% of the reduction in the Contract Price.
GCC 44.1	The currency of the Procuring Entity's Country is: **Kenya Shilling (KES)** Procuring Entity's Country
GCC 45.1	The Contract **is not** subject to price adjustment in accordance with GCC Clause 45, and the following information regarding coefficients **does not** apply. The coefficients for adjustment of prices are: **Not Applicable**
GCC 46.1	The proportion of payments retained is: **10%**
GCC 47.1	The liquidated damages for the whole of the Works are 0.05 percent of the total contract price per day. The maximum number of liquidated damages for the whole of the Works is **5%** of the final Contract Price.
GCC 48.1	The Bonus for the whole of the Works is *0%* per day. The maximum amount of Bonus for the whole of the Works is *0%* of the final Contract Price.
GCC 49.1	The Advance Payments shall be: **Not Applicable** and shall be paid to the Contractor no later than **Not Applicable**
GCC 50.1	The Performance Security amount is **% of the final Contract Price** denominated in the types and proportions of the currencies in which the Contract Price is payable, or in a freely convertible currency acceptable to the Procuring Entity*]* Performance Security – Bank Guarantee: in the amount(s) of **Ten** percent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount. Performance Security – Performance Bond: in the amount(s) of **two** percent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.
E. Finishing the Contract	

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
GCC 56.1	The date by which operating and maintenance manuals are required is immediately **after testing and not later than commissioning date** The date by which "as built" drawings are required is not later than the **site handing over (back to Client by Contractor) date**
GCC 56.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is **whole certificate**
GCC 57.2 (g)	The maximum number of days is: **90days**
GCC 58.1	The percentage to apply to the value of the work not completed, representing the Procuring Entity's additional cost for completing the Works, is **10% of the valuation of works.**

SECTION X – CONTRACT FORMS

FORM No 1: NOTIFICATION OF INTENTION TO AWARD

This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender. 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 Intention to 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) Country: *[insert country where ITT is issued]*

v) 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

Submit a Procurement-related Complaint in relation to the decision to award the contract.

a) The successful tenderer

i) Name of successful Tender_____

ii) Address of the successful Tender _____

iii) Contract price of the successful Tender Kenya Shillings _____ (in words____)

b) 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. For Tenders not evaluated, give one main reason the Tender was unsuccessful.

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 deadline 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*]

ii) Agency: [*insert name of Procuring Entity*]

iii) 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 info@ppra.go.ke or complaints@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:**___ **Email:** _____

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……

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 hereby accepted by …… (*name of Procuring Entity)*.

You are requested to furnish the Performance Security within 30 days 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 therein,

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 Letter of Acceptance
   b) the Letter 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 hereby 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 hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, 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 whereof the parties hereto 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, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of_____(*in words*),[1] 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...…[2], 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.*

[1] *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.*

[2] *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 thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter 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 thereunder, the Surety may promptly remedy the default, or shall promptly:
   1) complete the Contract in accordance with its terms and conditions; or
   2) 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
   3) 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 herein or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.

6. In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day _of_____ 20_____.

7. SIGNED ON_____on behalfof 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, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of (*in words*)[1] 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 ,[2] 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.

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[1] *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.*

[2] *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*_____*])*[1] 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 therein.

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 ….....……, 2.....…[2], 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.

[1] *The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.*

[2] *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. 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 Tenderer by meeting one or more of the following conditions:

- *Directly or indirectly holding 25% or more of the shares.*
- *Directly or in directly holding 25% or more of the voting rights.*
- *Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.*

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

Identity of Beneficial Owner	**Directly or indirectly holding 25% or more of the shares (Yes / No)**	**Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)**	**Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer (Yes / No)**
[include full name (last, middle, first), nationality, country of residence]			

OR

ii) We declare that there is no Beneficial Owner meeting one or more of the following conditions: directly or indirectly holding 25% or more of the shares. Directly or indirectly holding 25% or more of the voting rights. Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.

OR

We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Tenderer shall provide explanation on why it is unable to identify any Beneficial Owner]

Directly or indirectly holding 25% or more of the shares. Directly or indirectly holding25% or more of the voting

rights.

Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer]"

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]*

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]

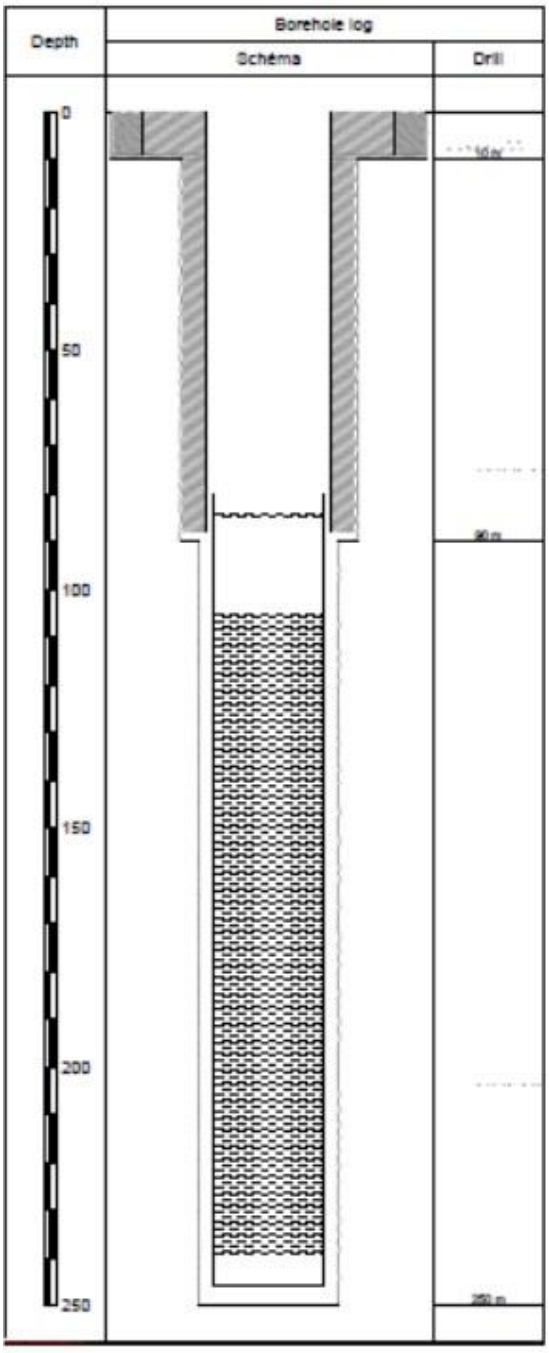
Date signed ..... [insert date of signing] day of..... [Insert month], [insert year]

ANNEX 3

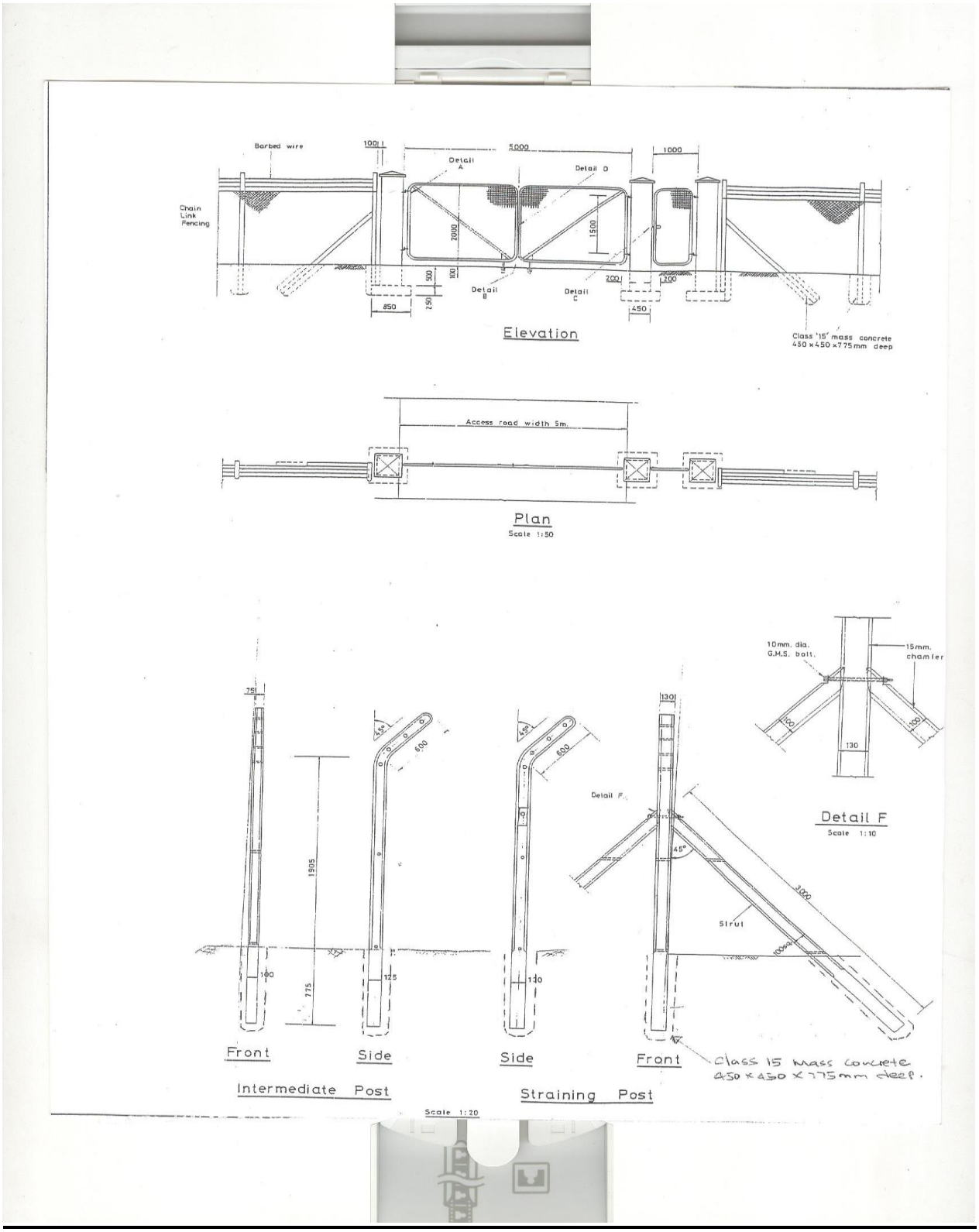
DRAWINGS

GENERAL LAYOUT FOR BOREHOLE

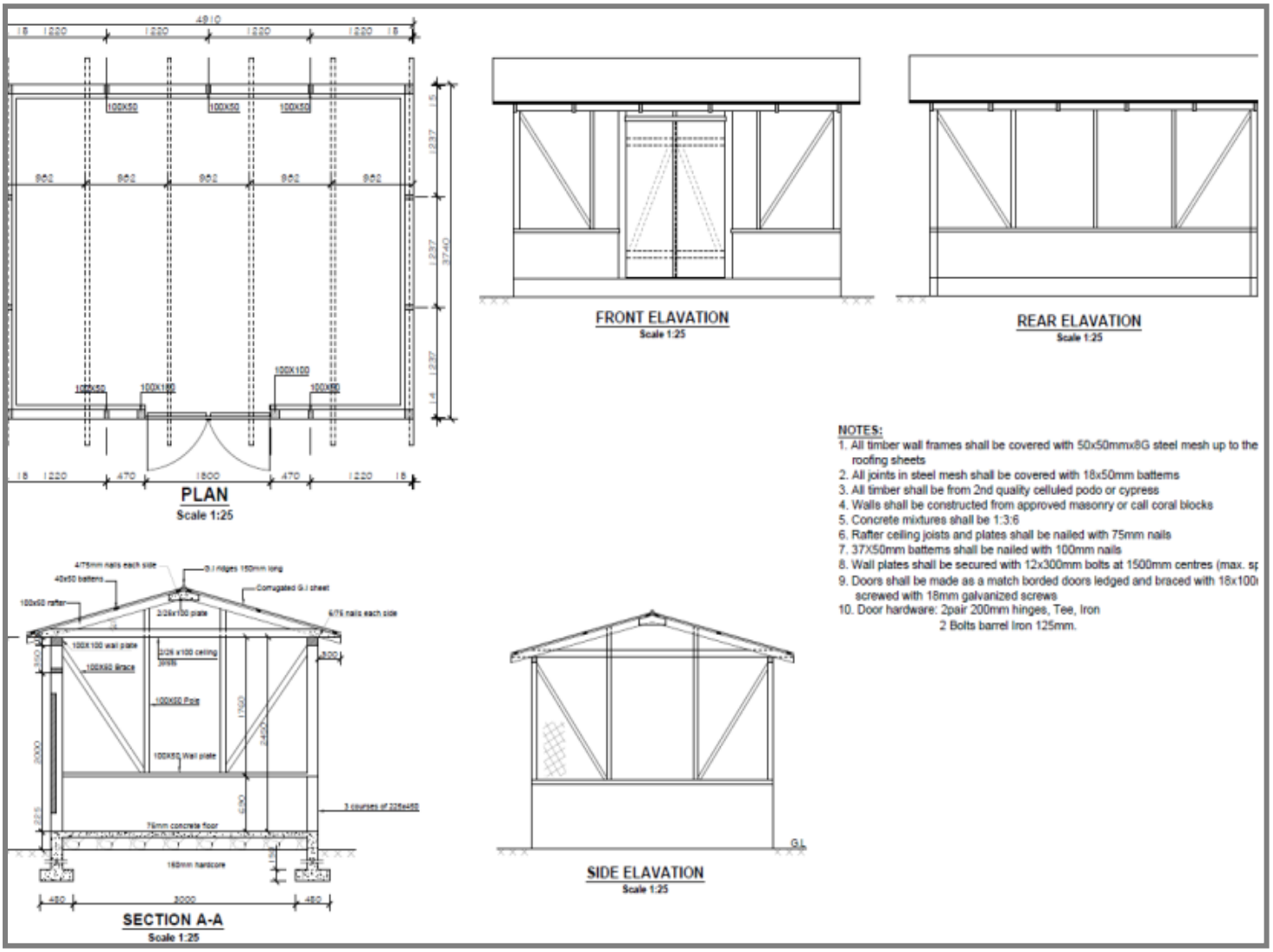
Drawing No. 1 Tentative Log for Borehole



GENERAL LAYOUT OF FENCING



GENERAL LAYOUT OF REVERSE OSMOSIS(RO) PLANT CONTROL/MACHINE ROOM



GENERAL LAYOUT OF REVERSE OSMOSIS PLANT