



NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)

OPEN NATIONAL TENDER

**ESTABLISHMENT OF APPROPRIATE WATER HARVESTING
TECHNOLOGIES IN NAROK AND KAJIADO COUNTIES**

(TENDER RESERVED FOR AGPO-WOMEN FIRMS ONLY)

TENDER REF. NO. NEMA/T/14/2023-2024

ISSUED ON: 7th MAY 2024

CLOSING ON: 21st MAY 2024

TIME: 10.00 AM

INVITATION TO TENDER (ITT)

**PROCURING ENTITY: NATIONAL ENVIRONMENT
MANAGEMENT AUTHORITY (NEMA)**

TENDER DESCRIPTION: ESTABLISHMENT OF APPROPRIATE WATER HARVESTING TECHNOLOGIES IN NAROK AND KAJIADO COUNTIES

1. The National Environment Management Authority (NEMA) invites sealed tenders for the establishment of appropriate water harvesting technologies in Narok and Kajiado Counties in the financial year 2023/2024.
2. Tendering will be conducted under OPEN National tender method using this standardized tender document. Tendering is open to all eligible, qualified and interested Tenderers under AGPO(WOMEN)
3. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours i.e., 0900 to 1500 hours at the address given below.
4. Tender documents should be obtained electronically free of charge.
5. Tender documents should be obtained electronically from the Website www.nema.go.ke or www.tenders.go.ke.
6. All Tenders must be accompanied by a **Tender Securing Declaration**.
7. Completed tenders must be delivered to the address below on or before **21st May 2024 at 10:00AM**. Electronic Tenders **will not** be permitted.
8. Tenders will 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.
9. Late tenders will be rejected.

10. The addresses referred to above are:

A. **Address for obtaining further information on tender documents**

National Environment Management Authority (NEMA)
Popo Road, South C, off Mombasa Road
P.O.BOX: 67839-00200, Nairobi.
020-2101370-ext 179
Procurement@nema.go.ke

B. **Address for Submission of Tenders.**

National Environment Management Authority (NEMA)
P.O.BOX: 67839-00200, Nairobi.
Popo Road, South C, off Mombasa Road

C. **Address for Opening of Tenders.**

National Environment Management Authority (NEMA)
P.O.BOX: 67839-00200, Nairobi.
Popo Road, South C, off Mombasa Road
Main Administration Building (Block A)

Authorized Official

The Director General

National Environment Management Authority
(NEMA)

Signature_____

Date_____

PART 1 - TENDERING PROCEDURES

SECTION I – INSTRUCTIONS TO TENDERERS

A. General

1. Scope of Tender

1.1 In connection with the Invitation to Tender (ITT), specified in the Tender Data Sheet (TDS), the Procuring Entity, issues this Tendering document for the Design, Supply and Installation of Plant and equipment as specified in Section VII, Procuring Entity's Requirements.

2. Definitions

2.1 Throughout this Tender document:

- a) The term “in writing” means communicated in written form (e.g.by mail, e-mail, fax, including if specified in the TDS, distributed or received through the electronic-procurement system used by the Procuring Entity) with proof of receipt;
- b) if the context so requires, “singular” means “plural” and vice versa; and
- c) “Day” means calendar day, unless otherwise specified as “Business Day.”
A Business Day is any day that is an official working day in Kenya. It excludes the Kenya's official public holidays.

3. Fraud and Corruption

3.1 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.

3.2 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.

- 3.3 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.
- 3.4 Tenderers shall permit and shall cause their agents (where declared or not), subcontractors, sub consultants, service providers, suppliers, and their personnel, to permit the Procuring Entity to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, tender submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Procuring Entity.

4. Eligible Tenderers

- 4.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 4.6, 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 Form of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Tendering process and, in the event the JV is awarded the Contract, during contract execution. The maximum number of JV members shall be specified in the TDS. Public Officers of the Procuring Entity and their relatives (i.e. spouse, child, parent, brother or sister and a 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.
- 4.2 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
 - d) Has a relationship with another Tenderer, directly or through common third parties, that puts it in a position to influence the Tender of another Tenderer, or influence the decisions of the Procuring Entity regarding this Tendering process; or
 - e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Plant and Installation Services that are the subject of the Tender; or
 - f) or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Project Manager for the Contract implementation; or
 - g) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the TDS ITT 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
 - h) 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 Tendering 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.
- 4.3 A tenderer shall not be involved in corrupt, coercive, obstructive or fraudulent practice. A tenderer that is proven to have been involved in any of these practices shall be automatically disqualified and would not be awarded a contract.
- 4.4 A firm that is a Tenderer (either individually or as a JV member) shall not participate as a Tenderer or as JV member in more than one Tender except for permitted alternative Tenders. Such participation shall result in the disqualification of all Tenders in which the firm is involved. However, this does not limit the participation of a Tenderer as subcontractor in another Tender or of a firm as a subcontractor in more than one Tender.

- 4.5 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.9. 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.
- 4.6 A Tenderer that has been debarred by the PPRA shall be ineligible to be prequalified for, initially selected for, Tender for, propose for, financially or otherwise, during such period of time as the PPRA shall have determined. The list of debarred firms and individuals is available at PPRA Website www.ppra.go.ke.
- 4.7 Tenderers that are state-owned enterprises or institutions in Kenya may be eligible to compete and be awarded a Contract(s) only if they can establish that they;
- (i) are legally and financially autonomous
 - (ii) operate under commercial law, and
 - (iii) are not under supervision of the Procuring Entity.
- 4.8 Firms and individuals may be ineligible if so indicated in Section V and (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. Where the procurement is implemented across jurisdictional boundaries, then exclusion of a firm or individual on the basis of ITT 4.8 (a) above by any country may be applied to that procurement across other countries involved.
- 4.9 Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, subcontracts and labor) 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”.

- 4.10 Pursuant to the eligibility requirements of ITT 4.10, a tender is considered a foreign tenderer, if it is registered in Kenya, has less than 51 percent ownership by nationals of Kenya and if it does not subcontract foreign contractors more than 10 percent of the contract price. JVs are considered as foreign tenderers if the individual member firms are registered in Kenya have less than 51 percent ownership by nationals of Kenya. The JV shall not subcontract to foreign firms more than 10 percent of the contract price.
- 4.11 The Competition Act 2010 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 Act. JVs will be required to seek for exemption from the Competition Authority of Kenya. 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
- 4.12 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, Plant and equipment for Installation Services

- 5.1 The Plant and equipment for Installation Services to be supplied under the Contract may have their origin in any eligible country.
- 5.2 For purposes of ITT 5.1 above, “origin” means the place where the plant, or component parts thereof are mined, grown, produced or manufactured, and from which the services are provided. Plant components are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that is substantially in its basic characteristics or in purpose or utility from its components.
- 5.3 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.

B. Contents of Tendering Document

6. Sections of Tendering Document

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

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
- v) Section V- Eligible Countries
- vi) Section VI- Fraud and Corruption

PART 2 - Procuring Entity's Requirements

- vii) Section VII-Procuring Entity's Requirements

PART 3 - Conditions of Contract and Contract Forms

- viii) Section VIII- General Conditions of Contract (GCC)
- ix) Section IX- Special Conditions of Contract (SCC)
- x) Section X- Contract Forms

6.2 The Invitation to Tender Notice issued by the Procuring Entity is not part of the Tendering document.

6.3 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the document, responses to requests for clarification, the Minutes of the pre-Tender meeting (if any), or Addenda to the Tendering document in accordance with ITT 10. 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 Tendering document and to furnish with its Tender all information or documentation as is required by the Tendering document.

7. Site Visit

7.1 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine 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 and a pre-arranged pretender visit of the site of the works

- 8.1 The Procuring Entity shall specify in the **TDS** if a pre-tender conference will be held, when and where. The Procuring Entity shall also specify in the **TDS** if a pre-arranged pretender visit of the site of the works 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 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 ITT6.3. Minutes shall not identify the source of the questions asked.
- 8.4 The Procuring Entity shall also promptly publish anonymized (no names) Minutes of the pre-Tender meeting and the pre-arranged pretender visit of the site of the works at the webpage identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre- Tender meeting shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT10 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 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 ITT8.4. 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 ITT6.3, including a description of the inquiry but without identifying its source. If so specified in the **TDS**, the Procuring Entity shall also promptly publish its response at the webpage 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 ITT10.

10. Amendment of Tendering Document

- 1.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tendering document by issuing addenda.
- 1.2 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 ITT6.3. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's webpage in accordance with ITT8.1
- 1.3 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 ITT24.2 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 conductor 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 translation of the relevant passages in 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:

- a) **Form of Tender** prepared in accordance with ITT 14.1;
- b) **Price Schedules** completed in accordance with ITT 14 and ITT 19;
- c) **Tender Security** or **Tender Securing Declaration**, in accordance with ITT 22;
- d) **Alternative Tender**, if permissible, in accordance with ITT 15;
- e) **Authorization**: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 23.3;
- f) **Eligibility of Plant and Installation Services**: documentary evidence established in accordance with ITT 16.1 that the Plant and Installation Services offered by the Tenderer in its Tender or in any alternative Tender, if permitted, are eligible;
- g) **Tenderer's Eligibility and Qualifications**: documentary evidence in accordance with ITT 17.1 establishing the Tenderer's eligibility and qualifications to perform the Contract if its Tender is accepted;
- h) **Conformity**: documentary evidence in accordance to ITT18 that the Plant and Installation Services offered by the Tenderer conform to the Tendering document;
- i) **Subcontractors**: list of subcontractors in accordance with ITT18.2; and
- j) Any other document required in the **TDS**.

13.2 In addition to the requirements under ITT 13.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered in to by all members. Alternatively, a Form 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 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 Price Schedules

14.1 The Form of Tender and Price Schedules shall be prepared, using the relevant forms furnished in Section IV, Tendering Forms. The forms must be completed as instructed in each form without any alterations to the text, and no substitutes

shall be accepted except as provided under ITT 21.3. 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 alternatives to the Time Schedule are explicitly invited, a statement to that effect will be included in the **TDS**, and the method of evaluating different time schedules will be described in Section III, Evaluation and Qualification Criteria.

15.3 Except as provided under ITT 15.4 below, Tenderers wishing to offer technical alternatives to the Procuring Entity's requirements as described in the Tendering document must also provide: (i) a price at which they are prepared to offer a Plant meeting the Procuring Entity's requirements; and (ii) all information necessary for a complete evaluation of the alternatives by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, and proposed installation methodology and other relevant details. 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.

15.4 When Tenderers are invited in the TDS to submit alternative technical solutions for specified parts of the facilities, such parts will be identified in the TDS, as will the method for their evaluation, and described in Section VII, Procuring Entity's Requirements.

16. Documents Establishing the Eligibility of the Plant and Installation Services

16.1 To establish the eligibility of the Plant and Installation Services in accordance with ITT 5, Tenderers shall complete the country-of-origin declarations in the Price Schedule Forms, included in Section IV, Tendering Forms.

17. Documents Establishing the Eligibility and Qualifications of the Tenderer

17.1 To establish its eligibility and 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 in Section IV, Tendering Forms.

- 17.2 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 supplier or group of suppliers qualifies for a margin of preference. Further the information will enable the Procuring Entity identify any actual or potential conflict of interest in relation to the procurement and/or contract management processes, or a possibility of collusion between tenderers, and thereby help to prevent any corrupt influence in relation to the procurement process or contract management.
- 17.3 The purpose of the information described in ITT 15.1 above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by the Procuring Entity as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.
- 17.4 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 15.1. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.
- 17.5 All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to the Procuring Entity. In submitting the information required pursuant to these requirements, the Tenderer shall warrant that the information submitted is complete, current and accurate as at the date of submission to the Procuring Entity.
- 17.6 If a tenderer fails to submit the information required by these requirements, its tenderer will be rejected. Similarly, if the Procuring Entity is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.

17.7 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.

17.8 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.

18. Documents Establishing the Conformity of the Plant and Installation Services

18.1 The Tenderer shall furnish the information stipulated in Section IV, Tendering Forms in sufficient detail to demonstrate substantial responsiveness of the Tenderers' proposal to the work requirements and the completion time.

18.2 For major items of Plant and Installation Services as listed by the Procuring Entity in Section III, Evaluation and Qualification Criteria, which the Tenderer intends to purchase or subcontract, the Tenderer shall give details of the name and nationality of the proposed Subcontractors, including manufacturers, for each of those items. In addition, the Tenderer shall include in its Tender information establishing compliance with the requirements specified by the Procuring Entity for these items. Quoted rates and prices will be deemed to apply to whichever Subcontractor is appointed, and no adjustment of the rates and prices will be permitted.

18.3 The Tenderer shall be responsible for ensuring that any Subcontractor proposed complies with the requirements of ITT 4, and that any plant, or

services to be provided by the Subcontractor comply with the requirements of ITT 5 and ITT 15.1

19. Tender Prices and Discounts

- 19.1 Unless otherwise specified in the **TDS**, Tenderers shall quote for the entire Plant and Installation Services on a “single responsibility” basis. The total Tender price shall include all the Contractor's obligations mentioned in or to be reasonably inferred from the Tendering document in respect of the design, manufacture, including procurement and subcontracting (if any), delivery, construction, installation and completion of the Plant. This includes all requirements under the Contractor's responsibilities for testing, pre-commissioning and commissioning of the plant and, where so required by the Tendering document, the acquisition of all permits, approvals and licenses, etc.; the operation, maintenance and training services and such other items and services as specified in the Tendering document, all in accordance with the requirements of the General Conditions. Items against which no price is entered by the Tenderer will not be paid for by the Procuring Entity when executed and shall be deemed to be covered by the prices for other items.
- 19.2 Tenderers are required to quote the price for the commercial, contractual and technical obligations outlined in the Tendering document.
- 19.3 Tenderers shall give a breakdown of the prices in the manner and detail called for in the Price Schedules included in Section IV, Tendering Forms.
- 19.4 Depending on the scope of the Contract, the Price Schedules may comprise up to the six (6) schedules listed below. Separate numbered Schedules included in Section IV, Tendering Forms, from those numbered 1 to 4 below, shall be used for each of the elements of the Plant and Installation Services. The total amount from each Schedule corresponding to an element of the Plant and Installation Services shall be summarized in the schedule titled Grand Summary, (Schedule 5), giving the total Tender price (s) to be entered in the Form of Tender. Tenderers shall note that the plant and equipment included in Schedule Nos. 1 and 2 below exclude materials used for civil, building and other construction works. All such materials shall be included and priced under Schedule No.4, Installation Services. The Schedules comprise:

Schedule No.1: Plant (including Mandatory Spare Parts) Supplied from
Abroad

Schedule No.2: Plant (including Mandatory Spare Parts) Supplied from

within Kenya

Schedule No.3: Design Services

Schedule No.4: Installation Services

Schedule No.5: Grand Summary (Schedule Nos.1to4)

Schedule No. 6: Recommended Spare Parts

19.5 In the Schedules, Tenderers shall give the required details and a breakdown of their prices as follows:

- a) Plant to be supplied from a broad (Schedule No.1): The price of the Plant shall be quoted on CIP - named place of destination basis as specified in the TDS, including all taxes payable in Kenya.
- b) Plant manufactured within Kenya (Schedule No.2):
 - i) The price of the plant shall be quoted on an EXW Incoterm basis (such as “ex-works,” “ex- factory,” “ex-warehouse” or “off-the-shelf,” as applicable);
 - ii) Sales tax and all other taxes payable in Kenya on the plant if the contract is awarded to the Tenderer; and
 - iii) The total price for the item.
- c) Design Services (Schedule No.3);
- d) Installation Services shall be quoted separately (Schedule No.4) and shall include rates or prices for local transportation to named place of final destination as specified in the TDS, insurance and other services incidental to delivery of the plant, all labor, contractor's equipment, temporary works, materials, consumables and all matters and things of whatsoever nature, including operations and maintenance services, the provision of operations and maintenance manuals, training, etc., where identified in the Tendering document, as necessary for the proper execution of the installation and other services, including all taxes, duties, levies and charges payable in Kenya as of twenty-eight (28) days prior to the deadline for submission of Tenders;
- e) Recommended spare parts shall be quoted separately (Schedule 6) as specified in either subparagraph (a) or (b) above in accordance with the origin of the spare parts.

- 19.6 The terms EXW, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce, as specified in the **TDS**.
- 19.7 The prices shall be either fixed or adjustable as specified in the **TDS**.
- 19.8 In the case of Fixed Price, prices quoted by the Tenderer shall be fixed during the Tenderer's performance of the contract and not subject to variation on any account. A Tender submitted with an adjustable price quotation will be treated as non-responsive and rejected.
- 19.9 In the case of Adjustable Price, prices quoted by the Tenderer shall be subject to adjustment during performance of the contract to reflect changes in the cost elements such as labor, material, transport and contractor's equipment in accordance with the procedures specified in the corresponding Appendix to the Contract Agreement. A Tender submitted with a fixed price quotation will not be rejected, but the price adjustment will be treated as zero. Tenderers are required to indicate the source of labor and material indices in the corresponding Form in Section IV, Tendering Forms.
- 19.10 If so indicated in ITT 1.1, Tenders are being invited for individual lots (contracts) or for any combination of lots (packages). Tenderers wishing to offer any price reduction (discount) for the award of more than one Contract shall specify in their Form of Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package, and the manner in which the price reductions will apply.
- 19.11 Tenderers wishing to offer any unconditional discount shall specify in their Form of Tender the offered discounts and the manner in which price discounts will apply.

20. Currencies of Tender and Payment

- 19.1 The currency(ies) of the Tender and the currency(ies) of payments shall be the same. The Tenderer shall quote in the currency of Kenya the portion of the Tender price that corresponds to expenditures incurred in the currency of Kenya, unless otherwise specified in the TDS.
- 19.2 The Tenderer may express the Tender price in any currency. If the Tenderer wishes to be paid in a combination of amounts in different currencies, it may quote its price accordingly but shall use no more than three foreign currencies in addition to the currency of Kenya.

21. Period of Validity of Tenders

- 21.1 Tenders shall remain valid for the Tender Validity period specified in the TDS. The Tender Validity period starts from the Tender submission deadline (as prescribed by the Procuring Entity in accordance with ITT 23.1). A Tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.
- 21.2 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 20, the Tenderer granting the request shall also extend the Tender Security for twenty-eight (28) 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 19.3.
- 21.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial Tender validity period, the Contract price shall be determined as follows:
- a) In the case of **fixed price** contracts, the Contract price shall be the Tender price adjusted by the factor or factors specified **in the TDS**;
 - b) In the case of **adjustable price** contracts, no adjustment shall be made; or
 - c) in any case, Tender evaluation shall be based on the Tender price without taking into consideration the applicable correction from those indicated above.

22. Tender Security

- 22.1 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**.
- 22.2 A Tender-Securing Declaration shall use the form included in Section IV Tendering Forms.
- 22.3 If a Tender Security is specified pursuant to ITT 20.1, the Tender security shall be a demand guarantee in any of the following forms at the Tenderer's option:
- a) cash;

- b) a bank guarantee;
- c) a guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority listed by the Authority; or
- d) a guarantee issued by a financial institution approved and licensed by the Central Bank of Kenya,

22.4 If a Tender Security or a Tender-Securing Declaration is specified pursuant to ITT 20.1, any Tender not accompanied by a substantially responsive Tender Security or Tender-Securing Declaration shall be rejected by the Procuring Entity as non-responsive.

22.5 If a Tender Security is specified pursuant to ITT 20.1, the Tender Security of unsuccessful Tenderers shall be returned as promptly as possible upon the successful Tenderer's furnishing of the Performance Security pursuant to ITT 47.

22.6 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.

22.7 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
- b) If the successful Tenderer fails to:
 - i. Sign the Contract in accordance with ITT 47; or
 - ii. Furnish a performance security in accordance with ITT 48.

22.8 Where the Tender-Securing Declaration is executed the Procuring Entity will recommend to the PPRA to debar the Tenderer from participating in public procurement as provided in the law.

22.9 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 Form of intent referred to in ITT 4.1 and ITT 11.2.

23. Format and Signing of Tender

23.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 11 and clearly mark it "Original." Alternative Tenders, if permitted in accordance with ITT 13, shall be clearly marked "Alternative". In addition, the Tenderer shall submit copies of the Tender, in the number specified

in the TDS and clearly mark them "Copy." In the event of any discrepancy between the original and the copies, the original shall prevail.

23.2 Tenderers shall mark as "CONFIDENTIAL" information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets or commercial or financially sensitive information.

23.3 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.

23.4 In the case that the Tenderer is a JV, the Tender shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

23.5 Any interlineations, 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

24. Submission, Sealing and Marking of Tenders

24.1 The Tenderer shall deliver the Tender in a single, sealed envelope (one (1) envelope process). The Tenderer shall place the following separate, sealed envelopes:

Inner Envelopes:

- a) In an envelope marked "ORIGINAL", all documents comprising the Tender, as described in ITT11; and
- b) In an envelope marked "COPIES", all required copies of the Tender; and
- c) If alternative Tenders are permitted in accordance with ITT 13, and if relevant:
 - i. In an envelope marked "ORIGINAL-ALTERNATIVE TENDER" the alternative Tender; and
 - ii. In the envelope marked "COPIES – ALTERNATIVE TENDER" all required copies of the alternative Tender.

The inner envelopes shall:

- a) Bear the name and address of the Tenderer;
- b) Be addressed to the Procuring Entity in accordance with ITT 23.1;
- c) Bear the specific identification of this Tendering process indicated in accordance with ITT 1.1; and
- d) Bear a warning not to open before the time and date for Tender opening.

The outer envelope (s) in which the inner envelopes are enclosed shall:

- a) Be addressed to the Procuring Entity in accordance with ITT 23.1;
- b) Bear the specific identification of this Tendering process indicated in accordance with ITT 1.1; and
- c) Bear a warning not to open before the time and date for Tender opening.

24.2 If all envelopes are 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.

25. Deadline for Submission of Tenders

25.1 Tenders must be received by the Procuring Entity at the address and no later than the date and time indicated 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.

25.2 The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders by amending the Tendering document in accordance with ITT8, 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.

26. Late Tenders

26.1 The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of Tenders, in accordance with ITT 23. 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.

27. Withdrawal, Substitution, and Modification of Tenders

27.1 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 21.3, (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 21 and ITT 22 (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 23.

27.2 Tenders requested to be withdrawn in accordance with ITT25.1 shall be returned unopened to the Tenderers.

27.3 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.

28. Tender Opening

28.1 Except as in the cases specified in ITT24 and ITT25.2, the Procuring Entity shall publicly open and read out in accordance with ITT26.5 all Tenders received by the deadline at the date, time and place specified in the TDS in the presence of Tenderers' designated representatives and anyone who choose to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 23.1, shall be as specified in the TDS.

28.2 First, the written notice of withdrawal in the envelopes marked "Withdrawal" shall be opened and read out and the envelope 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.

28.3 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.

28.4 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.

- 28.5 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Tenderer and the Tender Price(s), including any discounts and alternative Tenders, and indicating whether there is a modification; 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.
- 28.6 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further. The Form of Tender and the Price Schedules are to be initialed by representatives of the Procuring Entity attending Tender opening in the manner specified in the TDS.
- 28.7 The Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 24.1).
- 28.8 The Procuring Entity shall prepare a record 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 if applicable, including any discounts;
 - c) Any alternative Tenders; and
 - d) The presence or absence of a Tender Security or a Tender-Securing Declaration.
 - e) Number of pages for each tender
- 28.9 The Tenderers' representatives who are present shall be requested to sign the record. The omission of a Tenderer's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Tenderers.

E. Evaluation and Comparison of Tenders

29. Confidentiality

- 29.1 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 Tendering process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 42.
- 29.2 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.

29.3 Notwithstanding ITT 27.2, from the time of Tender opening to the time of Contract Award, if any Tenderer wishes to contact the Procuring Entity on any matter related to the Tendering process, it should do so in writing.

30. Clarification of Tenders

30.1 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. 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 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 ITT32.

30.2 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.

31. Deviations, Reservations, and Omissions

31.1 During the evaluation of Tenders, the following definitions apply:

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

32. Determination of Responsiveness

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

32.2 A substantially responsive Tender is one that meets the requirements of the Tendering document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

- a) If accepted, would:
 - i. Affect in any substantial way the scope, quality, or performance of the Plant and Installation Services specified in the Contract; or

ii. Limit in any substantial way, in consistent with the Tendering document, the Procuring Entity's rights or the Tenderer's obligations under the proposed Contract; or

b) if rectified, would unfairly affect the competitive position of other Tenderers presenting substantially responsive Tenders.

32.3 The Procuring Entity shall examine the technical aspects of the Tender in particular, to confirm that all requirements of Section VII, Procuring Entity's Requirements have been met without any material deviation, reservation, or omission.

32.4 If a Tender is not substantially responsive to the requirements of the Tendering 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.

33. Non-material Non-conformities

33.1 Provided that a Tender is substantially responsive, the Procuring Entity may waive any nonconformity in the Tender.

33.2 Provided that a Tender is substantially responsive, the Procuring Entity may request that the Tenderer submit the necessary information or documentation, within a reasonable period of time, to rectify 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.

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

34. Correction of Arithmetical Errors

34.1 Provided that the tender is substantially responsive, the Procuring Entity shall correct arithmetical errors on the following basis:

i) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Procuring Entity there is an obvious misplacement of the decimal point in

the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;

- ii) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- iii) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

34.2 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. The method of determining the error as a major deviation shall be specified in the TDS.

34.3 Corrected tender prices shall not be used in the evaluation of tenders, comparison of tender prices.

34.4 The Procuring Entity shall calculate the difference between the corrected price and tender price and work out the percentage difference, which will be plus or minus tender price as the case may be; [i.e. (corrected tender price– tender price)/ tender price X100]. This percentage difference between corrected tender price and tender price may be used to determine if the error so detected is considered a major deviation that affects the substance of the tender.

34.5 On award of contract, all payment valuation certificates, variation orders on omissions and additions valued based on rates in the Bill of Quantities will be adjusted by such a percentage specified in ITT 31.4 to ensure contractor is not paid less or more relative to the contract price which would be the tender price.

35. Conversion to Single Currency

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

36. Margin of Preference

36.1 A margin of preference may be allowed on locally manufactured goods (plant and equipment) only when the contract is open to international tendering, where the tender is likely to attract foreign goods and where the contract exceeds the threshold specified in the Regulations.

36.2 A margin of preference shall not be allowed unless it is specified so in the TDS.

36.3 Contracts procured on basis of international tendering and competition shall not be subject to reservations exclusive/ specific groups under women, youth and persons living with disability.

36.4 Where it is intended to reserve a contract to a specific group of businesses (these groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be), and who are appropriately registered as such by a competent authority, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses or firms belonging to the specified group are eligible to tender. Tender shall be reserved to only one group. If not so stated in the Tender documents, the invitation to tender will be open to all interested tenderers.

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. This is the Tender of the Tenderer that meets the qualification criteria and that has been determined to be:

- a) Most responsive to the Tendering document; and
- b) The lowest evaluated cost.

37.2 **Technical Evaluation.** The Procuring Entity will carry out a detailed technical evaluation of the Tenders not previously rejected to determine whether the technical aspects are in compliance with the Tendering document. The Tender that does not meet minimum acceptable standards of completeness, consistency and detail, and the specified minimum (or maximum, as the case may be) requirements for specified functional guarantees, will be rejected for non-responsiveness. In order to reach its determination, the Procuring Entity will examine and compare the technical aspects of the Tenders on the basis of the information supplied by the Tenderers, taking into account the following:

- a) Overall completeness and compliance with the Procuring Entity's Requirements; conformity of the Plant and Installation Services offered with specified performance criteria, including conformity with the specified minimum (or maximum, as the case may be) requirement corresponding to each functional guarantee, as indicated in the Specification and in Section III, Evaluation and Qualification Criteria; suitability of the Plant and Installation Services offered in relation to the environmental and climatic conditions prevailing at the site; and quality,

function and operation of any process control concept included in the Tender;

- b) type, quantity and long-term availability of mandatory and recommended spare parts and maintenance services; and
- c) other relevant factors, if any, listed in Section III, Evaluation and Qualification Criteria.

37.3 Where alternative technical solutions have been allowed in accordance with ITT 13, and offered by the Tenderer, the Procuring Entity will make a similar evaluation of the alternatives. Where alternatives have not been allowed but have been offered, they shall be ignored.

37.4 **Economic Evaluation.** To evaluate a Tender, the Procuring Entity shall consider the following:

- a) the Tender price, excluding provisional sums and the provision, if any, for contingencies in the Price Schedules;
- b) price adjustment due to discounts offered in accordance with ITT 17.11;
- c) price adjustment due to quantifiable non material non-conformities in accordance with ITT 31.3;
- d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITT 33; and
- e) the evaluation factors specified in the TDS and in Section III, Evaluation and Qualification Criteria.

37.5 If price adjustment is allowed in accordance with ITT 17.7, 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 taken into account in Tender evaluation.

37.6 In the case of multiple contracts or lots, Tenderers are allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) and for 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 35.4 to determine the Tender that has the lowest evaluated cost.

39. Abnormally Low Tenders and Abnormally High 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 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 correlation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tendering 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 deliver the contract for the offered tender price, the Procuring Entity shall reject the Tender.
- 39.4 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.
- 39.5 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:
- I. If the tender price is abnormally high based on wrong estimated cost of the contract, the Procuring Entity may accept or not accept the tender depending on the Procuring Entity's budget considerations.
 - II. If specifications, scope of work and/or conditions of contract are contributory to the abnormally high tender prices, the Procuring Entity shall reject all tenders and may retender for the contract based on revised estimates, specifications, scope of work and conditions of contract, as the case may be.
- 39.6 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.

40. Unbalanced or Front-Loaded Tenders

1. If the Tender that is evaluated as the lowest evaluated cost is, in the Procuring Entity's opinion, seriously unbalanced 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 Tendering document.
2. After the evaluation of the information and detailed price analyses presented by the Tenderer, the Procuring Entity may:
 - a) Accept the Tender; or
 - b) If appropriate, require that the total amount of the Performance Security be increased, at the expense of the Tenderer, to a level not exceeding twenty percent (10%) of the Contract Price; or
 - c) Reject the Tender.

41. Eligibility and Qualification of the Tenderer

- 41.1 The Procuring Entity shall determine to its satisfaction whether the Tenderer that is selected as having submitted the lowest evaluated cost and substantially responsive Tender is eligible and meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.
- 41.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 15.1. 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 Tendering document) or any other firm (s) different from the Tenderer.
- 41.3 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 cost to make a similar determination of that Tenderer's qualifications to perform satisfactorily.

41.4 The capabilities of the manufacturers and subcontractors proposed in its Tender to be used by the Tenderer with the Lowest Evaluated Tender for identified major items of supply or services will also be evaluated for acceptability in accordance with Section III, Evaluation and Qualification Criteria. Their participation should be confirmed with a Form of intent between the parties, as needed. Should a manufacturer or subcontractor be determined to be unacceptable, the Tender will not be rejected, but the Tenderer will be required to substitute an acceptable manufacturer or subcontractor without any change to the Tender price. Prior to signing the Contract, The corresponding Appendix to the Contract Agreement shall be completed, listing the approved manufacturers or subcontractors for each item concerned.

42. Procuring Entity's right to Accept Any Tender and to Reject Any or All Tenders.

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

F. Award of Contract

43. Award Criteria

43.1 Subject to ITT 40, the Procuring Entity shall award the Contract to the successful Tenderer. This is the Tenderer whose Tender has been determined to be the Lowest Evaluated Tender. This is the Tender of the Tenderer that meets the qualification criteria and whose Tender has been determined to be:

- a) Substantially responsive to the Tendering Document; and
- b) The lowest evaluated cost

44. Notice of Intention to Enter into a Contract/ Notification of Award

44.1 When a Standstill Period applies, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Award the Contract to the successful Tenderer. The Notification of Intention to Award 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 Form 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.

45. Standstill Period

- 45.1 The Contract shall not be signed earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply.
- 45.2 Where a Standstill Period applies, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter in to a Contract with the successful Tenderer.

46. Debriefing by the Procuring Entity

- 46.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 43, an unsuccessful tenderer may make a written request to the Procuring Entity for a debriefing on specific issues or concerns regarding their tender. The Procuring Entity shall provide the debriefing within five days of receipt of the request.
- 46.2 Debriefings of unsuccessful Tenderers may be done in writing or verbally. The Tenderer shall bear its own costs of attending such a debriefing meeting.

47. Letter of Award

- 47.1 Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period specified in ITT 43.1, upon addressing a complaint that has been filed within the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

48. Signing of Contract

- 48.1 Upon the expiry of the fourteen days of the Notification of Intention to enter into contract and upon the parties meeting their respective statutory requirements, the Procuring Entity shall send the successful Tenderer the Contract Agreement.
- 48.2 Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.

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

48.4 Notwithstanding ITT 46.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Procuring Entity, to the country of the Procuring Entity, or to the use of the Plant and Installation Services to be supplied, where such export restrictions arise from trade regulations from a country supplying those Plant and Installation Services, the Tenderer shall not be bound by its Tender, always provided, however, that the Tenderer can demonstrate to the satisfaction of the Procuring Entity that signing of the Contract Agreement has not been prevented by any lack of diligence on the part of the Tenderer in completing any formalities, including applying for permits, authorizations and licenses necessary for the export of the Plant and Installation Services under the terms of the Contract.

49. Performance Security

49.1 Within twenty-one (21) days of the receipt of the Form of Acceptance from the Procuring Entity, the successful Tenderer shall furnish the Performance Security in accordance with the General Conditions GCC 13.3, subject to ITT 38, using for that purpose the Performance Security Form included in Section X, Contract Forms, or another form acceptable to the Procuring Entity. If the Performance Security furnished by the successful Tenderer is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Tenderer to be acceptable to the Procuring Entity. A foreign institution providing a bond shall have a correspondent financial institution located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent financial institution is not required.

49.2 Failure of the successful Tenderer to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the Tenderer offering the next Best Evaluated Tender.

50. Publication of Procurement Contract

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

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

51. Appointment of Adjudicator

51.1 The Procuring Entity proposes the person named in the TDS to be appointed as Adjudicator under the Contract, at the hourly fee specified in the TDS, plus reimbursable expenses. If the Tenderer disagrees with this proposal, the Tenderer should so state in his Tender. 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 Special Conditions of Contract (SCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.

52. Procurement Related Complaint and Administrative Review

52.1 The procedures for making a Procurement-related Complaint are as specified in the TDS.

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

SECTION II - TENDER DATA SHEET

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

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
A. General	
ITT 1.1	<p>The reference number of the Invitation to Tender (ITT) is: NEMA/14/2023-2024</p> <p>The Procuring Entity is: NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY</p> <p>The name of the ITT is: Establishment of appropriate Water Harvesting Technologies in Narok and Kajiado Counties</p> <p>The number and identification of lots (contracts) comprising this ITT is: ONE CONTRACT.RESERVED FOR WOMEN FIRMS</p>
ITT 2.1	<p>The name of the Project is: Establishment of appropriate Water Harvesting Technologies in Narok and Kajiado Counties</p>
	<p>Electronic – Procurement System shall NOT BE USED</p> <p>The Procuring Entity shall use the following electronic-procurement system to manage this Tendering process: NOT APPLICABLE</p>
ITT 4.1	Maximum number of members in the Joint Venture (JV) shall be: N/A
B. Tendering Document	
ITT 8.1	There will be no mandatory pre-bid site visit . However, 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 in to a contract for the services. The costs of visiting the Site shall be at the tenderer's own expense.

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 8.2	The questions in writing, to reach the Procuring Entity not later than 14th 2024 at 4:00 PM
ITT 9.1	The Procuring Entity shall publish its response at the website www.nema.go.ke and/or www.tenders.go.ke
C. Preparation of Tenders	
ITT 13.1 (j)	The Tenderer shall submit the following additional documents in its Tender: As Indicated in The Evaluation Criteria
ITT 15.1	Alternative Tenders SHALL NOT BE considered.
ITT 15.2	Alternatives to the Time Schedule SHALL NOT BE permitted.
ITT 15.4	Alternative technical solutions shall be permitted for the following parts of the Plant and Installation Services: N/A
ITT 19.1	Tenderers shall quote for the following components or services on a single responsibility basis: ESTABLISHMENT OF APPROPRIATE WATER HARVESTING TECHNOLOGIES IN NAROK AND KAJIADO COUNTIES.
ITT 19.5 (a) and (d)	<p>1st Place of destination:</p> <p>1.OLTANKI PRIMARY SCHOOL-SUSWA</p> <p>2. MOSIRO BOARDING PRIMARY SCHOOL – MOSIRO</p> <p>ALL IN NAROK COUNTY</p> <p>2nd Place of destination:</p> <p>1.KILUANI BOYS HIGH SCHOOL-MATAPATO (NAMANGA),</p> <p>2.NASERIAN PRIMARY SCHOOL-MAGADI</p> <p>3.OL DUANG'ORO COMPREHENSIVE MIXED SCHOOL-EWASO</p> <p>KEDONG</p> <p>ALL IN KAJIADO COUNTY</p>

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 19.6	The Incoterms edition is: N/A
ITT 19.7	The prices quoted by the Tenderer SHALL NOT BE subject to adjustment during the performance of the Contract.
ITT 20.1	The Tenderer IS required to quote in Kenya shillings.
ITT 21.1	The Tender validity period shall be One Hundred and Nineteen (119) days.
ITT 21.3 (a)	The Tender price adjustment SHALL NOT be allowed.
ITT 22.1	A Tender Security SHALL BE required N/A A Tender-Securing Declaration SHALL BE required.
ITT 23.1	In addition to the original tender , the number of copies is: ONE .
ITT 23.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: A Written Power of Attorney Duly Witnessed by a Commissioner of Oaths.
D. Submission and Opening of Tenders	
ITT 25.1	<p>For <u>Tender submission purposes</u> only, the Procuring Entity's address is:</p> <p>Director General, National Environment Management Authority, P.O.BOX: 67839-00200, Nairobi. Popo Road, South C, off Mombasa Road Tender Box</p> <p>or</p> <p>Principal Supply Chain Management Office and ensure the provided tender submission register is signed.</p> <p>The deadline for Tender submission is: DATE: 21st May, 2024 TIME: 10:00 AM East African Time</p> <p>Tenderers SHALL NOT have the option of submitting their Tenders electronically.</p>

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 28.1	<p>The Tender opening shall take place at:</p> <p>Physical Address: Popo Road, South C, off Mombasa Road; Main Administration Building (Block A)</p> <p>DATE: 21st May, 2024</p> <p>TIME: 11:00 AM East African Time</p>
ITT 28.6	<p>The Form of Tender and priced Activity Schedule shall be initialed by At Least Three (3) representatives of the Procuring Entity conducting Tender opening as follows;</p> <ul style="list-style-type: none"> i) The Name of The Tenderer and Whether There Is a Withdrawal, Substitution, Or Modification ii) The Tender Price Including Any Discounts iii) The Presence or Absence of a Tender Security iv) Number Of Pages for Each Tender
E. Evaluation, and Comparison of Tenders	
ITT 34.2	<p>The error shall be determined as a major deviation if it is more than Not Applicable.</p> <p>No Arithmetic Errors Shall Be Accepted.</p>
ITT 36.2	A margin of preference <u>SHALL NOT BE</u> allowed.
ITT 37.4 (e)	<p>The adjustments shall be determined using the following criteria, from amongst those set out in Section III, Evaluation and Qualification Criteria:</p> <ul style="list-style-type: none"> (a) Deviation in Time for Completion: No. (b) Life cycle costs: the projected operating and maintenance costs during the life of the goods or equipment: No (c) Functional Guarantees of the Facilities: No (d) Work, services, facilities, etc., to be provided by the Procuring Entity: No
ITT 37.6	Tenderers shall <u>NOT BE ALLOWED</u> to quote separate prices for different lots (contracts) and the methodology to determine the lowest tenderer is specified in Section III, Evaluation and Qualification

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	Criteria.
ITT 45 Standstill Period	The Standstill Period is FOURTEEN (14) Days after the date the Procuring Entity has transmitted to all Tenderers that submitted a Tender, the Notification of its Intention to Award the Contract to the successful Tenderer.
ITT 51	N/A
ITT 52.1	<p>The procedures for making a Procurement-related Complaint are detailed in the “Notice of Intention to Award the Contract” herein and are also available from the PPRA website info@ppra.go.ke or complaints@ppra.go.ke.</p> <p>DIRECTOR GENERAL</p> <p>NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY</p> <p>Email address: procurement@nema.go.ke</p> <p>In summary, a Procurement-related Complaint may challenge any of the following:</p> <ol style="list-style-type: none"> 1. the terms of the Tendering Documents; and 2. the Procuring Entity’s decision to award the contract.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1. General Provision

- 1.1 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 turn over or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.
 - b) Value of single contract -Exchange rate prevailing on the date of the contract signature.

c) Exchange rates shall be taken from the publicly available source identified in the ITT 33.1. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.

1.2 This section contains the criteria that the Procuring Entity 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 Report for Goods and Works for evaluating Tenders.

1.3 Evaluation and contract award Criteria

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

2. STAGE I: 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 (including requirements in the qualification forms, tenderer's eligibility- confidential business questionnaire) 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 Requirements", including checking for tenders with unacceptable errors, abnormally low tenders, and abnormally high tenders. The Standard Tender Evaluation Report for Goods and Works provides clear guidelines on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will not be considered further.

3. Evaluation

The following criteria will be used to determine preliminary responsiveness of the bidders.

PRELIMINARY REQUIREMENTS (MANDATORY)

No	Mandatory eligibility criteria by the tenderer
1.	Tenderer shall chronologically serialize all pages of the tender documents submitted including the attachments. Where the pages are printed both sides, each side should be serialized chronologically.

No	Mandatory eligibility criteria by the tenderer
2.	The document should have a table of content with accurate referencing.
3.	The bidder shall provide one (1) original and one (1) copy of the filled bid document
4.	Duly filled, signed and stamped Confidential Business Questionnaire in the prescribed format.
5.	Attach copy of business registration certificate/certificate of incorporation
6.	Attach copy of CR12 Certificate from Business Registration Services (BRS) valid for the last 6 months before the date of tender opening.
7.	Duly completed, signed and stamped Form of Tender (as per the prescribed format attached in section IV of this document)
8.	KRA PIN certificate with VAT obligation or Tax Exemption Certificate. (This will be authenticated in the KRA PIN Checker)
9.	Valid Tax compliance certificate (This will be authenticated in the KRA TCC Checker or Tax Exemption Checker)
10.	Tender security -N/A Bidders shall be required to sign tender securing declaration form
11.	Tender is valid for 119 days. Indicate as required in the form of tender
12.	Submit a duly filled and signed Form SD1
13.	Submit a duly filled and signed Form SD2
14.	Duly signed declaration and commitment to the code of ethics
15.	Licensed qualified water resource contractor (By Ministry of water, irrigation and sanitation) - water supply, sewage, irrigation and electromechanical category any class.
16.	Registered Contractor with NCA 7 for Water Works and with valid license.
17.	Attach valid AGPO certificate, Women category
18.	Attach audited financial accounts for Two Years.(2021 and 2022) signed by and Accountant with a valid practicing license from ICPAK.
19.	Provide Power of Attorney duly executed by commissioner of Oaths.The tender must be signed by the person with power of Attorney.

Tenderers who do not pass the mandatory eligibility criteria will be considered non-responsive at this stage and will thus not be considered further.

STAGE II: TECHNICAL EVALUATION

TECHNICAL INFORMATION TO BE SUPPLIED BY THE TENDERER

Bidders will be expected to meet **ALL** the technical requirements as per the technical specifications provided in this tender document for establishment of appropriate water harvesting technologies in Narok and Kajiado counties.

Relevant documents supporting the specifications should be provided.

T1: Contractor's Representative and Key Personnel, which are specified as, below

No.	Position	Number Required	Minimum Qualifications	In Similar Works Experience (years)	Compliant (YES OR NO)
1.	Contractor's Representative / Site Agent	1	Degree/Diploma in Civil or Water Engineering and Registered with EBK/ KETRB	Must have supervised at least two water projects involving construction of Masonry Tanks	

Submit certified copies of academic and professional certificates(by commissioner of Oaths/Issuing institution) and Curriculum Vitae of proposed personnel.

The Bidder shall provide further details of proposed personnel using the relevant Forms in the tender document.

T2: Contractor's experience listed on the table below; -

No.	DESCRIPTION	Compliant (YES OR NO)
T2.	The bidder should have successfully completed three water projects for National or County Governments, their agencies or registered organizations in the last five years. (attach certified copies(by commissioner of oaths) completion certificates clearly showing the clients and their contacts, the description of works, project amount and location of project)	
	Each of the projects above should have a value equal or above 5 Million shillings.	
	Two (2) of the above projects should involve the construction of masonry tanks.	

Financial ratios.The required ratios are follows:

- ◆ **Current Ratio at least 1.2:1 for each year**
- ◆ **Quick Ratio at least 1.2:1 for each year**

Bidders who meet the technical criteria will progress to stage three on financial evaluation.

STAGE III: FINANCIAL EVALUATION

Financial situation will be assessed in accordance with **Form FIN – 3.1, Form FIN – 3.2 and Form FIN – 3.3**. Tenderers who will be determined financially incapable of meeting the financial obligations of the contract will not be considered further. Tenderers who will be financially responsive will be ranked to determine the lowest evaluated bidder.

- 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 price 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.

DUE DILIGENCE:

NEMA may conduct a due diligence after Tender evaluation process and before award of the contract to confirm and verify the qualifications of the lowest evaluated most responsive tenderer to be awarded the contract.

This may involve contacting listed clients and references and database searches to verify information given.

RECOMMENDATION FOR AWARD

The lowest evaluated bidder shall be recommended for award of contract

SECTION IV - TENDERING FORMS

1. FORM OF TENDER

(Amended and issued pursuant to PPRA CIRCULAR No. 02/2022)

INSTRUCTIONS TO TENDERERS

- i. All italicized text is to help the Tenderer in preparing this form.*
- ii. The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address. Tenderers are reminded that this is a mandatory requirement.*
- iii. Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION FORMS OF THE TENDERER as listed under (s) below.*

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

Tender Name and Identification:*[insert identification]*

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

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

- a) **No reservations:** We have examined and have no reservations to the Tendering document, including Addenda issued in accordance with ITT 8;
- b) **Eligibility:** We meet the eligibility requirements and have no conflict of interest in accordance with ITT 4;
- c) **Tender-Securing Declaration:** We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender Securing Declaration or Proposal-Securing Declaration in Kenya in accordance with ITT 4.7;
- d) **Conformity:** We offer to provide design, supply and installation services in conformity with the Tendering document of the following..... *[insert a brief description of the Plant, Design, Supply and Installation Services];*
- e) **Tender Price:** The total price of our Tender, excluding any discounts offered in item (f) below is: *[Insert one of the options below as appropriate]*

Option1, in case of one lot: Total price is..... *[insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies];*

Or

Option 2, in case of multiple lots: (a) Total price of each lot..... *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies];* and (b) Total price of all lots (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies];*

f) **Discounts:** The discounts offered and the methodology for their application are:

i) The discounts offered are..... *[Specify in detail each discount offered.]*

ii) 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];*

g) **Tender Validity Period:** Our Tender shall be valid for the period specified in TDS 19.1 (as amended if applicable) from the date fixed for the Tender submission deadline specified in TDS 23.1 (as amended if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

h) **Performance Security:** If our Tender is accepted; we commit to obtain a Performance Security in accordance with the Tendering document;

i) **One Tender Per Tenderer:** We are not submitting any other Tender (s) as an individual Tenderer, and we are not participating in any other Tender (s) as a Joint Venture member, and meet the requirements of ITT 4.3, other than alternative Tenders submitted in accordance with ITT 13;

j) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, consultants, 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. Further, we are not ineligible under the Kenya laws or official regulations or pursuant to a decision of the United Nations Security Council;

k) **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 4.6];

- l) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Tendering process or execution of the Contract: [insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]

Name of Recipient	Address	Reason	Amount

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

- m) **Binding Contract:** We understand that this Tender, together with your written acceptance thereof included in your Form of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- n) **Not Bound to Accept:** We understand that you are not bound to accept the lowest evaluated cost Tender, the Best Evaluated Tender or any other Tender that you may receive; and
- o) **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.
- p) **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.
- q) **Code of Ethical Conduct:** We undertake to adhere by the Code of Ethical Conduct for Persons Participating in Public Procurement and Asset Disposal Activities in Kenya, copy available from www.pppra.go.ke during the procurement process and the execution of any resulting contract.
- r) **Beneficial Ownership Information:** We commit to provide to the procuring

entity the Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form upon receipt of notification of intention to enter into a contract in the event we are the successful tenderer in this subject procurement proceeding.

s) We, the Tenderer, have duly completed, signed and stamped the following Forms as part of our Tender:

- (i) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.
- (ii) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.
- (iii) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
- (iv) Declaration and commitment to the code of ethics for Persons Participating in Public Procurement and Asset Disposal Activities in Kenya.

t) 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]*.

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

General and Specific Details

b) Sole Proprietor, provide the following details.

Name in full..... Age.....
Nationality.....

Country of Origin.....

Citizenship.....

c) Partnership, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

d) Registered Company, provide the following details.

- Private or public Company
- State the nominal and issued capital of the Company: -
Nominal Kenya Shillings (Equivalent)
Issued Kenya Shillings (Equivalent)

c. 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			

ii) 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		

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

CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the under signed, 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 here by make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of.....*[Name of Tenderer]*
that:

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

- a) prices;
- b) methods, factors or formulas used to calculate prices;
- c) the intention or decision to submit, or not to submit, a tender; or
- d) the submission of a tender which does not meet the specifications of the request for Tenders; except as specifically disclosed pursuant to paragraph (5) (b) above;

7. In addition, there has been no consultation, communication, agreement or arrangement with any competitor regarding the quality, quantity, specifications or delivery particulars of the works or services to which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph (5) (b) above;
8. The terms of the Tender have not been, and will not be, knowingly disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening, or of the awarding of the Contract, whichever comes first, unless otherwise required by law or as specifically disclosed pursuant to paragraph (5) (b) above.

Name.....

Title.....

Date.....

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

SELF DECLARATION FORMS

FORM SD1

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

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

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

.....

(Title)

(Signature)

.....

(Date)

Bidder's 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: -

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

.....

(Title)

.....

(Signature)

(Date)

Bidder'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.....

SCHEDULE OF RATES AND PRICES

No.	Description	Unit	Quantity	Unit price (Kshs)	Total price (Kshs)

Bidders may add rows to capture all items recommended for supply.

Country of Origin Declaration Form

Item	Description	Code	Country

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within Kenya

Item	Description	Qty.	EXW Unit Price ¹	EXW Total Price ¹
		(1)	(2)	(1) x (2)
TOTAL (to Schedule No. 5. Grand Summary)				
Name of Tender _____ Signature _____				
¹ Specify currency in accordance with ITT 18				

Schedule No. 3. Design Services

Item	Description	Qty	Unit Price ¹		Total Price ¹
			Local Currency Portion	Foreign Currency Portion	
		(1)	(2)	(optional)	(1) x (2)
TOTAL (to Schedule No. 5. Grand Summary)					

Name of Tenderer _____ Signature _____

Schedule No. 4. Installation and Other Services

Item	Description	Qty	Unit Price ¹		Total Price ¹	
			Foreign Currency Portion	Local Currency Portion	Foreign	Local
		(1)	(2)	(3)	(1) x (2)	(1) x (3)
TOTAL (to Schedule No. 5. Grand Summary)						

Name of Tenderer _____ Signature _____

¹ Specify currency in accordance with ITT 18

Schedule No. 5. Grand Summary

WATER HARVESTING, STORAGE AND ACCESS INFRASTRUCTURE IN SCHOOLS IN KAJIADO AND NAROK		
Summary Page		
Bill	Description	Amount (KSH)
	Kajiado	
1	Kiluani Boys Scondary School	
2	Naiserian Primary School	
3	Olodungoro Comprehensive School	
	Total for Kajiado County	
	Narok County	
1	Oltanki Primary School	
2	Mosiro Boarding Primary School	
	Total for Narok County	

Personnel

Form PER -1- Proposed Personnel

Tenderers should provide the names of suitably qualified personnel to meet the specified requirements stated in Section III. The data on their experience should be supplied using the Form below for each candidate.

1.	Title of position*
	Name
2.	Title of position*
	Name
3.	Title of position*
	Name
4.	Title of position*
	Name

*As listed in Section III.

Form PER-2

Resume of Proposed Personnel

Name of Tenderer _____

Position		
Personnel information	Name	Date of birth
	Professional qualifications	
Present employment	Name of Procuring Entity	
	Address of Procuring Entity	
	Telephone	Contact (manager / personnel officer)
	Fax	E-mail
	Job title	Years with present Procuring Entity

Summarize professional experience over the last 20 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company/Project/Position/Relevant technical and management experience

Proposed Subcontractors for Major Items of Plant and Installation Services

A list of major items of Plant and Installation Services is provided below.

The following Subcontractors and/or manufacturers are proposed for carrying out the item of the facilities indicated. Tenderers are free to propose more than one for each item

Major Items of Plant and Installation Services	Proposed Subcontractors/Manufacturers	Nationality

Others - Time Schedule

(to be used by Tenderer when alternative Time for Completion is invited in ITT 13.2)

Tenderers Qualification without prequalification

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

Form ELI 1.1

Tenderer Information Sheet

Date:

ITT No.:

1. Tenderer's Legal Name
2. In case of JV, legal name of each party:
3. Tenderer's actual or intended Country of Registration:
4. Tenderer's Year of Registration:
5. Tenderer's Legal Address in Country of Registration:
6. Tenderer's Authorized Representative Information Name: Address: Telephone/Fax numbers: Email Address:

7. Attached are copies of original documents of:

Articles of Incorporation or Registration of firm named in 1, above, in accordance with ITT 4.1 and ITT 4.4. In case of JV, Form of intent to form JV including a draft agreement, or JV agreement, in accordance with ITT 4.1 and ITT 11.2.

In case of state-owned enterprise or institution from Kenya, documents establishing legal and financial autonomy and compliance with the principles of commercial law, and is not under the supervision of the Procuring Entity in accordance with ITT 4.6.

Please note that a written authorization needs to be attached to this sheet as required by ITT 21.3

Form ELI 1.2

Party to JV Information Sheet

Date.....

ITT No.....

1. Tenderer's Legal Name:
2. JV's Party legal name:
3. JV's Party Country of Registration:
4. JV's Party Year of Registration:
5. JV's Party Legal Address in Country of Registration:
6. JV's Party Authorized Representative Information Name: Address: Telephone/Fax numbers: Email Address:
7. Attached are copies of original documents of: Articles of Incorporation or Registration of firm named in 1, above, in accordance with ITT 4.1 and ITT 4.4. In case of state-owned enterprise or institution from Kenya, documents

establishing legal and financial autonomy and compliance with the principles of commercial law and is not under the supervision of the Procuring Entity, in accordance with ITT 4.6.

Form CON – 2

Historical Contract Non-Performance

Tenderer's Legal Name:

Date.....

JV Member Legal Name:

ITT No.:

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 K Shilling equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Procuring Entity: <i>[insert full name]</i> Address of Procuring Entity: <i>[insert City/ street/building/floor number/room number/country]</i> Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>

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

- ☐ 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), K 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			
<input type="checkbox"/> No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4. <input type="checkbox"/> Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.			
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: <i>[indicate complete contract name, number, and any other identification]</i> Name of Procuring Entity: <i>[insert full name]</i> Address of Procuring Entity: <i>[insert City/ street/building/floor number/room number/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Procuring Entity" or "Contractor"]</i> Reason(s) for Litigation and award	<i>[insert amount]</i>

		decision <i>[indicate main reason(s)]</i>	
--	--	---	--

Form CCC

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 Form 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.

Name of contract	Procuring Entity, contact address/tel	Value of outstanding work (current Kshs equivalent)	Estimated completion date	Average monthly invoicing over last six months (K Shilling /month)
1.				
2.				
3.				
4.				
5.				
etc.				

Form FIN – 3.1**Financial Situation****Historical Financial Performance**

Tenderer's Legal Name: _____ Date: _____

ITT No.: **NEMA/T/14/2023/2024**

To be completed by the Tenderer.

Financial information in Kshs. equivalent	Historic information for previous two (2) years (Kshs. equivalent in 000s)						
	Year 1	Year 2	Year 3	Year ...	Year n	Avg	Avg. Ratio
Information from Balance Sheet							
Total Assets (TA)							
Total Liabilities (TL)							
Net Worth (NW)							
Current Assets (CA)							
Current Liabilities (CL)							
Information from Income Statement							
Total Revenue (TR)							
Profits Before Taxes (PBT)							

Attached are copies of financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following conditions:

- Must reflect the financial situation of the Tenderer or member to a JV, and not sister or parent companies.
- Historic financial statements must be audited by a certified accountant.
- Historic financial statements must be complete, including all notes to the financial statements.
- Historic financial statements must correspond to accounting periods already**

completed and audited (no statements for partial periods shall be requested or accepted).

Form FIN - 3.2

Average Annual Turnover

Tenderer's Legal Name.....Date:.....

ITT No.: **NEMA/T/14/2023/2024**

Annual turnover data		
Year	Amount and Currency	KSHILLING equivalent
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
*Average Annual Turnover	_____	_____

*Average annual turnover calculated as total certified payments received for work in progress or completed, divided by the number of years specified in Section III, Evaluation Criteria, Sub-Factor 2.3.2.

Form FIN3.3

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 cash flow demands of the subject contractor contracts as indicated in Section III, Evaluation and Qualification Criteria.

Source of financing	Amount (KShilling equivalent)
1.	
2.	

Starting Month/Year	Ending Month/Year	Years*	Contract Identification	Role of Tenderer
_____	_____	_____	by the Tenderer: Name of Procuring Entity: Address:	_____

*List calendar year for years with contracts with at least nine (9) months activity per year starting with the earliest year

Form EXP –4.2(a)

Specific Experience

Tenderer's Legal Name.....

JV Member Legal Name:

Similar Contract No. __ [insert specific number] of [total number of contracts].....required	Information
Description of the similarity in accordance with Sub-Factor 4.2a) of Section III:	
Amount	_____
Physical size	_____
Complexity	_____
Methods/Technology	_____
Physical Production Rate	_____

Form EXP –4.2(b)**Specific Experience in Key Activities**

Tenderer's Legal Name: _____ Date: _____

JV Member Legal Name: _____ ITT No.: _____ Subcontractor's Legal Name: _____

	Information		
Contract Identification	_____		
Award date	_____		
Completion date	_____		
Role in Contract	Contractor	Management Contractor	Subcontract or
Total contract amount	_____		KSHILLING__ _____
If member in a JV or subcontractor, specify participation of total contract amount	_____ %	_____	KSHILLING__ _____
Procuring Entity's Name:	_____		
Address:	_____ _____ _____		
Telephone/fax number:	_____ _____		
E-mail:	_____		

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

Beneficiary:..... **Request for Tenders No:**.....

Date:

TENDER GUARANTEE No.:

Guarantor:

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

.....
[signature(s)]

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 {r 46 and 155(2)}

[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 under signed, 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

MANUFACTURER'S AUTHORIZATION FORM

Date:

ITT No.:

To:

WHEREAS

We....., who are official manufacturers of....., having factories at....., do hereby authorize_____to submit a Tender the purpose of which is to provide the following goods, manufactured by us....., and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 27 of the General Conditions, with respect to the goods offered by the above firm.

Signed:

Name:

Title:

Duly authorized to sign this Authorization on behalf of:

Dated on..... day of.....,

PART 2 - PROCURING ENTITY'S REQUIREMENTS

TECHNICAL REQUIREMENTS FOR ESTABLISHMENT OF APPROPRIATE WATER HARVESTING TECHNOLOGIES IN NAROK AND KAJIADO COUNTIES.

NEMA intends to establish appropriate water harvesting technologies in Narok and Kajiado counties. The winning bidder is expected to deliver, install, test and commission the water harvesting equipment. The plant to be supplied is listed within the technical specifications. All Vendors MUST respond in writing against each technical requirement clearly showing technical compliance for each specification against their brochure with references.

All other costs associated with the works, not itemized in the bills of quantities, should be factored in the Rates.

BILLS OF QUANTITIES

(a) Preambles

1. The method of measurement of completed work for payment shall be in accordance with criteria above.
2. Any damage caused to the surfaces of this road shall be made good at the Contractor's expense. The Contractor shall visit the site and acquaint itself with its nature and position, the nature of the ground, substrata and other local conditions, positions of existing power, water and other services, access roads or any other limitations that might affect his cost or progress. No claim for extras shall be considered on account of lack of knowledge in this respect.
3. The Contractor shall obtain the Engineer's approval on the siting of all temporary buildings, spoil heaps, temporary access path, and storage of materials. The Contractor shall also obtain the Engineer's approval and direction regarding the use of any materials found on the Site.
4. The drawings used in the preparation of these Bills of Quantities can be inspected at the offices of the Procuring Entity or Procuring Entity's Representative during normal working hours. The drawings can also be accessed on the procuring entity's website. Contractors are to make copies at their cost.
5. The Contractor shall allow for the payment of all bank charges in connection with the procurement of Bank Guarantees and stamp charges in connection with this contract Agreement.
6. The Contractor shall carry out the various sections of the Works in such an order as the Engineer May direct. The Procuring Entity reserves the right to occupy the Works by sections on completion provided that such occupation is considered to be both practical and reasonable and will not interfere with the Works. The Contractor shall allow any costs associated with such occupation.
7. The main Contractor will be fully responsible for paying his Sub-Contractor but the Procuring Entity reserves the right in very exceptional circumstances to make such payments

direct in the interests of the project where the completion thereof might be jeopardized by any dispute or vicariousness between the Contractor and the Sub- Contractor involve.

8. The Contractor shall complete and deliver the Works in the period inserted in the Form of Tender as his time for completion of the Works from the date for Possession, to be agreed with the Engineer. The Contract Period is presumed to have been calculated making due allowance for seasonal inclement weather conditions. No claim for extension of time due to the normal inclement weather for this area shall be entertained.

9. The Contractor shall, upon receiving instructions to proceed with the Works, draw up a Programme and Progress Chart setting out the order in which the Works are to be carried out, with the appropriate dates thereof. This Chart shall be agreed with the Engineer and no deviation from the order set out in it will be permitted without the written consent of the Engineer. The Contractor will be responsible for arranging the above programme with all his sub-Contractors and Specialties. The Contractor shall allow in his rates for carrying out this exercise, and for updating it as required.

10. The Contractor shall submit to the Engineer on the first day of each week or such longer period as the engineer from time to time direct, a Progress Report and any information for the proceeding period, showing the progress during the period and the up-to-date cumulative progression all important items of each section or portion of the Works.

11. The Contractor shall arrange for photographs of the Site to be taken by a professional photographer approved by the Engineer. The Photographs shall provide a record of the Site and adjacent area as prior to the commencement of the Works and shall cover such portion of the works in progress and completion as the Engineer shall direct. All prints shall be full plate size, unmounted, and marked on the reverse side with the date of exposure, identification reference and brief description. The copyright of all photographs shall be vested in the Procuring Entity. The negatives and four prints from each negative shall be delivered to the Engineer within two weeks of exposure.

12. Figured dimensions are to be followed in preference to dimensions scaled from the Drawings, but whenever possible dimensions are to be taken on the Site or from the buildings. Before any work is commenced by Sub- Contractors or Specialist Firms, dimensions must be checked on the site comparable dimensions shown on the drawings. The Contractor shall be responsible for the accuracy of such dimensions.

13. Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to

any services shall be reported immediately to the Engineer and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense. Where appropriate the Contractor shall open up the ground in advance of the main work by hand digging if necessary, to locate precisely the position and details of the services which are likely to affect his operations.

14. The Contractor shall include in his prices for the transport of materials, workmen, etc./, to and from the site of the proposed works, at such hours and by such route as are permitted by the Authorities.

15. The Contractor will be required to make good, at his own expense and damage he may cause to the present road surface and pavements within or beyond the boundary of the Site, during the period of the works. All existing paths, storm water channels, etc., that may be destroyed or damaged during the progress of the Works shall be reinstated by the Contractor to the satisfaction of the Engineer.

16. The Contractor is to allow for complying with all instructions and regulations of the Police Authorities.

17. All water shall be fresh, clean and pure, free from earthly, vegetable or organic matter, acid or alkaline substance in solution. The Contractor shall provide at his own risk and cost all water for use in connection with the Works, (including works of sub-contractors). If need be, he shall make arrangements with the Local Water Authority for the installation of a separate meter for all water used by him throughout the Contract and pay all cost and fees in connection therewith. He shall also provide temporary storage tanks and tubing, etc., as may be necessary, and clear away at completion.

18. The Contractor shall provide all artificial lighting and power for his own use on the Works, (including Sub – Contractor's) including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection there with.

19. The Contractor shall constantly keep on the Works a Literate English-speaking Agent or Representative, competent and experienced in the kind of work involved, who shall give his whole time to the superintendence of the works. (Including works of sub – contractors). Such Agent or Representative shall receive on behalf of the Contractor directions and instruction from the Engineer, and such directions and instructions shall be deemed to be given to the contractor in accordance with the Conditions of Contract. The Agent shall not be replaced without the specific approval of the Engineer.

20. The Contractor shall ensure that the safety of his work people and all authorized visitors to the site are protected at all times. In particular, there shall be the proper provision of guard-rails to scaffolding, protection against falling materials, tools on site, dust, nail and other sharp objects.

The site shall be kept tidy and clear of dangerous rubbish. The Engineer shall be empowered to suspend work on site should it be considered this condition is not being observed and no claim arising from such suspension will be allowed.

21. The areas available to the Contractor for work yards, offices and other facilities shall be directed by the Engineer and any existing features to remain shall be protected from damage throughout the Contract Period and handed back in good condition when they are vacated at the end of the Contract. If additional areas are required, the contractor shall source them at own cost.

22. The Contractor shall give the Engineer reasonable notice of the intention to set out or take levels for any part of the Works so that arrangements may be made for checking the work. The accuracy of setting out and leveling shall be within the tolerances specified in the Specifications or on the Drawings. The checking of setting out or leveling by the Engineer shall not relieve the Contractor of his duties or responsibilities under the Contract.

23. The Contractor must take steps necessary to safeguard and shall be held fully responsible for any damage caused to existing and adjacent property, including buildings that are not a subject of demolition. He shall make good at his own cost damage to persons and property caused thereon, and he shall indemnify the Procuring Entity against any loss or claim that may arise.

24. The Contractor shall take such steps and exercise such care and diligence as to minimize nuisance arising from dust, noise or any other cause to the occupiers of the existing and adjacent property. He must provide such temporary and special screens and tarpaulins or gummy bags, hoarding, barriers, warning signs etc. as he considers necessary and sufficient for the protection of the existing and adjacent property and or prevention of nuisance etc. as directed by Engineer.

25. The Contractor's attention is drawn to the standards levy order which was amended on 15th October 1998. Legal notice No. 154 of 1998. The Contractor is required to pay a monthly level of 0.2% of his factory price of construction works with effect from January 1999. Tenderer shall allow for this in the build-upon of his rates.

26. The Contractor shall provide temporary sheds, offices, mess rooms, sanitary, accommodation and other temporary buildings for the use of the contractor and sub-contractors, including lighting, furniture, equipment and attendance.

27. Contractor shall provide/build labor camp sites to be agreed with the Engineer. Labor camps shall be complete with sanitary accommodation and fencing gates.

28. The Contractor must provide the necessary toilet facilities to the requirement and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.

29. The Contractor shall provide at his own risk and cost all watching and lighting as necessary to safeguard the Works, Plant and materials against damage and theft.

30. The Contractor shall provide all necessary hoists, tackle, plant, equipment, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove the same on completion. All such plant, tools and equipment shall comply with all regulations in force throughout the period of the Contract and shall be altered or adopted during the Contract period as may be necessary to comply with any amendments in or additions to such regulations.

31. Provide, erect and maintain all necessary scaffolding, sufficiently strong and efficient for the due performance of the works, including Sub-Contract Works, provide special scaffolding as required by Sub-Contractors, alter and adopt all scaffolding as and when required during the Works, and remove on completion. No scaffolding is measured here in after and the Contractor must allow in his rates for this.

32. The Contractor shall take all necessary precautions such as temporary fencing, hoarding fans, planked footways, guard-rails gantries screen, etc., for the safe custody of the Works, materials and public protection and adjacent properties.

33. Cover up all and protect from damage, including damage from inclement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Engineer until the completion of the Contract.

34. The Contractor shall, after completion of the works, at his own expense, remove and clear away all surplus excavated demolition materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Engineer, sheds, camps, etc. Particular care shall be taken to leave clean all floors and windows and to remove all paint and cement all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection therewith.

35. Concrete test cubes shall be prepared in a set of three, as described including testing fees, labor and materials, making molds, transport, handling, etc. Allow in your rates for making at least four cubes on each occasion, from different batches; the concrete being taken from the point of deposit.

36. The Contractors shall furnish at the earliest possible opportunity before work commences, and at his own cost, any samples of materials and workmanship that may be called for by the

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

37. The Contractors attention is that withholding tax will be applicable for payment IPCs as per relevant laws and regulations. The contractor shall allow for any costs arising resulting there from in the build-up of rates.

38. Blasting will not be allowed

39. The National Construction Authority is a state corporation established under the national construction authority Act No.14 of 2011. The broad Mandate of the Authority is to oversee the construction industry and coordinate its development. The National Construction Authority Regulations 2014 with an effective date of 6th June 2014, regulation 25, - Allow 0.5% of the tender sum/contract sum for construction levy.

40. The Contractor attention is drawn to Finance Bill of 1993 where VAT was introduced in all contracts for construction services. The tenderer is also drawn to VAT Act Cap 476 clause 19(9). The tenderer must allow for VAT 1.19 as instructed elsewhere.

41. The contractor shall allow and pay for all insurance to cover risks and indemnities required Items 17 and 18 of the Conditions of contract and also specified in the Special Conditions of Contract.

**WATER HARVESTING, STORAGE AND ACCESS INFRASTRUCTURE IN SCHOOLS IN
KAJIADO AND NAROK**

1) Kiluani Boy's Secondary School

Bill 1: Gutter System

Item	Description	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
	Guttering System				
	<i>Provide, Install and Commission items below to form guttering system as instructed. Include for all fittings, joining, cutting and wastage.</i>				
1.1	140mm heavy duty Plastic Gutters	M	64		
1.2	140X 75 mm stop end with running outlet	No	2		
1.3	140 mm gutter stop end.	No	2		
1.4	140mm Plastic Gutter Connector	No	14		
1.5	150mm Plastic Gutter Brackets at 1m c-c and at each side of the gutter connector	No	68		
1.6	75 mm PVC PN 10 Drain Pipe	M	15		
1.7	75 mm PVC PN 10 Elbow	No	7		
1.8	75 mm Pipe Brackets	No	10		
1.9	75 mm PVC equal angle Tee	No	1		
1.10	75/110 reducer	No.	1		
1.11	110 mm HDPE bend	No	2		
1.12	110 HDPE / GI adaptor	No.	1		
1.13	Provide and install 150X25mm wide fascia board. Include for painting	M	64		
	Total carried to collection page				

Item	Description	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
1.14	Excavate a 500mm X 500mm trench. Include for laying and Joining of 110 mm HDPE pipes and backfilling with granular material	M	10		1.14
1.15	Provide Ksh. 200,000 for all attendance to superintendence to works, preliminaries and statutory fees	P. C	1	200,000.00	200,000.00
1.16	Allow for overheads	%	200000.00		
	Total carried to collection page				

Bill 2: Storage					
Bill	Description	Unit	Quantity	Rate	Amount
	<i>THE FOLLOWING WORKS IN GROUND MASONRY 50 C.M. STORAGE TANK INCLUDING SUPPLY OF ALL MATERIALS AND NECESSARY WORKS FOR PLACING, ERECTING, COMPLETION, TESTING AND COMMISSIONING.</i>				
2.1	Excavation and Earth Works				
2.1.1	Excavate in normal material to formation level, use appropriate selected materials as fill where required and cart away surplus	m3	20		
2.1.2	Extra over excavation in decomposed rock/compacted murram.	m3	15		
2.1.3	Extra over excavation in rock	m3	5		
2.1.4	Provide materials place and compact hardcore 200mm thick to base of tank	m3	30		
2.2	Shuttering				
2.2.1	Provide and fix sawn shuttering including propping, strutting and striking to the edge of base slab 250mm thick and all deemed to be included items.	m	16		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.2.2	Provide and fix wrought shuttering including propping, strutting and striking to the edge of roof slab, sides of beams, and soffit of roof slab 250mm and allow for sloping and smooth trowel finish of slab.	m2	30		
2.3	Concrete & screed: Provide all materials, mix place concrete and screed and cure as specified.				
2.3.1	75mm Murram/ quarry dust filling	m2	20		
2.3.2	Concrete blinding class 15/20mm thick to base slab and treat hardcore surface with 'TERMIDOR' or other eco-approved anti termite treatment.	m3	20		
2.3.3	Vibrated Reinforced Concrete class 20/20mm to base slab, beams and roof slab. Allow for thickening at wall and column bases. Include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement.	m3	12		
2.3.4	25mm cement screed 1:2 cement/sand ratio include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement. Screed laid to falls of base slab.	m2	20		
2.3.5	Screeding to form slope on roof slab of tank	m2	20		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.4	Provide all requisite approved materials and construct natural dressed blue stone walling as per drawings and specifications. Rate to include curing, 25mm mortar joint of 1:3 cement/sand, pointing and water proof cement at a ratio of 1Kg to 50Kg of cement.				-
2.4.1	300mmx225mm thick foundation walling	m2	16		
2.4.2	225mmx225mm thick wall	m2	50		
2.4.3	Provide materials and render inside of reservoir walls with 25mm thick cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement. With smooth finish	m2	50		
2.4.4	Provide materials and render outside of reservoir walls with 25mm thick cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement with wooden float finish	m2	50		
2.4.5	Provide all materials and apply 2 coats of cover matt emulsion for under coat and 3 coats of ultra-guard permacoat exterior silicon paint. Colours as directed.	m2	50		
2.4.6	extra over for branding as directed	Item	1		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.5	Provide, cut, bend and fix steel reinforcement bars as specified. Spacers and binding wire are deemed to be included				-
2.5.1	8mm dia high yield	Kg	285		
2.5.2	10mm dia high yield	Kg	446		
2.5.3	12mm dia high yield	Kg	129		
2.5.3	16 mm dia high yield	Kg	13		
2.6	Bondex and lime				
2.6.1	Provide and apply lime as specified	Kg	10		
2.6.2	Provide and apply Bondex as specified	Kg	10		
2.7	Manhole and ladder: Rate to include for application of 3 coats of paint				
2.7.1	Allow for construction of 600x600mm access manhole, include for supply and fixing of lockable mild steel cover 16 gauge	No.	1		
2.7.2	Provide materials and fix galvanized cat ladder to outside of reservoir (stringers- 2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
	Total carried to collection page				-

Bill	Description	Unit	Quantity	Rate	Amount
2.7.3	Provide materials and fix wrought cat ladder to inside of reservoir (stringers- 2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
2.7.4	Allow for construction of 25mmx25mm drip all around the roof slab edge.	M	20		
2.7.5	Allow for construction of scour sump as detailed on drawing	No.	1		
2.8	Testing and Sterilization				
2.8.1	Allow for water tightness test as specified and directed	Item	1		
2.8.2	Allow for sterilization of the tank as directed	Item	1		
2.9	Supply and fix galvanized mild steel pipes to BS 1387 Class B including for all fittings and cutting				
2.9.1	110 mm diameter inlet pipe 4.5 m long	No.	1		
2.9.2	50 mm diameter overflow pipe 4.5m with bend on one end.	No.	1		
2.9.3	50 mm dia outlet pipe 10 m long with puddle flange	m	10		
2.9.4	50 mm dia scour pipe 4.5m long with puddle flange.	No.	1		
2.10.	Extra over tubing for the following :-				
2.10.1	110 mm diameter bend or elbow	No.	4		
2.10.2	110mm HDPE/ GI adaptor	No	1		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.10.3	50mm diameter Cast iron gate valve complete with all fittings	No.	2		
2.10.4	1200x1200mm Standard masonry valve chamber with 14G mild steel lockable cover as described	No.	2		
2.10.5	Provide and install 4 nr. 50mm GI vent pipes with top bend and wire gauze	item	1		
2.10.6	Provide all materials and construct 7m long and 1.2 m high masonry pipe stand with smooth plaster finish (TYPE B) with 5nr 12mm stop cork taps, 25mm GI pipework, 20m 50mm GI connecting pipe in trench and all necessary pipe fittings as per drawing and as instructed by the engineer.	Item	1		
	Total carried to collection page				

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	Summary Page				
	Bill 1: Gutter System (Page 3)				
	Bill 2: Storage (Page 10)				
	Total				

WATER HARVESTING, STORAGE AND ACCESS INFRASTRUCTURE IN SCHOOLS IN KAJIADO AND NAROK (Naserian School)

Bill 1: Gutter System

Item	Description	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
	Guttering System				
	<i>Provide, Install and joint with Tangit adhesive and Commission items below to form guttering system as instructed. Include for all fittings, joining, cutting and wastage.</i>				
1.1	140mm heavy duty Plastic Gutters	M	112		
1.2	140X 75 mm stop end with running outlet	No	8		
1.3	140 mm gutter stop end	No	8		
1.4	140mm Plastic Gutter Connector	No	25		
1.5	150mm Plastic Gutter Brackets at 1m c-c and at each side of the gutter connector	No	112		
1.6	75 mm PVC PN 10 Drain Pipe	M	30		
1.7	75 mm PVC PN 10 Elbow	No	32		
1.8	75 mm Pipe Brackets	No	30		
1.9	75 mm PVC equal angle Tee	No	4		
1.10	75/110 reducer	No.	4		
1.11	110 mm HDPE bend	No	5		
1.12	110 HDPE / GI adaptor	No.	1		
1.13	110 HDPE PN 16 Tee	No.	3		
1.14	Provide and install 150X25 mm wide fascia board. Include for painting	M	125		
1.15	Excavate a 500mm X 500mm trench. Include for laying and Joining of 110 mm HDPE PN 16 pipes and backfilling with granular material	M	55		
1.16	Provide Ksh. 200,000 for all attendance to superintendence to works, preliminaries and statutory fees	P. C	1	200,000.00	200,000.00
1.17	Allow for overheads	%	200000.00		
	Total carried to collection page				

Bill 2: Storage					
Bill	Description	Unit	Quantity	Rate	Amount
	THE FOLLOWING WORKS IN GROUND MASONRY 50 C.M. STORAGE TANK INCLUDING SUPPLY OF ALL MATERIALS AND NECESSARY WORKS FOR PLACING, ERECTING, COMPLETION, TESTING AND COMMISSIONING.				
2.1	Excavation and Earth Works				
2.1.1	Excavate in normal material to formation level, use appropriate selected materials as fill where required and cart away surplus	m3	20		
2.1.2	Extra over excavation in decomposed rock/compacted murram.	m3	15		
2.1.3	Extra over excavation in rock	m3	5		
2.1.4	Provide materials place and compact hardcore 200mm thick to base of tank	m3	30		
2.2	Shuttering				
2.2.1	Provide and fix sawn shuttering including propping, strutting and striking to the edge of base slab 250mm thick and all deemed to be included items.	m	16		
2.2.2	Provide and fix wrought shuttering including propping, strutting and striking to the edge of roof slab, sides of beams, and soffit of roof slab 250mm and allow for sloping and smooth trowel finish of slab.	m2	30		
2.3	Concrete & screed: Provide all materials, mix place concrete and screed and cure as specified.				
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.3.1	75mm Murram/ quarry dust filling	m2	20		
2.3.2	Concrete blinding class 15/20mm thick to base slab and treat hardcore surface with 'TERMIDOR' or other eco-approved anti termite treatment.	m3	20		
2.3.3	Vibrated Reinforced Concrete class 20/20mm to base slab, beams and roof slab. Allow for thickening at wall and column bases. Include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement.	m3	12		
2.3.4	25mm cement screed 1:2 cement/sand ratio include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement. Screed laid to falls of base slab.	m2	20		
2.3.5	screeding to form slope on roof slab of tank	m2	20		
2.4	Provide all requisite approved materials and construct natural dressed blue stone walling as per drawings and specifications. Rate to include curing, 25mm mortar joint of 1:3 cement/sand, pointing and water proof cement at a ratio of 1Kg to 50Kg of cement.				
2.4.1	300mmx225mm thick foundation walling	m2	16		
2.4.2	225mmx225mm thick wall	m2	50		
2.4.3	Provide materials and render inside of reservoir walls with 25mm thick cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement. With smooth finish	m2	50		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.4.4	<i>Provide materials and render outside of reservoir walls with 25mm thick cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement with float finish</i>	m2	50		
2.4.5	Provide all materials and apply 2 coats of cover matt emulsion for under coat and 3 coats of ultra-guard permacoat exterior silicon paint. Colours as directed.	m2	50		
2.4.6	Extra over for branding as directed	Item	1		
2.5	Provide, cut, bend and fix steel reinforcement bars as specified. Spacers and binding wire are deemed to be included				
2.5.1	8mm dia high yield	Kg	285		
2.5.2	10mm dia high yield	Kg	446		
2.5.3	12mm dia high yield	Kg	129		
2.5.3	16 mm dia high yield	Kg	13		
2.6	Bondex and lime				
2.6.1	Provide and apply lime as specified	Kg	10		
2.6.2	Provide and apply bondex as specified	Kg	10		
2.7	Manhole and ladder: Rate to include for application of 3 coats of paint				
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.7.1	Allow for construction of 600x600mm access manhole, include for supply and fixing of lockable mild steel cover 16 gauge	No.	1		
2.7.2	Provide materials and fix galvanized cat ladder to outside of reservoir (stringers- 2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
2.7.3	Provide materials and fix wrought cat ladder to inside of reservoir (stringers- 2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
2.7.4	Allow for construction of 25mmx25mm drip all around the roof slab edge.	M	20		
2.7.5	Allow for construction of scour sump as detailed on drawing	No.	1		
2.8	Testing and Sterilization				
2.8.1	Allow for water tightness test as specified and directed	Item	1		
2.8.2	Allow for sterilization of the tank as directed	Item	1		
2.9	Supply and fix galvanized mild steel pipes to BS 1387 Class B including for all fittings and cutting				
2.9.1	110 mm diameter in inlet pipe 4.5 m long	No.	1		
2.9.2	50 mm diameter in overflow pipe 4.5m long with bend on one end	No.	1		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.9.3	50 mm dia outlet pipe 10 m long with puddle flange	m	10		
2.9.4	50 mm dia scour pipe 4.5m long with puddle flange	No.	1		
2.10.	Extra over tubing for the following :-				
2.10.1	110 mm diameter bend or elbow	No.	4		
2.10.2	110mm HDPE/ GI adaptor	No	1		
2.10.3	50mm diameter Cast iron gate valve complete with all fittings	No.	2		
2.10.4	1200x1200mm Standard masonry valve chamber with 14G Mild steel lockable cover as described	No.	2		
2.10.5	Provide and install 4 nr. 50mm GI vent pipes with top bend and wire gauze	item	1		
2.10.6	Provide all materials and construct 7m long and 1.2 m high masonry pipe stand with smooth plaster finish (TYPE B) with 5nr 12mm stop cork taps, 25mm GI pipework, 20m 50mm GI connecting pipe in trench and all necessary pipe fittings as per drawing and as instructed by the engineer..	Item	1		
	Total carried to collection page				

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	Summary Page				
	Bill 1: Gutter System				
	Bill 2: Storage				
	Total				

WATER HARVESTING, STORAGE AND ACCESS INFRASTRUCTURE IN SCHOOLS IN KAJIADO AND NAROK (Oldungoro Comprehensive School)

Bill 1: Gutter System

Item	Description	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
	Guttering System				
	<i>Provide, Install and Commission items below to form guttering system as instructed. Include for all fittings, joining, cutting and wastage.</i>				
1.1	140mm heavy duty Plastic Gutters	M	54		
1.2	140X 75 mm stop end with running outlet	No	2		
1.3	140 mm gutter stop end	No	2		
1.4	140mm Plastic Gutter Connector	No	12		
1.5	150mm Plastic Gutter Brackets at 1m c-c and at each side of the gutter connector	No	55		
1.6	75 mm PVC PN 10 Drain Pipe	M	10		
1.7	75 mm PVC PN 10 Elbow	No	7		
1.8	75 mm Pipe Brackets	No	10		
1.9	75mm equal angle tee	No	1		
1.11	75/110 reducer	No.	1		
1.12	110 mm HDPE bend	No	3		
1.13	110 HDPE / GI adaptor	No.	1		
1.14	Provide and install 150X25 mm wide fascia board. Include for painting	M	54		
	Total carried to collection page				

Item	Description	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
1.14	Excavate a 500mm X 500mm trench. Include for laying and Joining of 110 mm HDPE pipes and backfilling with granular material	M	10		
1.15	Provide Ksh. 200,000 for all attendance to superintendence to works, preliminaries and statutory fees	P. C	1	200,000.00	200,000.00
1.16	Allow for overheads	%	200000.00		
	Total carried to collection page				

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Bill 2: Storage					
Bill	Description	Unit	Quantity	Rate	Amount
	THE FOLLOWING WORKS IN GROUND MASONRY 50 C.M. STORAGE TANK INCLUDING SUPPLY OF ALL MATERIALS AND NECESSARY WORKS FOR PLACING, ERECTING, COMPLETION, TESTING AND COMMISSIONING.				
2.1	Excavation and Earth Works				
2.1.1	Excavate in normal material to formation level, use appropriate selected materials as fill where required and cart away surplus	m3	20		
2.1.2	Extra over excavation in decomposed rock/compacted murrum.	m3	15		
2.1.3	Extra over excavation in rock	m3	5		
2.1.4	Provide materials place and compact hardcore 200mm thick to base of tank	m3	30		
2.2	Shuttering				
2.2.1	Provide and fix sawn shuttering including propping, strutting and striking to the edge of base slab 250mm thick and all deemed to be included items.	m	16		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate (Ksh)	Amount (Ksh,)
2.2.2	Provide and fix wrought shuttering including propping, strutting and striking to the edge of roof slab, sides of beams, and soffit of roof slab 250mm and allow for sloping and smooth trowel finish of slab.	m2	30		
2.3	Concrete & screed: Provide all materials, mix place concrete and screed and cure as specified.				
2.3.1	75mm Murram/ quarry dust filling	m2	20		
2.3.2	Concrete blinding class 15/20mm thick to base slab and treat hardcore surface with 'TERMIDOR' or other eco-approved anti termite treatment.	m3	20		
2.3.3	Vibrated Reinforced Concrete class 20/20mm to base slab, beams and roof slab. Allow for thickening at wall and column bases. Include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement.	m3	12		
2.3.4	25mm cement screed 1:2 cement/sand ratio include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement. Screed laid to falls of base slab.	m2	20		
2.3.5	screeding to form slope on roof slab of tank	m2	20		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.4	Provide all requisite approved materials and construct natural dressed blue stone walling as per drawings and specifications. Rate to include curing, 25mm mortar joint of 1:3 cement/sand, pointing and water proof cement at a ratio of 1Kg to 50Kg of cement.				
2.4.1	300mmx225mm thick foundation walling	m2	16		
2.4.2	225mmx225mm thick wall	m2	50		
2.4.3	Provide materials and render inside of reservoir walls with 25mm thick cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement. With smooth finish	m2	50		
2.4.4	<i>Provide materials and render outside of reservoir walls with 25mm thick cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement with float finish</i>	m2	50		
2.4.5	Provide all materials and apply 2 coats of cover matt emulsion for under coat and 3 coats of ultra-guard permacoat exterior silicon paint. Colours as directed.	m2	50		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
	Provide for branding as directed	Item	1		
2.5	Provide, cut, bend and fix steel reinforcement bars as specified. Spacers and binding wire are deemed to be included				
2.5.1	8mm dia high yield	Kg	285		
2.5.2	10mm dia high yield	Kg	446		
2.5.3	12mm dia high yield	Kg	129		
2.5.3	16 mm dia high yield	Kg	13		
2.6	Bondex and lime				
2.6.1	Provide and apply lime as specified	Kg	10		
2.6.2	Provide and apply bondex as specified	Kg	10		
2.7	Manhole and ladder: Rate to include for application of 3 coats of paint				
2.7.1	Allow for construction of 600x600mm access manhole, include for supply and fixing of lockable mild steel cover 16 gauge	No.	1		
2.7.2	Provide materials and fix galvanized cat ladder to outside of reservoir (stringers- 2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.7.3	Provide materials and fix wrought cat ladder to inside of reservoir (stringers- 2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
2.7.4	Allow for construction of 25mmx25mm drip all around the roof slab edge.	M	20		
2.7.5	Allow for construction of scour sump as detailed on drawing	No.	1		
2.8	Testing and Sterilization				
2.8.1	Allow for water tightness test as specified and directed	Item	1		
2.8.2	Allow for sterilization of the tank as directed	Item	1		
2.9	Supply and fix galvanized mild steel pipes to BS 1387 Class B including for all fittings and cutting				
2.9.1	110 mm diameter in inlet pipe 4.5 m long	No.	1		
2.9.2	50 mm diameter in overflow pipe 4.5m long	No.	1		
2.9.3	50 mm dia outlet pipe 10 m long with puddle flange.	m	10		
2.9.4	50 mm dia scour pipe 4.5m long with puddle flange.	No.	1		
2.10.	Extra over tubing for the following :-				
2.10.1	110 mm diameter bend or elbow	No.	4		
2.10.2	110mm HDPE/ GI adaptor	No	1		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.10.3	50mm diameter Cast iron gate valve complete with all fittings	No.	2		
2.10.4	1200x1200mm Standard masonry valve chamber with 14G Ms lockable cover as described	No.	2		
2.10.5	Provide and install 4 nr. 50mm GI vent pipes with top bend and wire gauze	item	1		
2.10.6	Provide all materials and construct 7m long and 1.2 m high masonry pipe stand with smooth plaster finish (TYPE B) with 5nr 12mm stop cork taps, 25mm GI pipework, 20m 50mm GI connecting pipe in trench and all necessary pipe fittings as per drawing and as instructed by the engineer.	Item	1		
	Total carried to collection page				

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WATER HARVESTING, STORAGE AND ACCESS INFRASTRUCTURE IN SCHOOLS IN KAJIADO AND NAROK (Oltanki Primary School)

Bill 1: Gutter System

Item	Description	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
	Guttering System				
	<i>Provide, Install and Commission items below to form guttering system as instructed. Include for all fittings, joining, cutting and wastage.</i>				
1.1	140mm heavy duty Plastic Gutters	M	87		
1.2	140X 75 mm stop end with running outlet	No	4		
1.3	140 mm gutter stop end	No	5		
1.4	140mm Plastic Gutter Connector	No	19		
1.5	150mm Plastic Gutter Brackets at 1m c-c and at each side of the gutter connector	No	87		
1.6	75 mm PVC PN 10 Drain Pipe	M	10		
1.7	75 mm PVC PN 10 Elbow	No	19		
1.8	75 mm Pipe Brackets	No	10		
1.9	75mm equal angle tee	No	1		
1.11	75/110 reducer	No.	1		
1.12	110 mm HDPE bend	No	3		
1.13	110 HDPE / GI adaptor	No.	1		
1.14	Provide and install 150X25 mm wide fascia board. Include for painting and removal of existing fascia board	M	87		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
1.14	Excavate a 500mm X 500mm trench. Include for laying and Joining of 110 mm HDPE pipes and backfilling with granular material	M	10		
1.15	Remove existing gutters at the front of class block and fix them at the back to allow them to drain to tank	M	15		
1.16	Provide Ksh. 200,000 for all attendance to superintendence to works, preliminaries and statutory fees.	P. C	1	200,000.00	200,000.00
1.17	Allow for overheads	%	200000.00		
	Total carried to collection page				

[illegible]

Bill 2: Storage					
Bill	Description	Unit	Quantity	Rate	Amount
	THE FOLLOWING WORKS IN GROUND MASONRY 50 C.M. STORAGE TANK INCLUDING SUPPLY OF ALL MATERIALS AND NECESSARY WORKS FOR PLACING, ERECTING, COMPLETION, TESTING AND COMMISSIONING.				
2.1	Excavation and Earth Works				
2.1.1	Excavate in normal material to formation level, use appropriate selected materials as fill where required and cart away surplus	m3	20	650.00	13,000.00
					-
2.1.2	Extra over excavation in decomposed rock/compacted murrum.	m3	15	1,700.00	25,500.00
2.1.3	Extra over excavation in rock	m3	5	2,200.00	11,000.00
2.1.4	Provide materials place and compact hardcore 200mm thick to base of tank	m3	30	1,700.00	51,000.00
					-
2.2	Shuttering				-
2.2.1	Provide and fix sawn shuttering including propping, strutting and striking to the edge of base slab 250mm thick and all deemed to be included items.	m	16	600.00	9,600.00
					-
2.2.2	Provide and fix wrought shuttering including propping, strutting and striking to the edge of roof slab, sides of beams, and soffit of roof slab 250mm and allow for sloping and smooth trowel finish of slab.	m2	30	600.00	18,000.00
	Total carried to collection page				-

Bill	Description	Unit	Quantity	Rate	Amount
2.3	Concrete & screed: Provide all materials, mix place concrete and screed and cure as specified.				
2.3.1	75mm Murram/ quarry dust filling	m2	20		
2.3.2	Concrete blinding class 15/20mm thick to base slab and treat hardcore surface with 'TERMIDOR' or other eco-approved anti termite treatment.	m3	20		
2.3.3	Vibrated Reinforced Concrete class 20/20mm to base slab, beams and roof slab. Allow for thickening at wall and column bases. Include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement.	m3	12		
2.3.4	25mm cement screed 1:2 cement/sand ratio include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement. Screed laid to falls of base slab.	m2	20		
2.3.5	screeding to form slope on roof slab of tank	m2	20		
2.4	Provide all requisite approved materials and construct natural dressed blue stone walling as per drawings and specifications. Rate to include curing, 25mm mortar joint of 1:3 cement/sand, pointing and water proof cement at a ratio of 1Kg to 50Kg of cement.				
2.4.1	300mmx225mm thick foundation walling	m2	16		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.4.2	225mmx225mm thick wall	m2	50		
2.4.3	Provide materials and render inside of reservoir walls with 25mm thick cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement. With smooth finish	m2	50		
2.4.4	<i>Provide materials and render outside of reservoir walls with 25mm thick cement cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement with float finish</i>	m2	50		
2.4.5	Provide all materials and apply 2 coats of cover matt emulsion for under coat and 3 coats of ultra-guard permacoat exterior silicon paint. Colours as directed.	m2	50		
	Provide for branding as directed	Item	1		
2.5	Provide, cut, bend and fix steel reinforcement bars as specified. Spacers and binding wire are deemed to be included				
2.5.1	8mm dia high yield	Kg	285		
2.5.2	10mm dia high yield	Kg	446		
2.5.3	12mm dia high yield	Kg	129		
2.5.3	16 mm dia high yield	Kg	13		
2.6	Bondex and lime				
2.6.1	Provide and apply lime as specified	Kg	10		
	Total carried to collection page				-

Bill	Description	Unit	Quantity	Rate	Amount
2.6.2	Provide and apply bondex as specified	Kg	10		
2.7	Manhole and ladder: Rate to include for application of 3 coats of paint				
2.7.1	Allow for construction of 600x600mm access manhole, include for supply and fixing of lockable mild steel cover 16 gauge	No.	1		
2.7.2	Provide materials and fix galvanized cat ladder to outside of reservoir (stringers-2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
2.7.3	Provide materials and fix wrought cat ladder to inside of reservoir (stringers-2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
2.7.4	Allow for construction of 25mmx25mm drip all around the roof slab edge.	M	20		
2.7.5	Allow for construction of scour sump as detailed on drawing	No.	1		
2.8	Testing and Sterilization				
2.8.1	Allow for water tightness test as specified and directed	Item	1		
2.8.2	Allow for sterilization of the tank as directed	Item	1		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.9	Supply and fix galvanized mild steel pipes to BS 1387 Class B including for all fittings and cutting				-
2.9.1	110 mm diameter in inlet pipe 4.5 m long	No.	1		
2.9.2	50 mm diameter in overflow pipe 4.5m long	No.	1		
2.9.3	50 mm dia outlet pipe 10 m long with puddle flange	m	10		
2.9.4	50 mm dia scour pipe 4.5m long with puddle flange.	No.	1		
2.10.	Extra over tubing for the following :-				
2.10.1	110 mm diameter bend or elbow	No.	4		
2.10.2	110mm HDPE/ GI adaptor	No	1		
2.10.3	50mm diameter Cast iron gate valve complete with all fittings	No.	2		
2.10.4	1200x1200mm Standard masonry valve chamber as with 14G Ms. Lockable cover described	No.	2		
2.10.5	Provide and install 4 nr. 50mm GI vent pipes with top bend and wire gauze	item	1		
2.10.6	Provide all materials and construct 7m long and 1.2 m high masonry pipe stand with smooth plaster finish (TYPE B) with 5nr 12mm stop cork taps, 25mm GI pipework, 20m 50mm GI connecting pipe in trench and all necessary pipe fittings as per drawing and as instructed by the engineer.	Item	1		
	Total carried to collection page				

	Collection page				
	Page 34				
	Page 35				
	Page 36				
	Page 36				
	Page 37				
	Page 38				
	Total Carried to summary page				

	Summary Page				
	Bill 1: Gutter System				
	Bill 2: Storage				
	Total				

WATER HARVESTING, STORAGE AND ACCESS INFRASTRUCTURE IN SCHOOLS IN KAJIADO AND NAROK (Mosiro Boarding Primary School)

Bill 1: Gutter System

Item	Description	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
	Guttering System				
	<i>Provide, Install and Commission items below to form guttering system as instructed. Include for all fittings, joining, cutting and wastage.</i>				
1.1	140mm heavy duty Plastic Gutters	M	58		
1.2	140X 75 mm stop end with running outlet	No	4		
1.3	140 mm gutter stop end	No	4		
1.4	140mm Plastic Gutter Connector	No	14		
1.5	150mm Plastic Gutter Brackets at 1m c-c and at each side of the gutter connector	No	58		
1.6	75 mm PVC PN 10 Drain Pipe	M	15		
1.7	75 mm PVC PN 10 Elbow	No	8		
1.8	75 mm Pipe Brackets	No	12		
1.9	75mm equal angle tee	No	2		
1.11	75/110 reducer	No.	2		
1.12	110 mm HDPE bend	No	1		
1.13	110 mm PVC equal tee	No.	2		
1.14	110 mm end cap	No.	1		
1.15	110 HDPE / GI adaptor	No.	1		
	Total carried to summery page				

Item	Description	Unit	Quantity	Rate (Ksh.)	Amount (Ksh.)
1.16	Provide and install 150X25 mm wide fascia board. Include for painting	M	58		
1.17	Excavate a 500mm X 500mm trench. Include for laying and Joining of 110 mm HDPE pipes and backfilling with granular material	M	10		
1.17	Excavate a 500mm X 150mm trench. Include for laying and Joining of 40 mm PN 16 HDPE pipes and backfilling with granular material. Include for all fittings, joining, PVC stop cork valve and connection to tank below	M	300		
1.18	Provide Ksh. 200,000 for all attendance to superintendence to works, preliminaries and statutory fees.	P.C	1	200,000.00	200,000.00
1.19	Allow for overheads	%	200000.00		
	Total carried to collection page				

[illegible]

Bill 2: Storage					
Bill	Description	Unit	Quantity	Rate	Amount
	THE FOLLOWING WORKS IN GROUND MASONRY 50 C.M. STORAGE TANK INCLUDING SUPPLY OF ALL MATERIALS AND NECESSARY WORKS FOR PLACING, ERECTING, COMPLETION, TESTING AND COMMISSIONING.				
2.1	Excavation and Earth Works				
2.1.1	Excavate in normal material to formation level, use appropriate selected materials as fill where required and cart away surplus	m3	20		
2.1.2	Extra over excavation in decomposed rock/compacted murrum.	m3	15		
2.1.3	Extra over excavation in rock	m3	5		
2.1.4	Provide materials place and compact hardcore 200mm thick to base of tank	m3	30		
2.2	Shuttering				
2.2.1	Provide and fix sawn shuttering including propping, strutting and striking to the edge of base slab 250mm thick and all deemed to be included items.	m	16		
2.2.2	Provide and fix wrought shuttering including propping, strutting and striking to the edge of roof slab, sides of beams, and soffit of roof slab 250mm and allow for sloping and smooth trowel finish of slab.	m2	30		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.3	Concrete & screed: Provide all materials, mix place concrete and screed and cure as specified.				-
2.3.1	75mm Murram/ quarry dust filling	m2	20		
2.3.2	Concrete blinding class 15/20mm thick to base slab and treat hardcore surface with 'TERMIDOR' or other eco-approved anti termite treatment.	m3	20		
2.3.3	Vibrated Reinforced Concrete class 20/20mm to base slab, beams and roof slab. Allow for thickening at wall and column bases. Include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement.	m3	12		
2.3.4	25mm cement screed 1:2 cement/sand ratio include Water Proof Cement at a rate of 1Kg Water proof cement to 50Kg cement. Screed laid to falls of base slab.	m2	20		
2.3.5	screeding to form slope on roof slab of tank	m2	20		
2.4	Provide all requisite approved materials and construct natural dressed blue stone walling as per drawings and specifications. Rate to include curing, 25mm mortar joint of 1:3 cement/sand, pointing and water proof cement at a ratio of 1Kg to 50Kg of cement.				
2.4.1	300mmx225mm thick foundation walling	m2	16		
	Total carried to collection page				-

Bill	Description	Unit	Quantity	Rate	Amount
2.4.2	225mmx225mm thick wall	m2	50		
2.4.3	Provide materials and render inside of reservoir walls with 25mm thick cement cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement. With smooth finish	m2	50		
2.4.4	<i>Provide materials and render outside of reservoir walls with 25mm thick cement cement render with water proof additive 1:2 cement/sand ratio. Water proof additive to be at a rate of 1Kg to 50Kg cement with float finish</i>	m2	50		
2.4.5	Provide all materials and apply 2 coats of cover matt emulsion for under coat and 3 coats of ultra-guard permacoat exterior silicon paint. Colours as directed.	m2	50		
	Provide for branding as directed	Item	1		
2.5	Provide, cut, bend and fix steel reinforcement bars as specified. Spacers and binding wire are deemed to be included				
2.5.1	8mm dia high yield	Kg	285		
2.5.2	10mm dia high yield	Kg	446		
2.5.3	12mm dia high yield	Kg	129		
2.5.3	16 mm dia high yield	Kg	13		
2.6	Bondex and lime				-
	Total carried to collection page				-

Bill	Description	Unit	Quantity	Rate	Amount
2.6.1	Provide and apply lime as specified	Kg	10		
					-
2.6.2	Provide and apply bondex as specified	Kg	10		
2.7	Manhole and ladder: Rate to include for application of 3 coats of paint				
2.7.1	Allow for construction of 600x600mm access manhole, include for supply and fixing of lockable mild steel cover 16 gauge	No.	1		
2.7.2	Provide materials and fix galvanized cat ladder to outside of reservoir (stringers-2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
2.7.3	Provide materials and fix wrought cat ladder to inside of reservoir (stringers-2.0mx50mmx10mm flat bar, rungs 300mmx20mm dia round bar at 300mm centers)	No.	1		
2.7.4	Allow for construction of 25mmx25mm drip all around the roof slab edge	M	20		
2.7.5	Allow for construction of scour sump as detailed on drawing	No.	1		
2.8	Testing and Sterilization				
2.8.1	Allow for water tightness test as specified and directed	Item	1		
	Total carried to collection page				

Bill	Description	Unit	Quantity	Rate	Amount
2.8.2	Allow for sterilization of the tank as directed	Item	1		
2.9	Supply and fix galvanized mild steel pipes to BS 1387 Class B including for all fittings and cutting				
2.9.1	110 mm diameter in inlet pipe 4.5 m long	No.	1		
2.9.2	50 mm diameter in overflow pipe 4.5m long	No.	1		
2.9.3	50 mm dia outlet pipe 10 m long with puddle flange	m	10		
2.9.4	50 mm dia scour pipe 4.5m long with puddle flange	No.	1		
2.10.	Extra over tubing for the following :-				
2.10.1	110 mm diameter bend or elbow	No.	2		
2.10.2	110mm HDPE/ GI adaptor	No	1		
2.10.3	50mm diameter Cast iron gate valve complete with all fittings	No.	2		
2.10.4	1200x1200mm Standard masonry valve chamber with 14G Lockable MS. Cover as described	No.	4		
2.10.5	Provide and install 4 nr. 50mm GI vent pipes with top bend and wire gauze	item	1		
2.10.6	Provide all materials and construct 7m long and 1.2 m high masonry pipe stand with smooth plaster finish (TYPE B) with 5nr 12mm stop cork taps, 25mm GI pipework, 20m 50mm GI connecting pipe in trench and all necessary pipe fittings as per drawing and as instructed by the engineer.	Item	1		
	Total carried to collection page				

[illegible]

	Summary Page				
	Bill 1: Gutter System				
	Bill 2: Storage				
	Total				

WATER HARVESTING, STORAGE AND ACCESS INFRASTRUCTURE IN SCHOOLS IN KAJIADO AND NAROK COUNTIES.

Summary Page

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FORMS AND PROCEDURES

Form of Completion Certificate

Date:.....

ITT No:

To:

Dear Ladies and/or Gentlemen,

Pursuant to GCC Clause 24 (Completion of the Facilities) of the General Conditions of the Contract entered into between yourselves and the Procuring Entity dated....., relating to the....., we hereby notify you that the following part (s) of the Facilities was (were) complete on the date specified below, and that, in accordance with the terms of the Contract, the Procuring Entity hereby takes over the said part (s) of the Facilities, together with the responsibility for care and custody and the risk of loss thereof on the date mentioned below.

1. Description of the Facilities or part there of:

2. Date of Completion:

However, you are required to complete the outstanding items listed in the attachment hereto as soon as practicable.

This Form does not relieve you of your obligation to complete the execution of the Facilities in accordance with the Contract nor of your obligations during the Defect Liability Period.

Very truly yours,

Title (Project Manager)

FORM OF OPERATIONAL ACCEPTANCE CERTIFICATE

Date:

ITT No:

To:

Dear Ladies and/or Gentlemen,

Pursuant to GCC Sub-Clause 25.3 (Operational Acceptance) of the General Conditions of the Contract entered into between yourselves and the Procuring Entity dated....., relating to the....., we hereby notify you that the Functional Guarantees of the following part (s) of the Facilities were satisfactorily attained on the date specified below.

1. Description of the Facilities or part there of:

2. Date of Operational Acceptance:

This Form does not relieve you of your obligation to complete the execution of the Facilities in accordance with the Contract nor of your obligations during the Defect Liability Period.

Very truly yours,

Title (Project Manager)

CHANGE ORDER PROCEDURE AND FORMS

Date:

ITT No:

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1. General
2. Change Order Log

3. References for Changes

ANNEXES

Annex 1: Request for Change Proposal

Annex 2: Estimate for Change Proposal

Annex 3: Acceptance of Estimate

Annex 4: Change Proposal

Annex 5: Change Order

Annex 6: Pending Agreement Change Order

Annex 7: Application for Change Proposal

Change Order Procedure

1. General

This section provides samples of procedures and forms for implementing changes in the Facilities during the performance of the Contract in accordance with GCC Clause 39 (Change in the Facilities) of the General Conditions.

2. Change Order Log

The Contractor shall keep an up-to-date Change Order Log to show the current status of Requests for Change and Changes authorized or pending, as Annex 8. Entries of the Changes in the Change Order Log shall be made to ensure that the log is up-to-date. The Contractor shall attach a copy of the current Change Order Log in the monthly progress report to be submitted to the Procuring Entity.

3. References for Changes

- 1) Request for Change as referred to in GCC Clause 39 shall be serially numbered CR-X-nnn.
- 2) Estimate for Change Proposal as referred to in GCC Clause 39 shall be serially numbered CN-X-nnn.
- 3) Acceptance of Estimate as referred to in GCC Clause 39 shall be serially numbered CA-X-nnn.
- 4) Change Proposal as referred to in GCC Clause 39 shall be serially numbered CP-X-nnn.
- 5) Change Order as referred to in GCC Clause 39 shall be serially numbered CO-X-nnn.

Note:

- a) Requests for Change issued from the Procuring Entity's Home Office and the Site representatives of the Procuring Entity shall have the following respective references:

Home Office CR-H-nnn

Site CR-S-nnn

- b) The above number “nnn” is the same for Request for Change, Estimate for Change Proposal, Acceptance of Estimate, Change Proposal and Change Order.

ANNEX 1. REQUEST FOR CHANGE PROPOSAL

(Procuring Entity's Form head)

To: Date:

Attention:

Contract Name:

Contract Number:

Dear Ladies and/or Gentlemen:

With reference to the captioned Contract, you are requested to prepare and submit a Change Proposal for the Change noted below in accordance with the following instructions within.....days of the date of this Form.....

1. Title of Change:
2. Change Request No.
3. Originator of Change:
4. Procuring Entity:
5. Contractor (by Application for Change Proposal No.:
6. Brief Description of Change.....
7. Facilities and/or Item No. of equipment related to the requested Change:

8. Reference drawings and/ or technical documents for the request of Change: Drawing No./ Document No. Description
9. Detailed conditions or special requirements on the requested Change:
10. General Terms and Conditions:
- a) Please submit your estimate to us showing what effect the requested Change will have on the Contract Price.
 - b) Your estimate shall include your claim for the additional time, if any, for completion of the requested Change.
 - c) If you have any opinion negative to the adoption of the requested Change in connection with the conformability to the other provisions of the Contractor the safety of the Plant or Facilities, please inform us of your opinion in your proposal of revised provisions.
 - d) Any increase or decrease in the work of the Contractor relating to the services of its personnel shall be calculated.
 - e) You shall not proceed with the execution of the work for the requested Change until we have accepted and confirmed the amount and nature in writing.

(Procuring Entity's Name)

(Signature).....

(Name of signatory)

(Title of signatory)

ANNEX 2. ESTIMATE FOR CHANGE PROPOSAL

(Contractor's Form head)

To:Date:

Attention:

Contract Name:

Contract Number:

Dear Ladies and/or Gentlemen:

With reference to your Request for Change Proposal, we are pleased to notify you of the approximate cost of preparing the below-referenced Change Proposal in accordance with GCC Sub-Clause 39.2.1 of the General Conditions. We acknowledge that your agreement to the cost of preparing the Change Proposal, in accordance with GCC Sub-Clause 39.2.2, is required before estimating the cost for change work.

1. Title of Change:
2. Change Request No./Rev.:
3. Brief Description of Change:
4. Scheduled Impact of Change:
5. Cost for Preparation of Change Proposal: __9
 - a) Engineering (Amount)
 - i) Engineer_hrsx__rate/hr=
 - ii) Draftsperson____hrsx__rate/hr= Sub-total_____hrs
 - iii) Total Engineering Cost_____

b) Other Cost

Total Cost (a) + (b)

(Contractor's Name).....

(Signature)

(Name of signatory).....

(Title of signatory)

9Costs shall be in the currencies of the Contract.

ANNEX 3. ACCEPTANCE OF ESTIMATE

(Procuring Entity's Form head)

To: Date:

Attention:

Contract Name:

Contract Number:

Dear Ladies and/or Gentlemen:

We hereby accept your Estimate for Change Proposal and agree that you should proceed with the preparation of the Change Proposal.

1. Title of Change:

2. Change Request No./ Rev.:

3. Estimate for Change Proposal No./ Rev.:

4. Acceptance of Estimate No./ Rev.:

5. Brief Description of Change:

6. Other Terms and Conditions: In the event that we decide not to order the Change accepted, you shall be entitled to compensation for the cost of preparation of Change Proposal described in your Estimate for Change Proposal mentioned in para. 3 above in accordance with GCC Clause 39 of the General Conditions.

(Procuring Entity's Name)

(Signature)

(Name and Title of signatory)

ANNEX 4. CHANGE PROPOSAL

(Contractor's Form head)

To:Date:

Attention:

Contract Name:

Contract Number:

Dear Ladies and/or Gentlemen:

In response to your Request for Change Proposal No....., we hereby submit our proposal as follows:

1. Title of Change:
2. Change Proposal No./Rev.:.....
3. Originator of Change:
Procuring Entity:
Contractor:
4. Brief Description of Change:
5. Reasons for Change:
6. Facilities and/or Item No. of Equipment related to the requested Change:
7. Reference drawings and/ or technical documents for the requested Change: Drawing/
Document No. Description
8. Estimate of increase/ decrease to the Contract Price resulting from Change Proposal:
(Amount)
 - a) Direct material
 - b) Major construction equipment
 - c) Direct field labor (Total hrs)
 - d) Subcontracts
 - e) Indirect material and labor
 - f) Site supervision
 - g) Head office technical staff salaries
 - Process engineer..... hrs @.....rate/hr
 - Project engineer..... hrs @.....rate/hr
 - Equipment engineerhrs @.....rate/hr
 - Procurement..... hrs @.....rate/hr

Drafts person hrs @.....rate/hr

Total.....hrs

h) Extraordinary costs (computer, travel, etc.)

i) Fee for general administration.....% of Items

j) Taxes and customs duties

Total lump sum cost of Change Proposal

(Sum of items (a) to (j))

Cost to prepare Estimate for Change

Proposal (Amount payable if Change is not accepted)

9. Additional time for Completion required due to Change Proposal

10. Effect on the Functional Guarantees

11. Effect on the other terms and conditions of the Contract

12. Validity of this Proposal: within [Number] days after receipt of this Proposal by the
Procuring Entity

13. Other terms and conditions of this Change Proposal:

- a) You are requested to notify us of your acceptance, comments or rejection of this detailed Change Proposal within days from your receipt of this Proposal.
- b) The amount of any increase and/or decrease shall be taken into account in the adjustment of the Contract Price.
- c) Contractor's cost for preparation of this Change Proposal:2

(Contractor's Name)

(Signature)

(Name of signatory)

(Title of signatory)

2Specify where necessary.

ANNEX 5. CHANGE ORDER

(Procuring Entity's Form head)

To:..... Date.....

Attention:

Contract Name:

Contract Number:

Dear Ladies and/or Gentlemen:

We approve the Change Order for the work specified in the Change Proposal (No.....), and agree to adjust the Contract Price, Time for Completion and/or other conditions of the Contract in accordance with GCC Clause 39 of the General Conditions.

1. Title of Change:
2. Change Request No./Rev.:
3. Change Order No./ Rev.:
4. Originator of Change:Procuring Entity:Contractor.....
5. Authorized Price:Ref. No.:Date.....
Foreign currency portion.....plus Local currency portion.....
6. Adjustment of Time for Completion
None..... Increase.....Days Decrease.....days
7. Other effects, if any

Authorized by:Date:

(Procuring Entity)

Accepted by:Date:

(Contractor)

ANNEX 6. PENDING AGREEMENT CHANGE ORDER

(Procuring Entity's Form head)

To:..... Date.....

Attention:

Contract Name:

Contract Number:

Dear Ladies and/or Gentlemen:

We instruct you to carry out the work in the Change Order detailed below in accordance with GCC Clause 39 of the General Conditions.

1. Title of Change:
2. Procuring Entity's Request for Change Proposal No./Rev.:dated:
3. Contractor's Change Proposal No./Rev.:dated:
4. Brief Description of Change.....
5. Facilities and/or Item No. of equipment related to the requested Change.....
6. Reference Drawings and/or technical documents for the requested Change:
Drawing/Document No. Description
7. Adjustment of Time for Completion:
8. Other change in the Contract terms:
9. Other terms and conditions:

(Procuring Entity's Name)

(Signature).....

(Name of signatory)

(Title of signatory)

ANNEX 7. APPLICATION FOR CHANGE PROPOSAL

(Contractor's Form head)

To..... Date.....

Attention:

Contract Name:

Contract Number:

Dear Ladies and/or Gentlemen:

We hereby propose that the below-mentioned work be treated as a Change in the Facilities.

1. Title of Change:

2. Application for Change Proposal No./Rev.: dated.....
3. Brief Description of Change:
4. Reasons for Change:
5. Order of Magnitude Estimation (in the currencies of the Contract):
6. Scheduled Impact of Change:
7. Effect on Functional Guarantees, if any:
8. Appendix:

(Contractor's Name)

(Signature)

(Name of signatory)

(Title of signatory)

DRAWINGS

(attached)

SPECIFICATIONS

GENERAL

101. TENDER DRAWINGS, BILLS OF QUANTITIES AND SPECIFICATION

- 101.1 The Tender Drawings are as listed in Section VI of Volume I and these may be supplemented from time to time by the Contract Administrator during the period of the contract.
- 101.2 The Specifications, Bills of Quantities, and the Tender Drawings are intended to describe and provide for a complete and finished project. They are intended to be co-operative, e.g. all items of work called for by any shall be as binding as if called for by all. The Contractor is to understand that the work herein described shall be complete in every detail, notwithstanding the fact that every item necessarily involved is not particularly mentioned or shown. The Contractor will be held to provide all labour and materials necessary for the completion of the works described and shall not avail himself of any errors or omissions which are manifestly unintentional.
- 101.3 Before commencing any work, the Contractor shall check all drawings, Bills of Quantities and Specifications and report to the Contract Administrator any errors or inconsistencies and shall verify all dimensions given on the drawings
- 101.4 The Specifications are divided into trades and divisions for the distinct

purpose of facilitating the work. However, the Contractor will become responsible for furnishing all labour and materials necessary to provide the complete project as contemplated by the drawings and specifications. Any item mentioned under any heading of the Specifications must be supplied even though it is not called for again under the heading for the respective work.

- 101.5 At the award of contract the contractor shall sign one set of drawings and specifications and such signed set of contract documents shall be deposited with the Contract Administrator as an additional evidence of the Contractor's understanding of the work required.

102 SETTING OUT OF THE WORKS

- 102.1 The Contract Administrator's Representative will if necessary provide the Contractor with basic information supplementary to that shown on the Drawings such as the position of centre-lines and base-lines etc. Such supplementary information may be provided on drawings sketches in writing or indicated on the site.
- 102.2 The contractor shall prepare detailed setting out drawings and data sheets as necessary and submit them to the Contract Administrator's Representative in triplicate for approval. Any modification to the setting out drawings or data sheets required by the Contract Administrator's Representative shall be made by the Contractor and re-submitted for final approval. Approval by the Contract Administrator's Representative shall be signified by the return to the Contractor of one copy duly signed by the former or an authorized member of his staff.
- 102.3 Should it be necessary during setting out or during construction for agreed setting out details to be amended to contractor shall amend the drawings or data sheets or make new ones for approval as required by the Contract Administrator's Representative.
- 102.4 Copies of setting out drawings and data sheets shall be preserved for use by the Contractor in preparing final records and drawings in accordance with the requirements set out elsewhere.
- 102.5 The Contractor shall be before commencing work establish steel datum pegs at all sites which shall be securely concreted in and shall agree with the Contract Administrator the level and co-ordinates of each peg.

103 CONTRACTOR'S WORKING AREA/BOUNDARIES OF WORKS.

- 103.1 The contractor shall make his own arrangements for and pay all costs incurred in the use of such areas of land as he may require for storage and working space for the purpose of the contract.
- 103.2 The employer will provide the land and rights of way for works specified in the contract.
- 103.3 The contractor shall not enter upon or occupy with men tools equipment and materials any land other than land or rights of way provided by the Employer without the written consent of the owner of such additional land or rights of way as he may require in accordance with conditions of contract.

104 FLAGGING LIGHTING WATCHING AND TRAFFIC CONTROL

- 104.1 The Contractor shall be responsible for watching and lighting the works and for the flagging and control of traffic and he shall comply with the requirements of the Employer and police and the competent Authority in these matters.

105 REGISTRATIONS ON USE OF ROADS.

- 105.1 The Contractor shall not run tracked vehicles or tracked plant on any existing works of the Employer or on any public or private road being a metallic or sealed road or on any public or private road being a metallic or sealed road or on any other public or private road without the written approval of the Contract Administrator and the responsible Authority or Owner and subject to such conditions as each may require.
- 105.2 The Contractor shall observe all weight restrictions which apply automatically to the majority of minor roads and tracks in Kenya when such road and tracks are wet and with all other reasonable restrictions which may from time to time be imposed by the Contract Administrator and the responsible Authority or Owner.
- 105.3 Contractor shall not be entitled to additional payment for any additional cost he may incur on account of adverse weather and road conditions, restrictions on the use of the roads delays detours or any other thing which may increase the average haulage distance or journey time or otherwise adversely affect his operations.

106. OFFICE FOR CONTRACT ADMINISTRATOR'S REPRESENTATIVE

- 106.1 The Contractor shall be responsible for the provision of the Contract

Administrator's Representative furnished office accommodation for the entire duration of his supervision contract. (A bill item has been included for the costs)

107 CONTRACTOR'S OFFICES, YARDS, STORES, ETC.

- 107.1 The contractor shall provide and maintain at a place to be agreed with the Contract Administrator's Representative an office for the use of his Agent and to which written instructions by the Contract Administrator's Representative can be delivered. Any instructions delivered to such office shall be deemed to have been delivered to the Contractor. This office will be erected before any construction work commences and will be open and attended at all hours when work is in progress.
- 107.2 The Contractor shall make his own arrangements for all yards stores etc. and for all services in connection therewith for the efficient execution of the Contract.
- 107.3 The location of all offices and stores shall be agreed beforehand with the Contract Administrator and shall be such as to avoid obstruction and nuisance to the public and interference with the proper operation of the existing services.

108 ACCOMMODATION FOR WORKMEN

- 108.1 The contractor shall provide at each site sufficient closets or latrines to the satisfaction of the Government Medical Officer. They shall be properly screened and maintained in a clean and sanitary state at all times.

109 FIRST AID OUTFITS MEDICAL TREATMENT AND TRANSPORT

- 109.1 During the progress of the works the Contractor shall provide and maintain to the satisfaction of the Medical Officer of Health in easily accessible positions on the Site adequate First Aid Outfits to the approval of the Medical Officer of Health and of the Contract Administrator, such outfits to be in charge of an experienced dresser who shall be on duty at the Site during working hours.

110 WATER AND ELECTRICITY SUPPLIES

- 110.1 The Contractor shall make his own arrangements for water and electricity supplies and shall pay all constructional costs, fees and expenses incurred and for all the water and electricity used.

111. PRECAUTIONS AGAINST CONTAMINATION OF THE WORKS

- 111.1 The Contractor shall ensure that all his personnel working on the site are medically suitable to be in contract with a public water supply and his personnel shall undergo any necessary medical test at the Contractor's expense to show that they are free from infectious diseases and are not carriers of any such diseases.
- 111.2 The Contractor shall at all times take every possible precaution against contamination of the works and existing Water Mains. The Contractor shall give strict instructions to all persons employed by him to use the sanitary accommodation provided. Clause 16 of the Conditions of Contract will be rigidly enforced in any case where these instructions are disobeyed.
- 111.3 Throughout the Contract the Site and all permanent and temporary works shall be kept in a clean tidy and sanitary condition.

112. LEVEL DATUM

- 112.1 All levels are referred to survey of Kenya datum and the Contractor shall obtain in writing from the Contract Administrator's Representative the location and value of the permanent bench marks to be used.

113. LEVELS AND DIMENSIONS

- 113.1 The reduced levels shown on the Drawings are believed but not guaranteed to be correct. In the event of any discrepancies between the Drawings and Specification, the Specification shall have precedence over the Drawings. In the event of any discrepancies between Drawings the Contractor shall notify the Contract Administrator in writing who will issue corrections, forthwith.

114. SURVEY EQUIPMENT AND LABOUR

- 114.1 The Contractor shall maintain the Contract Administrator's Representative survey instruments and other equipment necessary for inspection/checking of Works for the entire duration of the contract (A bill item has been included for the procurement)
- 114.2 The Contractor shall provide all labour and materials as may be required by the Contract Administrator's Representative for survey work in connection with the works.

115. ORDER OF CONSTRUCTION OF WORKS

- 115.1 Construction of the Works shall be carried out as directed by the Contract Administrator.
- 115.2 Following detailed discussions with the Contract Administrator, and before he begins the work, the Contractor shall submit to the Contract Administrator a programme which shall be reviewed and brought up to date at frequent intervals as the work proceeds. The programme shall be adhered to and only varied by permission of the Contract Administrator.

116. QUALITY OF MATERIALS AND WORKMANSHIP

- 116.1 All materials and workmanship shall be to the approval of the Contract Administrator. In the reading of this Specification the words “to the approval of the Contract Administrator” shall be deemed to be included in the description of all materials or articles incorporated in the Works and in the descriptions of the operation for the due execution of the works.
- 116.2 Specifications of the British Standards Institution current at the date of tender shall apply for all materials and workmanship unless otherwise directed by the Contract Administrator.
- 116.3 The words “British Standards Specifications” are hereinafter abbreviated to B.S.

117. SUBMISSION OF SAMPLES

- 117.1 Before incorporating in the finished work any material or articles which he supplies under the terms of the Contract the Contractor shall submit to the Contract Administrator’s Representative for his approval a sample of each respective material or article and such samples shall be delivered to and be kept at his office for reference. All the respective kinds of material and articles used in and upon the Works shall be at least equal in quality to the approved samples. Each and every sample shall be a fair average of the bulk material or of the article which it represents. The Contract Administrators Representative may decide the method by which each sample to be taken from the bulk shall be obtained.

118. RESPONSIBILITY FOR ORDERING MATERIALS AND MANUFACTURED ARTICLES AND SAMPLES FOR TESTING.

- 118.1 The responsibility for so ordering and delivering materials and manufactured articles and samples that they may be tested sufficiently far in advance of the work as not to delay it shall rest upon the Contractor and he shall not be entitled to any time credit for delays occasioned by his neglect to order sufficiently well in advance or to payment of any costs he may incur as the result thereof.

119 TESTING OF MATERIALS

- 119.1 Tests and inspections will be carried out by the Contract Administrator or by an Inspector to be appointed by him. In such circumstances where the Contract Administrator does not require witnessed tests to be carried out, the Contractor shall furnish test certificates.
- 119.2 The contractor shall provide facilities for the Contract Administrator or his Agent to inspect examine and test all materials and workmanship. If the materials are manufactured on premises other than those of the Contractor, he shall obtain from the manufacturer similar facilities.
- 119.3 The Contractor shall give two weeks' notice to the Contract Administrator of the place or places at which the materials are to be manufactured and as to when testing will be in progress and shall ascertain before manufacture commences whether the Contract Administrator wishes to attend or send his Agent for the purposes of witnessing manufacture, inspecting, examining, or testing.

120 REJECTED MATERIALS

- 120.1 Should any materials or manufactured articles be brought on to the Site of the Works which are in the judgment of the Contract Administrator unsound or of inferior quality or in any way unsuited for the work in which it is proposed to employ them, such materials or manufactured articles shall not be used upon the Works but shall forthwith be removed from the Site of the Works all at the Contractor's expense and in each case as the Contract Administrator and/or Contract Administrator's Representative shall decide and direct.

121 CUTTING OUT EXISTING WORK

- 121.1 Where existing work is to be cut, the Contractor shall ensure that the cutting out is done in such manner as not to cause permanent damage to the surrounding structure. Before commencing to cut out any work, the Contractor shall submit to the Contract Administrator the method he proposes to use and no such work will be permitted until the Contract Administrator's written approval has been obtained.
- 121.2 Notwithstanding the giving of the Contract Administrator's approval, the Contractor shall be liable for making good at his own expense any damage arising from such work of cutting out.

122 EXISTING SERVICES

- 122.1 The Contractor shall take every precaution to ensure that all existing services

pipes cables drainage and irrigation ditches and the like are located supported and safeguarded from damage even though they may not be in the line of excavation but near to it. Any damage caused to any such services pipes culverts cables drainage and irrigation ditches and the like attributable to the Contractor's operations or to his negligence shall be made good by or for

the Contractor at his own expense or the satisfaction of the Contract Administrator and of the owner or responsible Authority.

- 122.2 In the event of the owner or responsible Authority electing to repair such damage the Contractor shall pay the cost of his or their so doing the work. Should the Contractor fail to pay the cost of the said work within a reasonable period of the account being presented the Employer reserves the right to settle the account and deduct the sum paid by him from moneys due or which may become due to the Contractor.

123 TEMPORARY REMOVAL OF EXISTING SERVICES

- 123.1 If it should become necessary for the proper execution of the work temporarily to remove or divert any existing pipe sewer field-drain cable drainage or irrigation ditch or other service the Contractor shall obtain permission from the competent

Authority or Owner and shall carry out the work at his own expense in a manner and at times to be approved by such Authority or owner and shall subsequently reinstate the work to the satisfaction of such Authority or Owner. In the event of the Owner or responsible Authority electing to arrange for the temporary removal of an existing service the Contractor shall pay the cost of his or their doing the work. Should the Contractor fail to pay the cost of the said work within a reasonable period of the account being presented the Employer reserves the right to settle the account and deduct the sum paid by him from moneys due or which may become due to the Contractor.

- 123.2 The Contractor's attention is particularly drawn to the requirement to maintain drainage and irrigation ditches in order to avoid any interruption of flow of water therein to the satisfaction of the Contract Administrator Owner or competent Authority and the Contractor shall be deemed to have included in his rates and prices for all temporary works so required.

124 PERMANENT DIVERSION OF EXISTING SERVICES

- 124.1 If in the opinion of the Contract Administrator and/or of the competent Authority or owner it should become necessary permanently to remove or re-align any existing pipe sewer field- drain cable ditch or other service the Contractor shall obtain permission where necessary from the competent Authority or Owner and shall carry out and complete the work to the satisfaction of the Contract Administrator and such Authority or Owner. Payment for such additional work

will be made in accordance with the tendered rates and/or the schedule for day work contained in the Bill of Quantities as the Contract Administrator will determine provided always that the necessity for such permanent diversion has not arisen due to the fault of the contractor.

- 124.2 In the event of the Owner or responsible Authority electing to arrange for the permanent diversion of an existing service due to the fault of the contractor doing the work. Should the Contractor fail to pay the cost of the said work within a reasonable period of the account being presented the Employer reserves the right to settle the account and deduct the sum paid by him from monies due or which may become due to the Contractor.
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125 PERMANENT SUPPORT FOR EXISTING SERVICES, ETC.

- 125.1 If in the opinion of the Contract Administrator and/or the competent Authority or owner it should become necessary to provide permanent support for any existing pipe sewer cable structure or other thing disturbed exposed or injured during or after the execution of the works the Contractor shall carry out promptly such additional works as the Contract Administrator may require to provide such permanent support. Payment for such additional work will be made in accordance with the tendered rates and/or the schedule for Day work contained in the Bill of Quantities as the Contract Administrator will determine provided always that the necessity for such permanent support has not arisen due to the fault of the Contractor.

126 ATTENDANCE UPON OTHER CONTRACTORS

- 126.1 When an item is included in the Bill of Quantities for attendance, such attendance shall in addition to the requirements of the conditions of contract include all reasonable and customary conveniences apparatus plant and labour in attendance.

127 SUPPORT TO EXCAVATIONS

- 127.1 Payment for timber and other supports left in excavations will be made only for those supports ordered to be left in for any purpose by the Contract Administrator. Supports so left in will be paid for at the rates entered in the Bill of Quantities.

128 OWNERSHIP OF EXCAVATED AND OTHER MATERIAL

- 128.1 All material of any kind whatsoever including growing matter removed or cut down as part of the works shall remain the property of the Employer or the owner

of the land through under or over which the works are carried out. The disposal of such material belonging to the Employer shall be at the discretion of the Contract Administrator who will instruct the Contractor in all matters of its use and/or removal from the site.

129 CARE OF BOUNDARY HEDGES, WALLS, FENCES AND TREES

- 129.1 The Contractor shall not cut through or remove any section of any boundary, hedge, wall, or fence without the prior approval of the Contract Administrator's Representative who will determine the limits of such cutting or removal.
- 129.2 Approval for the cutting or removal of boundary hedges walls and fences will normally be limited to those crossing the route of mains and pipelines and the contractor shall so conduct his operations as to minimize the extent of such cutting through or removal.

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- 129.3 In the case of boundary hedges walls and fences being part of enclosed paddocks or grazing areas the Contractor shall provide erect maintain and remove on completion of all work adequate temporary fencing or shall by other means ensure that animals and other livestock cannot stray from the previously enclosed paddocks or grazing areas.
 - 129.4 The Contractor shall repair and reinstate in a manner similar to the original or by other approved means any hedging wall or fence which he may have cut through or remove with or without the approval of the Contract Administrator's Representative or damaged during his operations and all such repairs and reinstatement shall be the contractor's sole liability and shall be carried out to the satisfaction of the Contract Administrator and the responsible Authority or owner.
 - 129.5 The Contractor shall not cut down grub up or remove any tree without the prior permission of the Contract Administrator.

130 WORK THROUGH PRIVATE PROPERTY AND SERVING OF NOTICES

- 130.1 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 Employer and the Contract Administrator fully informed concerning the rate of contract progress and of his intention to enter and begin work within any way leave as required by Clause 201 and 202 of this Specification.

131 COMPENSATION FOR LOSS OF CROPS ETC. IN PRIVATE PROPERTY

- 131.1 The attention of the Contractor is drawn to Clause 11 of the conditions of contract and with reference to sub-clause 11(1) of the clause the description “loss of or damage to property” shall mean crops including trees, shrubs and hedges within the boundaries of the lands and rights of way defined in this Specification except such individual trees shrubs and hedges which the Contract Administrator may require to be preserved in accordance with Clause 292 of this Specification.

132 PROVISION OF FACILITIES FOR CONTRACT ADMINISTRATOR'S INSPECTIONS

- 132.1 The Contractor shall provide the necessary equipment access and labour to enable the Contract Administrator and/or the Contract Administrator's Representative to conveniently carry out such inspections as they may deem necessary at all times during the currency of the contract.

INSPECTIONS BY CONTRACT ADMINISTRATOR DURING PERIOD OF MAINTENANCE

- 132.2 The Contract Administrator will give the Contractor due notice of his intention to carry out any inspections during the period of Maintenance and the Contractor shall thereupon arrange

for a responsible Representative to be present at the times and dates named by the Contract Administrator. This Representative shall render all necessary assistance and take note of all matters and things to which his attention is directed by the Contract Administrator.

134 CLEARING UP SITE

- 134.1 During the progress of the works the contractor shall at reasonable intervals or when required by the Contract Administrator's Representative gather and remove rubbish and surplus materials from the site.
- 134.2 On completion of the works the site of all permanent and temporary works in connection with the contract shall be carefully cleared up and everything shall be handed over to the Employer in a neat and clean condition.
- 134.3 All rubbish roots undergrowth and the like cleared from the works must be burnt or removed completely from the site and disposed of by other means to the satisfaction of the Contract Administrator and the Contractor shall make his own arrangements for all such disposal.

- 134.4 All surplus materials and manufactured articles supplied by the contractor shall if not accepted or purchased by the Employer be removed from the site and disposed of by the contractor.

135 THE LANDS UNDER THE CONTROL OF THE CONTRACTOR

- 135.1 The Contractor shall attend to all operations carried out on the lands under his control and utilize them only for the purpose of construction of the works and to the lands responsible for any damage to the lands responsible for any damage to the lands and to the lands adjacent. Before starting any work the Contractor shall ascertain the boundaries of the lands coming under his control.

136 FENCING THE WORKS

- 136.1 The Contractor shall fence the works in a manner sufficient for the protection of the public and of livestock and property to whomsoever it may belong during the progress of the works and shall satisfy the Employer and the Contract Administrator or his Representative in this respect.
- 136.2 Temporary fencing shall prevent the straying of livestock and reasonable access to lands and premises must be provided.
- 136.3 The Contractor shall erect and maintain guard-rails around all trenches and other open excavations in a manner sufficient to provide safety for pedestrians and vehicles at all time.
- 136.4 Temporary bridges shall be provided across trenches to maintain reasonable access for pedestrians and vehicles to land and property on either side of the trench.

137 CORRESPONDENCE AND RECORDS TO BE IN THE ENGLISH LANGUAGE

- 137.1 All correspondence between the contractor and the Contract Administrator or the Contract Administrator's staff shall be in the English language.
- 137.2 All books, time sheet records, notes, drawings, documents shall be in the English Language, or, if the original documents are in another language, a certified translation in English shall be submitted to the Contract Administrator or Contract Administrator's Representative.

138 MATERIALS ORDERED AND PAID FOR BY THE EMPLOYER

- 138.1 The Employer will deliver to the Contractor at the specified places the materials detailed (but not by way of limitation) in the Appendix to the Bill of Quantities and any other materials of which the Contract Administrator may from time to time give particulars to the contractor. Payment for all such materials delivered to those places and store areas has been or will be made by the Employer to the several manufacturers forwarding agents and shipping companies and the Contractor will not be allowed commission on any such payments.
- 138.2 The Contractor shall take delivery of all materials without delay upon receipt of instructions from the Contract Administrator's Representative giving details of the materials and the places at which delivery is to be taken.
- 138.3 The Employer will make every endeavor promptly to supply any materials which he may undertake to supply in accordance with the Conditions but he will accept no responsibility for loss delay or inconvenience suffered by the Contractor should such materials not be available and/or delay occur in the supply of such materials and plant.
- 138.4 The Contractor shall examine the materials before taking delivery and shall report any damage defect or deficiency to the Contract Administrator's Representative immediately.
- Any damage defect or deficiency so reported or which arises after the contractor has taken delivery and could not reasonably have been detected by normal methods of inspection shall be repaired or made good at the expense of the Employer provided always the Contract Administrator is satisfied that such damage defect or deficiency has not been caused by negligence on the part of the contractor.
- 138.5 Subject to the above provisions whilst taking delivery of and after taking delivery of all materials by the Employer and Contractor shall be solely responsible for any loss, damage, defect or deficiency however arising in connection therewith and he shall forthwith make good such loss, damage, defect or deficiency at his own expense.
- 138.6 After taking delivery of the materials the Contractor shall transport them without delay to his own store on the site of the works or elsewhere. The contractor will be held solely responsible for any claim against the Employer and any delay brought about by the Contractor's failure to take delivery immediately he is instructed to do so and the settlement of any such claims shall be at the Contractor's sole expense.
- 138.7 In pricing the items in the Bill of Quantities for "Take delivery" the Contractor shall include (but not by way of limitation) for the following services and supplies:-
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- (a) Accept, unpack, physically inspect, and test as may be necessary, re-pack as required report discrepancies and breakages, cart to storage compound and/or stores building and conduct all insurances claims.
- (b) Store the materials and plant and maintain a Stores Ledger recording in full detail both the receipt and disposal of all items.
- (c) Guard and insure all such material and plant against all loss or damage.

138.8 Where materials are supplied by the Employer the quantity incorporated in the Works will be checked against the quantity supplied. The Contractor shall at his own expense return all surplus material to the Employer's store and make good any deficiencies. In checking pipes an allowance of not more than one per cent of the measured quantity used will be made to cover cutting to waste except in special circumstances which shall be decided by the Contract Administrator.

139 TESTING OF WATER-RETAINING STRUCTURES

139.1 All water-retaining structures shall be tested for water tightness on completion in the following manner. The structure shall be filled with clean water in stages and held at each water level for such time as the Contract Administrator may require. Should any dampness or leakage occur at any stage the water shall be drawn off and the defects remedied to the satisfaction of the Contract Administrator. The procedure shall be continued and finally the structure shall be allowed to remain full for seven days. Should any damages or leakages or other defects occur they shall be made good to the satisfaction of the Contract Administrator and the structure re-tested until the water tightness is approved by the Contract Administrator.

139.2 The Contractor shall provide a hook gauge to measure variations in water level during the tests.

139.3 The testing shall be carried out before excavations are backfilled and embankments placed

140. CLEANSING AND STERILIZING WATER-RETAINING STRUCTURE

140.1 The inside of all potable water-retaining structure and all interior pipe work and fittings shall be thoroughly cleaned and washed after the water tightness test has been approved by the Contract Administrator to remove all contamination and the water from these operations shall be removed by squeegees and drained away.

140.2 The structure shall then be filled to overflow level with clean water clean water containing 20 parts per million of chlorine and left for a period of at least 24 hours. The chlorinated water shall then be drained away and the structure refilled with

clean water from which samples shall be taken for analysis to the instruction of the Contract Administrator. If any of the results of the analyses are unsatisfactory when compared with those of the control sample of the supply water the sterilizing process shall be repeated until the results of the test are satisfactory.

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- 140.3 The costs of the initial sampling analysis and preparing reports on the bacteriological quality of the water shall be borne by the Employer but should the initial reports be unsatisfactory the costs of any subsequent sampling analyses preparing reports shall be borne by the Contractor.

141 WATER ETC. FOR TESTING WATER-RETAINING STRUCTURES

- 141.1 The Contractor shall make available all water required for the testing of water-retaining structures. The Employer may allow the Contractor to draw water for testing from the existing water supply at the price pertaining at the time.
- 141.2 The Contractor shall be solely responsible for the provision of all labour materials and other things necessary for testing water-retaining structures.
- 141.3 The Contractor shall be responsible for making all arrangements necessary for obtaining all water required for testing water-retaining structures.

142 CONTRACTOR TO USE SPECIAL PLANT IF REQUIRED

- 142.1 The Contractor shall if the Contract Administrator so requires supply and use such special plant and tools in executing the work as the Contract Administrator may direct.

143 USE OF PARTS OF THE WORKS ON THEIR COMPLETION

- 143.1 Should the Employer so desire he shall have full power to use and put into active operation any or all sections or parts of the works directly they are finished. Such action shall not however relieve the Contractor of his obligations with regard to maintenance.

144 DUTY STAFF

- 144.1 At least one responsible senior representative shall be on the site and immediately available at all times during normal working hours. To such representative shall be delegated full authority to confer with the Contract Administrator's Representative or his staff and to take all steps and to issue all those instructions which may be required in an emergency to ensure the safety of all personnel of the works and of all the Employer's and other property on the Site and in the immediate vicinity thereof. The Contract Administrator's

Representative may from time to time at his discretion after taking into consideration all the prevailing conditions allow some relaxation of this clause but such relaxation shall be made only with his written permission and subject to any special conditions which he may then require.

145 REGULATIONS AND SITE DISCIPLINE

- 145.1 The Contractor shall obey all police health and municipal regulations all other regulation which may from time to time require his observance and he shall instruct his agents servants and other employees to obey such regulations. The Contractor shall be responsible for keeping discipline on the Site and shall permanently remove from site within 24 hours from receipt of written instructions by the Contract Administrator to that affect any servant laborer or other employee who neglects to observe the regulations or who refuses to carry out

instructions given to him by the Contractor on the representation of any responsible representative of the Employer.

146 REMOVAL OF EMPLOYEES

- 146.1 The contractor shall permanently remove from site any person guilty of attempted dishonesty to the Employer or of disobedience of the regulations aforesaid or of bad behavior of who causes or attempts to cause trouble and unrest among the labour force.

147 RECORD OF NAMES AND PERMANENT ADDRESSES OF EMPLOYEES

- 147.1 The Contractor shall keep a full record giving the names and permanent addresses of all his employees and holds this record for the inspection of the Contract Administrator.

148 FIRE PRECAUTIONS

- 148.1 The Contractor shall provide at the Site adequate audible means of giving the alarm in the event of an outbreak of fire and shall make arrangements which may be necessary for the sounding of such an alarm. The Contractor shall take all precautions against fire and he shall provide firefighting appliances labour, pangas, beaters, axes etcetera as may be necessary for the isolation and extinguishing of fires with the utmost expediency.

149 TESTS ON COMPLETION

- 140.1 On commissioning of the works the contractor shall have on site personnel to ensure that all the plant is working satisfactorily. The personnel shall be on site for a minimum period of 7 days or for such time as is required to determine that the equipment is operating to the satisfaction of the Contract Administrator.

150 CONNECTION INTO EXISTING MAIN

- 150.1 Connection into existing mains will be carried out at times acceptable to the Employer such that any inconvenience to the public is kept to a minimum. This may require night or Sunday working and the contractor must allow for this in his rates. The contractor shall notify the Contract Administrator at least seven days before the day on which the particular connection is proposed. The Contract Administrator will make any necessary arrangement for the limited shut down of the mains, provided that times proposed are acceptable.

151 RESPONSIBILITY FOR DAMAGE

- 151.1 The Contractor shall be fully responsible for any damage which may be done by himself or his employees to site buildings, works services such as electricity, water, gas, pipelines, or apparatus. Such damage must be made good to the entire satisfaction of the Contract Administrator within a reasonable period of time specified in writing by the Contract Administrator.
- 151.2 The Contractor shall be fully responsible for and take every reasonable precaution to protect any section of the contract works against loss or damage from any cause.

152 SAFETY PRECAUTIONS TO BE OBSERVED

- 152.1 The Contractor shall be responsible for the safety of his own staff and his sub-contractors staff whilst employed on the site.
- 152.2 The Contractor shall see that only safe working practices are used, and that only proper and safe equipment such as step ladders, ladders, scaffolding, ropes, and lifting equipment are in use on the site. The Contractor shall ensure that his staff are suitably instructed to use only safe working methods and safe appliances during the receipt, unloading, handling into store and transmission to site, erection and installation, testing and commissioning, the equipment, materials and installation forming the requirements of this contract.
- 152.3 The Contract Administrator will require cessation of any working practice which in the Contract Administrator's opinion is not safe and the removal of any equipment which has not been certified as safe by an appropriate authority.

153 OPENING AND REINSTATEMENT OF SURFACES

- 153.1 The Contractor shall ascertain and observe the current regulations of the Highway Authority and the requirements of any other body public or private person in, on, under, over or through whose land the works are to be carried out for the opening and reinstatement of surfaces and it will be deemed that he has ascertained all charges and requirements connected therewith and has made full allowance in his prices therefore.
- 153.2 All surfaces of roads fields open spaces paths courtyards gardens verges and other places whether public or private which are affected by the operations of the contractor are to be reinstated by him both temporarily and permanently unless in the case of surfaces in the control of the Highway Authority or a public body such Authority or body shall elect to do the permanent reinstatement themselves when the Contractor shall do the Temporary reinstatement only.

CONCRETE

301 GENERAL

- 301.1 The standard of materials and of workmanship shall not be inferior to the recommendations of the current:

- (a) British Standard Code of Practice CP114-)
The Structural Use of Reinforced) whichever
is Concrete in Buildings and CP110 – The) applicable
Structural Use of Concrete.) to the
Or) particular
- (b) British Standard Code of Practice BS 5337)
structures
The Structural Use of Concrete for)
Retaining Aqueous Liquids)
and
- (c) Appropriate British Standards
or
- (d) Approved Kenya Bureau of
Standards or Ministry of Works
Standards, if any.
Or

- (e) Other equivalent and approved international standards.

The requirements outlined in the above documents must be read with those of this Section of the Specification and where any conflict exists between the recommendations of the above and of this Specification, the requirements of this Specification shall prevail.

- 301.2 As and when required by the Contract Administrator the Contractor shall prepare and submit, before commencing the work, a time-chart (additional to the general programme) detailing the various operations for concrete work.
- 301.3 No material shall be used in the Works until prior approval for its use has been given by the Contract Administrator; neither shall any change in the nature, quality, kind, type, source of supply or manufacture be made without the Contract Administrator's permission.

301.4 Names of manufacturers and test certificates for materials not supplied by the Employer shall be supplied as soon as possible to the Contract Administrator.

301.5 The cost of providing samples and the cost of carrying out tests required by 306.1 (except as otherwise provided in the Conditions of Contract) together with the cost of supplying equipment for sampling and site testing indicated in columns 3 and 4 of Table 3.7 of this section of the Specification shall be borne by the Contractor (see also Clause 306.1)

301.6 During the progress of the Works, consignment notes for materials not supplied by the Employer shall be supplied to the Contract Administrator giving details of each consignment.

301.7 The use of the word "approved" in this Specification refers to the approval of the Contract Administrator.

301.8 Cross references between certain Clauses of this Specification have been shown in brackets following particular item.

302 CONCRETE

302.1 *Requirements*

302.1.1 The mix proportions shall be selected to ensure that the workability

of the fresh concrete is suitable for the conditions of handling and placing, having regard to the structural element being constructed, the disposition of reinforcement, the climatic conditions prevailing and the limitations set by Table 3.1 of this Clause for the particular class of concrete specified.

302.1.2 Notwithstanding the strength requirements of this Specification, in order to ensure adequate durability of the finished concrete, while at the same time limiting its shrinkage characteristics, the limits shown in Table 3.1 shall not be exceeded.

302.1.3 In all cases of mix proportioning, the added water shall be included with due allowance for the moisture contained in the aggregates and shall be the minimum consistent with the workability requirements. Where difficulty is experienced in maintaining the correct workability for the water-cement ratio outlined in Table 3.1 the use of a water reducing additive may be permitted subject to Clause 302.9

302.1.4 Where aggregates do not conform to the moisture requirements of Clause 21.2 of BS 5337 but are permitted for use, in the case of liquid retaining structures the water content indicated in Table 3.1 shall be reduced by 2.5 litres per 50 kg of cement.

Type of Structures	Exposure (Cl.49 BS 5337)	Minimum Cement Content Kg/m³ finished Concrete					
		OPC			Sulphate Resisting cement		
		Aggregate		W/C	Aggregate		W/C
		40 mm	20 mm		40 mm	20 mm	
Liquid Retaining Surface Structures	A	320	360	0.50	As for Ordinary Portland Cement (OPC)		
Liquid Retaining Substructures Building Foundations	B	260	290	0.55			
Protected Building Structures*	C	220	250	0.60			
		Minimum Cement Content Kg/m³ finished concrete					

Type of Structure	Exposure to Sulphate Condition		O P C			Sulphate Resisting Cement		
			Aggregate		W/C	Aggregate		W/C
	Total 50% 3	Parts per 100 000 in ground water	40 mm	20 mm		40 mm	20 mm	
Substructures And Foundations	<0.2	<30	240	280	0.55	-	-	-
	0.2-0.5	30-120	290	330	0.5	240	280	0.55
	0.5-2.0	250-500	-	-	-	290	330	0.5
	1.0-2.0	250-500	-	-	-	330	370	0.45
	>2.0	>500	-	-	-	Ditto with Protective coating		

*Not exposed to liquid or moist or corrosive conditions

- 302.2.1 The basis for assessing the strength of concrete shall be related to the characteristic strength, defined as the strength of the concrete at 28 days, as determined by the standard method of testing (Clause 306.1) below which not more than 5% of the test results shall fall.
- 302.2.2 The relationship between the class of the concrete and the characteristic strength shall accord with Table 3.2

TABLE 3.2 : Concrete Strength Requirements

Location	Coarse Aggregate Size (mm)	Class and Characteristic Strength N/mm ² 28 Days	Target Strength 7 days
Blinding Concrete	20 or 40	15	10
Blinding Concrete Sulphate Condition	20	25	
Substructures thickness less than 400m	20	25	
Substructures walls and slabs more than 400m	20 or 40	25	17
Superstructures normal concrete	20	20	14
or	20	25	
68. Fine Concrete	10	25	
Precast Concrete	10 or 20	30	20
Prestressed Concrete:	20	30	
Post-tensioned tendons	20	40	
Structural concrete in water towers – all components	20	30	

302.3.1 If, in the opinion of the Contract Administrator, the Prescribed Mix method of proportioning will not produce concrete to satisfy the requirements of this Specification, the mix shall be designed.

(a) Designed Mixes

Proportions shall be determined in accordance with the "Design of Normal Concrete Mixes" published by the British Department of the Environment and obtainable from:-

The Government Bookshop,
P.O. Box 569,
London,
ENGLAND SE1 9NH

or other approved methods, for the requirements set out in Clause 302.1 and 302.2

For the purpose of determining the design mean strength of the concrete a margin shall be added to the characteristic strength (indicated in Table 3.2) for the particular class of concrete. This design margin shall be assessed on the degree of control reasonably to be expected in the manufacture of the concrete and shall not be less than 7.5 N/mm² nor less than 1.64 times the standard deviation. Until such time as the standard deviation has been assessed the margin shall not be less than 15 N/mm².

Details of the designed mixes shall be forwarded immediately to the Contract Administrator for his approval.

(b) Prescribed Mixes

Proportions for the several classes of concrete shall conform to the requirements of Table 50 of CP 110.

(c) Nominal Mixes

Nominal mix proportioning is applicable only to non-structural concrete Class 10 and Class 15 and in special cases when permitted by the Contract Administrator for the other classes

of concrete. Proportions shall conform to the requirements of Table 3.2.1

(d) Chloride Content

The total chloride content of the concrete mix shall comply with the requirements of CP 110 Cl. 6.3.8 (as amended November 1980)

TABLE 3.2.1 : Nominal Mix Proportions

Class of Concrete	Nominal Mix
30 or 30(s)	1 : 1 : 2
25 or 25(s)	1 : 1.5 : 3
20 or 20(s)	1 : 2 : 4
15 or 15(s)	1 : 3 : 6
10 or 10(s)	1 : 4 : 8

302.4 QUALITY CONTROL

302.4.1 The principal basis of control shall be by comparison of the results of the compression cube tests at 28 days, except for small quantities of concrete whose strength can be otherwise derived and which is permitted for use by the Contract Administrator. 40 sample cubes shall be made initially in eight samples each day for five days of concreting and thereafter one sample in 25 mixes or not less than one for each day's concreting.

302.4.2 Where materials are of an unfamiliar grading or type, compression tests shall be carried out at 7 days and adjustments made in advance of the main control methods outlined above.

302.4.3 Cube test results will be examined individually in 10 consecutive sets of four and the standard deviation and mean strength of each set calculated. The concrete mix proportions will only be acceptable if all of the following requirements are complied with:-

- (i) not more than two results in 40 are less than the characteristic crushing strength

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- (ii) no value of the average of any set of four results is less than the characteristic strength plus one-half of the design margin (Clause 302.3)
 - (iii) when 40 results have been obtained and the mean strength and standard deviation are calculated, the mean strength minus 1.64 times the standard deviation shall be greater than the characteristic strength.

302.4.4 Where the results do not confirm to the requirements the following action shall be taken:-

- (a) Adjustments to the mix shall be made to obtain the strength required.
- (b) In the case where any result is less than 80% of the characteristic strength - in accordance with Clause 305.1. For those prescribed mixes required to be tested, requirements (i) and (ii) only will be applicable.

302.5 *Production*

302.5.1 Aggregates and cement shall be proportioned by weigh-batching, and water shall be proportioned by volume. Subject to the prior approval of the Contract Administrator volume-batching of aggregates may be used for small sections of work, but volume batching of cement will in no case be accepted. The Contractor may, however, so proportion the mix that each batch shall use a whole bag or bags of cement, the weight of which is known precisely. Where permission has been given for volume batching of aggregates, all gauge boxes shall be accurate and due allowance shall be made for bulking of the aggregates in assessing the correct volume to be used. (Clause 602 of CP 114).

302.5.2 The aggregates and the cement shall be thoroughly mixed in a clean mechanical mixer for a period of time agreed with the Contract Administrator and the water added on the basis of the approved design.

302.5.3 The amount of water added shall conform to the requirement of Clause 302.1

302.5.4 Batch mixing machines shall comply with the requirements of BS 1305. They shall be provided in such numbers and of such capacity as to ensure a continuous supply of freshly mixed concrete at all times during construction.

302.5.5 Continuous mixing machines shall be used only with the written permission of the Contract Administrator.

302.6 *Cement*

302.6.1 Ordinary and Rapid-hardening Portland cement shall comply with BS 12.

302.6.2 Sulphate resisting cement shall comply with BS 4027
302.6.3 High Alumina, super sulphated, pozzolanic, low heat, blast-furnace or other cements shall only be used as directed by the Contract Administrator. They shall not be considered within the scope of this Specification but shall be subject to the requirements of a supplementary specification when required to be used.

302.6.4 No extra payment will be made to the Contractor if on his own initiative he used Rapid-hardening Portland cement.

302.6.5 Cement shall be fresh when delivered to Site and the consignments shall be used in the order of their delivery. The Contractor shall mark the date of delivery on each consignment and each consignment shall be stored separately and in such manner as to be easily accessible and identified.

302.6.6 No cement in bags or other containers shall be used unless these and the manufacturer's seals are intact at the time of mixing.

302.6.7 If the cement is delivered in bags it shall be stored in a waterproof shed or building at a temperature of not less than 8°C and the bags shall be placed on dry boards above the floor to prevent deterioration or contamination from any cause.

302.6.8 Bulk cement may be used provided it is stored in an approved container.

302.6.9 The Contractor shall not use cement which has hardened

into lumps, but subject to removal of the lumps by screening, the Contract Administrator may allow such cement to be used in non- structural concrete mixes.

- 302.6.10 Cement of different types shall be kept separate in storage and shall not be mixed together in the production of concrete.

302.7 *Aggregates*

- 302.7.1 Fine and coarse aggregates shall be as defined by and be of the quality and nature required by BS 882 and BS 1201 whichever is applicable. In addition they shall be chemically inert to alkali reaction.

- 302.7.2 Aggregates shall conform to the requirements of the “Accepted Standards” of Table 3.8.

- 302.7.3 Aggregates of rounded shape or otherwise capable of producing a concrete of good workability with the minimum addition of water shall be preferred.

- 302.7.4 The Contractor shall ensure that the nature and gradings of aggregates remain reasonably consistent, and shall, if necessary, stockpile and include different gradings to ensure that the overall grading remains constant for each section of the works.

- 302.7.5 Dust or flour resulting from crushing the aggregate shall not be allowed to contaminate the stockpiles. When, in the opinion of the Contract Administrator such contamination has taken place it shall be removed by an approved means or otherwise the aggregate shall be rejected.

- 302.7.6 For mass concrete, in order to improve the consistency of the mix, dust or flour resulting from crushing the aggregate, may, subject to test, be included in controlled quantities to supplement the fine aggregate.

- 302.7.7 The aggregates of various sizes shall be kept separate and away from all possible contamination and shall be stored on a hard- standing area or in bins, provided with proper drainage at the base of the stockpiles.

- 302.7.8 Except where aggregates have been otherwise specified on the Drawings the grading of aggregates shall be as

follows:

Coarse Aggregate:

- (a) 10mm max. size, graded, for all “fine” concrete
- (b) 20mm max. size, graded for all reinforced concrete in beams and for walls and slabs not greater than 400mm thick.
- (c) 40mm max. size, graded, for all reinforced concrete walls and slabs in excess of 400mm thick.

Fine Aggregate:

- (a) Where aggregates conforming to zones 2 or 3 of BS 882 are available they shall be used.
- (b) For prescribed mixes, zones 1,2, or 3 aggregates only shall be used.

302.7.9 Sea-dredged Aggregates

Where sound land deposits are readily available locally they shall be used in preference to sea-dredged aggregates. Where however this situation does not exist, the following requirements for the use of sea-dredged aggregates shall apply in addition to those of Clause 302.7 foregoing.

TABLE 3.3 : Shell Content

The shell content shall not exceed the following values:-

Nominal Size of Aggregate mm	% by weight of dry aggregate of shell as calcium carbonate		
	Normal Reinforced Concrete Work	Liquid Retaining Structures	Main Concrete Work
75	Nil	Nil	Nil
40	5	2	5
20	10	5	10

10	15	15	15
Fine Aggregate	40	30	40

Hollow shell shall not exceed one half of the total shell content by weight of 20mm and 40mm sizes.

TABLE 3.4 : Sodium Chloride Content

The sodium chloride content shall not exceed the following values:-

	% Sodium Chloride content by weight			
	Of Dry Aggregate		Of Cement	
	Normal Reinforced Concrete Work	Liquid Retaining Structure	Normal Reinforced Concrete Work	Liquid Retaining Structure
Coarse Aggregate	0.05	0.03	0.50	0.32
Fine Aggregate	0.15	0.10		

Calcium chloride or calcium chloride-containing cements shall not be used with sea-dredged aggregates (C1.302.9)

Cements other than ordinary or rapid-hardening Portland complying with BS 12 and sulphate-resisting complying with BS 4027 shall not be used with sea dredged aggregates.

Where the use of sea dredged aggregates is shown materially to affect the rate of setting of the concrete, the Contract Administrator may require the Contractor to include an approved admixture in the mix at no extra cost (C1.302/9)/

302.8 Water

302.8.1	The Contractor shall supply all water, make all arrangements, and pay all charges in respect of such supply. Where water can be obtained from a public water supply it shall be used.
302.8.2	Where water cannot be obtained from the public supply it shall be tested in accordance with BS 3148 and if necessary shall be treated to assure compliance therewith.
302.8.3	Water for washing and curing shall be such that it will impair neither the strength of the finished concrete nor its appearance.
302.9	<i>Concrete Admixtures</i>
302.9.1	Before approval for the use of a proprietary admixture is given the Contractor will be required to satisfy the Contract Administrator as to its suitability for the work and its compatibility with the cement it is intended to complement.
302.9.2	Preference will be given to the use of admixtures which can be administered in fixed calibrated amounts through a mechanical dispenser or cachet, and which are added directly to the mixing water.
302.9.3	Where approval is given for the use of more than one type of admixture for the same concrete mix they shall be dispensed separately.
302.9.4	In all cases the Contractor shall ensure that careful control s exercised in maintaining correct proportions as laid down by the formulators. Where incorrect proportioning has been carried out, or where the admixture can be shown to have adversely affected the finished concrete, the work shall be treated in accordance with C1.305.13.
(a)	Water-reducing admixtures - The Contractor shall include an approved water-reducing admixture (plasticiser) where, in the opinion of the Contract Administrator, the workability of the mix is otherwise inadequate to achieve an acceptable compaction and/or surface finish, or where excessive bleeding of the concrete is in evidence.
(b)	Air-entraining admixtures - Refer to Clause 307.2
(c)	Set-retarding admixtures - Where large quantities of concrete are to be placed at any one time or where

concreting is undertaken under hot conditions, the Contractor may include an approved set-retarding admixture to reduce the heat of hydration and to enable work to be properly finished before premature setting has taken place.

Where sea-dredged aggregates are used the Contract Administrator may require an approved set-retarding admixture to be included in the mix (C1.302.7.9)

- (d) Set-accelerating admixtures - The Contractor shall not use set- accelerating admixtures in in-situ concrete construction except for cold weather concreting (C1.305.4) or where expressly permitted by the Contract Administrator for a specified purpose.
- (e) Calcium chloride admixtures or ingredients included in propriety type cements shall not be used in reinforced concrete or pre- stressed concrete work.

303 REINFORCEMENT

303.1 Steel

303.1.1 Reinforcement shall be:

- (a) Plain round mild steel or High Yield steel bars confirming to BS 4449.
- (b) Cold worked steel bars conforming to BS 4461 or
- (c) Fabric reinforcement made of cold drawn high

tensile bars conforming to BS 4483.

- 303.1.2 The Contractor shall obtain from his supplies certificates of the mechanical and physical properties of the reinforcement and shall submit them to the Contract Administrator for approval, except where reinforcement has been supplied by the Employer. The frequency of sampling and the method of quality control shall be in accordance with Table 4 and Clause 20 respectively of these British Standards. All high yield and cold worked bars (except in welded fabric reinforcement) shall be deformed bars complying with classification Type 2 for bond strength in accordance with Classification Type 2 for bond strength in accordance with BS 4449 and BS 4461. Where galvanised reinforcement is specified, galvanizing shall comply with the requirements of BS 729, Part 1.

303.2 Storage

Reinforcement shall be stored on Site under cover and supported clear of the ground and in such manner as to make identification easy. Supports shall be such that distorting of the steel is avoided and contamination and corrosion prevented.

303.3 Bending and Fixing of Reinforcement

- 303.3.1 The Contractor shall provide on site facilities for cutting and bending reinforcement whether he is ordering his reinforcement bent or not and shall ensure that a token amount of straight bar is available on Site for bending as and when directed by the Contract Administrator.
- 303.3.2 Reinforcement shall be wire brushed and cleaned at the Contractor's expense, before and/or after it is placed in position, if required by the Contract Administrator.
- 303.3.3 The bars shall be cold bent in strict accordance with the drawings and the Contractor shall be responsible for the accuracy of the bending. Bending dimensions shall be worked to the tolerances indicated in BS 4466 and CP 110 Table 20. Bars in which any errors in bending are beyond the limits of the foregoing tolerances shall be replaced at the Contractor's cost by correctly bent new bars, or, may be straightened and rebent cold subject to the Contract Administrator's prior approval. Any discrepancy or inaccuracy found in the drawings shall be notified to the Contract Administrator immediately.

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- 303.3.3 After assembling, reinforcement shall be securely bundled and labelled with weather-proof tags or shall be marked with other approved signs by which it can readily be identified.
- 303.3.4 After bending, reinforcement shall be securely bundled and labelled with weather-proof tags or shall be marked with other approved signs by which it can readily be identified.
- 303.3.5 Before assembling or fixing the reinforcement the dimensions to which it has been bent shall be checked by the Contractor against the drawings
- 303.3.6 The reinforcement shall be fixed in strict accordance with the Drawings as regards cover, spacing and position, and suitable precautions shall be taken by the Contractor to prevent the displacement of reinforcement during the placing and compaction of concrete.
- 303.3.7 Where required to support and retain the reinforcement in its correct position the Contractor shall provide templates stools or other supports at his own cost. He shall allow for cutting to correct length all corner lacer bars included in the bar schedules as standard lengths.
- 303.3.8 Precast concrete support blocks for reinforcement shall be manufactured from Class 30 "fine" concrete to ensure the correct cover thickness. They shall be well cured before use and carefully stored on Site to avoid contamination. Plastic and metal supports, chairs, etc. may be used subject to the Contract Administrator's prior approval.
- 303.3.9 In the case of mild steel, a lap of not less than 40 diameters of the smaller bar shall be provided at the junction of two bars for which the lap is not specifically detailed on the drawings and, in the case of High Yield steel, a lap of not less than 50 diameters.
- 303.3.10 All intersections of bars in walls and slabs and all connections between binders or links and main bars in columns or beams shall be tied with soft iron wire ties or with fixing clips which shall not be allowed to make contact with the shuttering or to project materially into the specified cover.
- 303.3.11 Unless permitted by the Contract Administrator, welding of bar reinforcement at intersections or for the joining of bars is prohibited. Where permission is granted, welding shall be carried out in accordance with the recommendations of the

Institute of Welding for the welding of reinforcing bars for reinforced concrete construction.

303.3.12 When fixed reinforcement is to be left exposed for a delayed period of time, it shall be thoroughly cleaned and painted with neat cement grout.

303.3.13 Where galvanised reinforcement is used any damage suffered by galvanising shall be made good by the application of an approved galvanising formulation, before concrete placing is commenced.

303.4 *Couplers for Reinforcement*

Couplers for reinforcement shall be either Standard Swaged Splices or Type II Alpha Couplers manufactured by CCL Systems Limited, Cabco House, Ewell Road, Surbiton, Surrey, KT9 7AH, UK., or similar approved. Where bars of different diameters are to be joined a CCL Reducer Sleeve or similar shall be used.

Couplers shall be suitable for the type and size of reinforcing bars and shall be capable of developing 15% of the characteristic strength of the smaller of the compression. Couplers shall be installed in accordance with the manufacturer's recommendations. Square twisted reinforcing bars shall not be used with couplers.

304 **SHUTTERING**

304.1 *Requirements*

304.1.1 The term "shuttering" shall be taken to include centering, formwork, strutting, bracing and the like.

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- 304.1.2 When called upon to do so by the Contract Administrator's Representative the Contractor shall submit his shuttering proposals for checking and approval by the Contract Administrator in advance of the concreting.
- 304.1.3 Shuttering shall be of such accuracy, strength and rigidity as to carry the weight and pressure from the concrete to be placed on or against it, together with all constructional, wind or other loads likely to be imparted to it, without producing deformation of the finished concrete in excess of the tolerances outlined in Clause 304.5 and Table 3.5.
- 304.1.4 All shuttering shall be sufficiently tight, without plugging, to prevent loss of grout during the vibration of the concrete. When required by the Contract Administrator joints between shutter facing boards shall be sealed with foam rubber, sealing strips or other approved material.
- 304.1.5 Faces of shuttering shall be clean, Faces of shuttering shall be clean, free from projecting nails, adhering grout and other imperfections or defects which would prevent the specified surface finish from being attained. They shall be treated with approved mould oil before positioning. Great care shall be exercised to prevent reinforcement or steelwork from being contaminated by the oil during erection of the shuttering.
- 304.1.6 Shuttering, which as a result of prolonged use of general deterioration does not, in the opinion of the Contract Administrator, conform to the particular requirements set out in this clause, shall not be used.
- 304.1.7 Through-bolts or ties will not be permitted in liquid-retaining structures. The Contractor shall use only such bolts or ties as are capable of being removed in whole or in part so that no part remaining embedded in the concrete shall be nearer the surface of the concrete than the specified thickness of cover to the reinforcement.
- 304.1.8 Beam soffits shall be erected with an upward camber of 5mm for each 3 metres of span.
- 304.1.9 Top shuttering shall be counterweighted or otherwise anchored against flotation.
- 304.1.10 Boxes for forming holes shall be constructed so as to be easily removable without damaging the concrete during removal. They shall be properly vented to permit the escape of entrapped air, and shall be capable of being sealed, subsequently to prevent

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- the loss of grout. The use of polystyrene blocks for the forming of holes, sinking, etc. will not be allowed except by express permission of the Contract Administrator.
- 304.1.11 Openings for inspection of the inside of beam, wall, column, and similar shuttering and for cleaning-out purposes shall be formed so that they can conveniently be closed before the placing of concrete.
- 304.1.12 All props shall be supported on adequate sole plates and shall not bear directly on or against concrete. They shall be capable of being released gently and without shock from the supported shuttering. No appliance for supporting the shuttering shall be built into the permanent structure without the Contract Administrator's prior approval. Props for upper level support shall be placed directly over those at lower levels, and the lowermost props shall bear upon work sufficiently mature to carry the load.
- 304.1.13 Shuttering shall be such as to allow for its removal without damaging the concrete, and in the case of suspended floors, for the removal of the beam sides and slab soffits without disturbing the beam sides and slab soffits without disturbing the beam bottom boards and their props.
- 304.1.14 Before concreting, the areas which are intended to receive the concrete shall be cleaned by jetting with compressed air, and all water and extraneous material removed.
- 304.1.15 Where timber is used for shuttering it shall be properly cured, free from warp, straight, clean, and free from loose knots.
- 304.1.16 Where metal forms are used for shuttering they shall be of the type strengthened by intermediate ribs or cross bracing.
- 304.1.17 Moving shuttering may be used where in the opinion of the Contract Administrator it is appropriate.

304.2 *Sawn Shuttering*

Rough finish shuttering shall produce an ordinary standard of finish consistent with normal good practice for use where the face of the finished concrete will not be exposed. The face in contact with the concrete shall consist of sawn timber boards, sheet metal or other approved material.

304.3 *Wrought Shuttering*

Wrought shuttering for use on internal exposed faces and water retaining faces shall produce a high standard of finish consistent with the best practice. The face in contact with the concrete shall consist of wrought and thickened boards tongued and grooved of not less than 30mm finished thickness, framed plywood or metal panels or other approved material. Joints between boards and/or panels shall be arranged in a uniform pattern

304.4 *Special Wrought Shuttering*

Special wrought shuttering shall provide the highest standard of finish where the face of the finished concrete is to form a particular feature. The face in contact with the concrete shall consist of large smooth sheets, unless otherwise specified, arranged in an approved uniform pattern, with joints coinciding with possible architectural features, sills, window heads, or changes in direction or surface. Accurate alignment of all joints shall be maintained. Wrought boarding and standard steel panels shall not be used unless specially faced.

304.5 *Tolerances*

Unless otherwise indicated on the Drawings, the tolerances of the finished concrete with respect to the dimensions shown on the drawings shall not exceed the limits set out in Table 3.5.

Table 3.5 : Tolerances of Dimensions for Finished Concrete

Items	Tolerance (mm)
Overall dimensions and levels	± 5
Column Sizes) Beam Sizes) Wall Sizes)	± 5
Vertical lines out of plumb	5mm + 5mm in every 15m ht.

Except that in the case of Rough Finish Shuttering the dimensions of the finished concrete shall be not less than those shown on the Drawings.

304.6 *Striking and Removal of Shuttering*

304.6.1 The recommendations set out in Table 3.6 are given as a minimum requirement for striking shuttering:-

TABLE 3.6 : Striking of Shuttering

Item	Ordinary Portland Cement Normal Weather 16⁰C Days	Rapid- Hardenin g Cement Normal Weather 16⁰C Days
Beam Sides, Walls, Columns	1	1
Slabs (props left under)	4	3
Beam soffits (Props left under)	7	5
Removal of props to slabs	8	5
Removal of props to beams	16	8

The above striking times are for normal conditions and before deciding on the actual time for each case, the Contractor shall consider and extend the period as tabled if:-

- (a) the span of the structural member under consideration exceeds 6 metres for beams and 3 metres for slabs. An additional period of one day for each 500mm of additional span shall then be allowed;
- (b) the dead load of the structural member under consideration forms a large proportion of the total design load;
- (c) constructional loads coming on to the structural member under consideration are being placed soon after the concreting operations and these loads form a large proportion of the total design load;
- (d) the setting of the concrete has been retarded for any reasons;

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- (e) the temperature falls below 8°C. An additional period of half day shall be added for each day on which the temperature falls below 8°C. For temperatures falling below 3°C the additional period to be added shall be one day for each day on which the temperature falls below 3°C;
 - (f) any combination of the above points and other considerations which would call for such a precaution to be taken.

304.6.2 Information regarding paragraph (b) above will be supplied by the Contract Administrator; any other design information relevant to be above shall be obtained by the Contractor from the Contract Administrator.

305 CONCRETING

305.1 *Requirements*

The finished concrete shall be dense, durable, impervious to the ingress of water, free from cracks and honeycombing, and resistant to wear and mild chemical attack. Special concretes will be the subject of their own particular sections of Clause 307.

305.2 *Transporting of Concrete*

305.2.1 Concrete shall be transported to the place of final deposit by approved means.

305.2.2 Barrows, spades and other equipment used in the process of transporting concrete shall be thoroughly cleaned before each day's work or after a long interruption and they shall be free from hardened concrete.

305.2.3 Concrete shall be transported as soon as possible after mixing, by methods which will prevent the segregation, loss or contamination of the ingredients.

305.2.4 Proper bridging arrangements for traffic over reinforcement shall be provided so that the reinforcement is not distorted, damaged or displaced.

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- 305.2.5 Where approval is obtained for concrete to be conveyed by chutes, these shall have a slope (not exceeding 1 vertical to 2 horizontal) such as to ensure a continuous flow of concrete. Additional water shall not be introduced to assist the flow. If deposition is to be intermittent the chute shall be arranged to discharge into a storage hopper. In no case will a clear fall of more than 1m be permitted at the discharge end of the chute.
- 305.2.6 Where approval is obtained for pumping the concrete, the pump manufacturer's recommendations shall be followed. The pumps used shall be adequate capacity and power to ensure delivery of a continuous supply. The Contractor shall provide adequate alternative arrangements for transporting the concrete in case of a breakdown of the pumping equipment. (see also Clause 307.7).
- 305.2.7 Wherever transport of concrete is interrupted for any length of time (periods over half an hour shall be treated as such) the chutes, pumps, pipes and any

Other means of distribution shall be thoroughly flushed out and cleaned. These shall also be flushed out immediately prior to resumption of concreting and shall be kept free from hardened concrete. All wash water used shall be discharged outside the shuttering and clear of any freshly placed concrete.

305.3 *Placing and Compaction of Concrete*

- 305.3.1 No concrete shall be placed until the Contractor has obtained approval to do so from the Contract Administrator's Representative. When the Contractor intends to place concrete he shall inform the Contract Administrator's Representative in sufficient time to enable him to inspect the reinforcement, shuttering, and surface on which the concrete is to be placed and the Contractor shall provide all facilities for such inspection.
- 305.3.2 Concrete shall be placed within 30 minutes of mixing, to uniform level, in layers not exceeding 500mm deep in such manner as to avoid segregation, and each layer shall be compacted by means of approved vibrators to form a dense material free from honeycombing and other blemishes. Compaction by hand may be used only with the prior approval of the Contract Administrator.
- 305.3.3 Vibration time, the effective radius, and other vibration characteristics shall be in accordance with the vibrator manufacturer's recommendations.

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- 305.3.4 If internal vibrators are used, they shall be withdrawn immediately water or a thin film of mortar begins to appear on the surface of the concrete. Withdrawal shall be carried out slowly to avoid cavitation.
- 305.3.5 Where two distinct batches of concrete, placed at different periods of time and forming part of the same concreting operation are required to be formed monolithically with each other, the more mature concrete shall be penetrated by the vibrator to a sufficient depth to effect plastic movement between the two batches. Where the concrete does not respond to the action of the vibrator, it shall be deemed to have set, and no further disturbance will be permitted. Unless otherwise instructed by the Contract Administrator the condition shall be treated as for a "stoppage of work" and the marrying up of the two concretes shall be effected only when both concretes have properly set.
- 305.3.6 If shuttering vibrators are used, the shuttering shall be strong enough to withstand the forces of vibration.
- 305.3.7 Temporary or permanent stoppages of work shall be made only against stop ends (Clause 305.9).
- 305.3.8 Unless otherwise specified, before placing new concrete against concrete which has already hardened, the face of the older concrete shall be prepared by the removal of any laitance and loose aggregate, and shall be cleaned by a jet of compressed air.
- 305.3.9 When displacers are permitted to be used they shall be so placed that no displacer is within 300mm of any finished face or within 500mm of any other displacer. On completion of any lift, displacers shall be so arranged that they project for half their height above the surface.

305.3.10 Concreting in Deep Lifts

305.3.10.1 Limitations

Any height exceeding 2.5m from which concrete is poured into shuttering to form sections of wall will be considered within the terms of this Clause.

Deep lift construction will not be permitted where the reinforcing bars are to be placed closer than 100mm to one another in any direction or, where the clear width at the point of admitting the concrete between one layer of reinforcement and another (or in the case of singly reinforced walls between reinforcement and shutter) is less than 200mm.

The method shall only be used where trial sections revealed that, in the Contract Administrator's opinion it can be satisfactorily employed,

in which case the requirements of this Specification shall apply except where they are in conflict with the requirements of this particular clause, when the latter shall prevail

305.3.10.2 **Concrete**

In order to prevent segregation of aggregates, concrete mixes shall be designed for increased cohesion, or, where suitable, on a gap-graded basis. The use of approved admixtures may be made to achieve this end (302.9).

At the same time, the mix shall be such as to limit the amount of bleeding in the concrete, and where in the opinion of the Contract Administrator the quantity of free water rising to the surface is excessive, the mix shall be corrected before further concreting is undertaken.

In order to offset any increase in the water-cement ratio at the upper levels, the Contract Administrator may require the concrete mix to be modified for the upper depositions.

A slump of 80mm shall not be exceeded.

305.3.10.3 **Reinforcement**

In order that reinforcement is not distorted or displaced during construction as a result of it being used for gaining access in or out of the shuttering, all intersections of vertical and horizontal steel shall be properly fastened.

All obstructions caused by spacer blocks or chairs shall be eliminated so as to permit an unobstructed passage for the concrete to the bottom of the shuttering. The Contractor may use sliding timber spacers instead of fixed concrete or plastic spacer blocks to position the reinforcement.

305.3.10.4 **Shuttering**

In view of the high pressures to be expected from this form of construction extra attention shall be paid to the strength and stability of the shuttering, to the prevention of loss of grout, and to the prevention of displacement of adjacent panels.

The use of through-bolts and other accessories which might interfere with the free passage of concrete between and around the reinforcement shall be reduced to a minimum of the use of properly designed shuttering.

305.3.10.5 **Concreting**

Particular attention shall be paid to the concreting of the initial sections at the bottom of the shuttering to prevent segregation caused by rebound from the hard surface of the kicker, base and/or lower sections. The initial depositions shall therefore be made by using trunking methods, or by placing the concrete through openings formed in the sides of the shuttering. Such openings shall not be higher from the hard surface than 2.5m.

In order to reduce differential settlement, and consequently, cracking between two sections of concrete placed at different intervals of time, concreting between one section and another shall be carried out on a gap- construction basis (Clause 305.9). The gap shall subsequently be concreted in distinct lifts each not exceeding 2.5m in height. For the same reason, for concreting two adjacent sections placed at the same time but of different heights (e.g. where boxing out is included), the difference in height shall not exceed 15% of the height of the deeper section.

Concreting from the upper level of the shuttering shall be carried out in such manner as to ensure that concrete is admitted centrally between the faces of the shuttering.

For this purpose the Contractor shall make use of trunking or shall use funnel-shaped hoppers extending for a distance of not less than 1.5m into the shuttering. A sufficient number of such hoppers shall be provided, and/or they shall be capable of movement along the length of the shuttering, to enable the concrete to be placed in contiguous heaps at the base of the pour. Such heaps shall not exceed 460mm in height.

Where excessive bleeding is in evidence, the excess water shall be removed before placing further concrete (see sub-clause 305.3.10.2 of this clause).

305.3.10.6 **Compaction**

Compactions shall be carried out where possible by manual operation of poker vibrators within the shuttering. Where this is not possible poker vibrators shall be suspended in sufficient numbers to ensure uniform compaction along the length of wall receiving the concrete, without the need for their withdrawal and re-insertion. The means of suspension shall be such that the vibrators may be progressively and systematically lifted as the concreting proceeds to ensure that every section of placed concrete is married into adjacent and underlying sections.

The use of vibrators to reposition deposited concrete is prohibited. Surface vibrators attached to the shuttering may be used only to supplement the main means of compaction.

305.4 *Cold Weather Concreting (Using cement to BS 12)*

305.4.1 No concrete shall be placed while the air temperature is below 5°C without the permission of the Contract Administrator.

305.4.2 In the event of the Contract Administrator giving permission for concreting to be carried out when the air temperature is below 5°C the following conditions shall apply:-

- (a) Concreting shall be at the sole risk of the Contractor and shall be carried out during the day only;

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- (b) No structural concrete shall be placed on frozen ground;
 - (c) No structural concrete shall be placed on frozen ground;
 - (d) Concrete shall have a temperature of between 16°C and 24°C on leaving the mixer and it shall be placed in position and compacted before its temperature has dropped to 5°C. To effect this, pre-heating of the mixer, heating of mixing water to a temperature not exceeding 60°C, and heating of aggregates to not exceeding 50°C is permitted, but on no account shall cement be heated or admitted to the mixer until the aggregates and the water have been thoroughly mixed;
 - (e) If the Contract Administrator gives approval for the use of calcium chloride to accelerate the hardening, not more than 2% by weight of flake calcium chloride (calcium chloride to cement) shall be added. Where proprietary accelerators are used their proportions shall be adjusted to satisfy this requirement. In all cases the calcium chloride shall be dissolved in the mixing water before adding to the mix. Calcium chloride and proprietary accelerators shall not be used with other than Ordinary or Rapid Hardening Portland Cement, nor where sea-dredged aggregates are permitted to be used (Clause 302.7.9);
 - (f) The placed concrete shall not be allowed to fall below 3°C until it has thoroughly hardened. The provision of heaters, adequate covering the insulation shall be made as may be required to ensure this. Care shall be taken to prevent over-heating or carbonation of the concrete;
 - (g) The period over which the precautions set out in (f) above shall apply (referred to as pre-hardening period) shall not be less than 3 days unless otherwise permitted by the Contract Administrator. Concrete temperatures shall be taken three times each day, morning, noon and evening, each at two separate positions expected to give the least favorable results;
 - (h) Concrete once placed shall not be subjected to curing techniques involving the application of water to the surface;

The use of steel shuttering, unless insulated, will not be permitted.

305.5 *Hot Weather Concreting (for temperatures above 20 Degrees Centigrade)*

305.5.1 Concreting shall not be permitted if its temperature at placing is in excess of 30°C. In order to maintain the temperature of the concrete below this value the following precautions shall be taken wholly or in part as instructed by the Contract

Administrator:-

- (i) All aggregate stockpiles, water lines and tanks as well as the mixer shall be protected from the direct rays of the sun;
- (ii) Coarse aggregate shall be cooled by constant watering where possible;
- (iii) Mixing water shall be cooled by the addition of ice to the storage tanks where necessary;
- (iv) Rapid-hardening cement shall not be used;
- (v) Where the above precautions are inadequate concreting shall be carried out during the cooler parts of the day or during the night as may be directed by the Contract Administrator.

305.5.2 When the air temperature is above 20°C loss of mixing water by evaporation shall be considered in arriving at the amount of water to be added to the mix (Clause 302.1). In order to maintain the water/cement ratio within permissible limits an approved water-reducing agent shall be included in the mix (Clause 302.9). The maximum water/cement ratios indicated in Clause 302.1 may be increased with the Contract Administrator's permission by 0.05 or 2.5 litres/50 kg of cement) during mixing, but on no account shall water be added to concrete directly or indirectly once it has left the mixer.

305.5.3 In order to reduce premature drying of the concrete during transporting and placing, all chutes, shuttering and reinforcement shall be cooled by watering when possible, or shall otherwise be protected from the direct rays of the sun. Any water so used shall be removed by jetting with compressed air before placing the concrete in close contact.

305.5.4 As soon as possible after concreting, the shuttering shall be stripped (Clause 304.6) and the surface of the concrete shall be treated in accordance with Clause 305.8.
Where drying winds are encountered, wind shields shall be positioned as directed by the Contract Administrator to protect exposed surfaces of the curing concrete.

305.6 *Wet Weather Concreting*

305.6.1 Concreting during periods of constant rain shall not be permitted unless aggregate stockpiles, mixers and transporting equipment, and the areas to be concreted are adequately covered.

305.6.2 During showery weather, the Contractor shall ensure the work

can be concluded at short notice by the provision of stop ends. On no account shall work be terminated before each section, between one stop end and another, is complete. Adequate covering shall be provided to protect newly placed concrete from the rain.

305.7 *Holes, Cavities and Fixing*

- 305.7.1 The Contractor shall be responsible for the co-ordination of all requirements of his sub-contractors as regards provision of holes, chases, cavities and fixings and shall, if required by the Contract Administrator, prepare drawings giving details of his and his sub-contractors' requirements and shall send copies of such drawings to the Contract Administrator prior to construction.
- 305.7.2 Holes, etc. shall be accurately marked and boxed-out for before concreting operations commence and, without the Contract Administrator's prior approval, no such holes, etc. shall be formed after the concrete has set.
- 305.7.3 Where bars, if placed to specified spacing would foul holes of sizes less than 250mm x 250mm the full length of the bar shall be moved to one side and in the case of holes exceeding 250mm x 250mm the bars shall be cut on site and lapped with additional equivalent bars, or as otherwise indicated on the Drawing.
- 305.7.4 Wherever possible, the Contractor shall build in all pipe work, ironwork, etc. which passes through walls and floors, and the pipe work, ironwork, etc. shall first be thoroughly cleaned and freed from any deleterious matter, and every care shall be taken to ensure that it is thoroughly encased in concrete.
- 305.7.5 Bolts, hooks, and other fixings shall be embedded in concrete, or holes shall be drilled and fitted with threaded expanding anchors to receive the bolts. The Contractor shall ensure that bolts, hooks, etc. are accurately positioned. Holding down bolts for machinery shall be set to template.
- 305.7.6 Where brick or stonework is to form a facing to the concrete or where the end of a brick or stone wall butts against a concrete face, galvanized metal ties of approved manufacture to BS 1243 shall be incorporated.
- 305.7.7 The distance between ties shall be gauged with due regard for the bonding of the walls, and at intervals required by the Contract Administrator.

305.8 *Protection and Curing of Concrete*

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- 305.8.1 Newly placed concrete shall be protected by approved means from rain, drying winds, sun, and contact with substances which can adversely affect it.
- 305.8.2 No traffic or constructional loads shall be permitted on newly placed concrete until it has hardened sufficiently to take such traffic or load, and only then with the approval of the Contract Administrator (305.13).
- 305.8.3 Exposed faces of concrete shall be kept moist after placing for not less than 3 days if Ordinary Portland and 2 days if Rapid Hardening cement is used. Membrane curing by approved materials may be used when permitted by the Contract Administrator.
- 305.8.4 Any concrete surfaces, arises and treads of stairways which might be damaged during the construction of the Works shall be adequately protected.
The method of curing shall prevent loss of moisture from the concrete. Immediately after compaction and for 7 days thereafter concrete shall be protected against harmful effects of weather, including rain, rapid temperature changes and from drying out.

The curing time shall be the number of days given in the following table unless the average temperature of the concrete during the required number of days falls below 10°C in which case the period curing shall be extended until the maturity of the concrete reaches the value given in the table.

Curing shall be carried out using either of the following basic methods. The method adopted for any particular situation shall be agreed with the Contract Administrator.

A. *Membrane Applied by Spray*

Liquid membrane compounds shall be applied to moist concrete surfaces as follows:-

(i) **Uniformed Surfaces**

The compound shall be applied immediately after the free water has left the surface.

(ii) **Formed Surfaces**

The compound shall be applied immediately after removing the forms. If there is appreciable drying, the surface shall be mist sprayed with water to produce a uniformly damp appearance before the compound is applied.

The compound shall be applied in one or two separate applications to produce complete and uniform coverage of the surface. If the compound is applied in two increments, the second application shall follow the first within 30 minutes. The method and rate of application shall be in accordance with the compound manufacturer's instructions.

If rain falls on the newly coated surface before the film has dried sufficiently to resist damage, or if the film is damaged in any other manner, a new coat of compound shall be applied to the affected area in curing value to that originally applied.

Compound applied to construction joint surfaces, or to other surfaces to which concrete are to be bonded, shall be remove prior to placing the fresh concrete.

Depending on the surface to which it is to e applied the compound shall conform to the following requirements of AASHTO M148.

- (i) Exposed and vertical concrete surfaces - Type I-D (clear compound with fugitive dye).
- (ii) Unexposed top surfaces of foundations and superstructures – Type 2 (white pigmented).

B Polythene Sheeting

The concrete surfaces shall be covered with white polythene sheeting as follows:-

(i) Unformed Surfaces

The sheeting shall be laid over the surface as soon as possible without marring the surface, and not until initial stiffening has taken place if a brushed or tamped finish is required.

(ii) Formed Surfaces

The surfaces shall be covered immediately after the removal of the forms.

Details of all curing methods used shall be subject to the approval of the Contract Administrator.

The sheeting may be in contact with the concrete or made into portable shelters on light weight frames. In both cases, the sheeting shall be jointed and sealed against the concrete surfaces to prevent wind blowing between the sheeting and the concrete.

The white polythene sheet shall conform with the requirements of AASHTO M171.

C. *Other Curing Methods*

These shall be agreed with the Contract Administrator. Methods involving the use of damped hessian coverings shall not be used.

Details of all curing methods used shall be subject to the approval of the Contract Administrator.

TABLE 3.7: *Normal Curing Periods*

Minimum period of protection for different types of cement

Conditions under which concrete is maturing	Number of days (When the average temperature of the concrete exceeds 10°C during the whole of the period)			Equivalent maturity (deg.C Hors) (calculated as the age of the concrete in hours multiplied by the number of degrees Centigrade by which the average temperature of the concrete exceeds – 10°C)		
	Type IV	Type I or Type V	Type III	Type IV	Type I or Type V	Type III
1. Hot weather or drying winds	7	4	2	3500	2000	1000

2. Conditions not covered by 1.	4	2	1	2000	1000	500
Type IV - Low Heat Portland Cement Type I - Ordinary Portland Cement Type III - Rapid-hardening Portland Cement Type V - Sulphate-resisting Portland Cement						

Where the thickness of concrete placed exceeds 1.5m, the Contractor shall submit for the Contract Administrator's approval proposals to ensure that, during the curing period:-

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- (a) the rate of rise of temperature in the concrete does not exceed 15°C per hour for the first 3 hours;
 - (b) thereafter the rate of rise and fall of temperature in the concrete does not exceed 35°C per hour;
 - (c) the maximum difference temperature in the concrete does not exceed 70°C; and
 - (d) the maximum difference in temperature between the core and the surface of the concrete does not exceed 20°C.

The proposals shall include consideration of:-

- (a) concrete mix design;
- (b) temperature of mix at time of placing;
- (c) Method of curing.

Where required by the Contract Administrator, the Contractor shall carry out temperature measurements in the concrete. The method and procedure of temperature measurement shall be agreed with the Contract Administrator.

305.9 *Joints*

305.9.1 Construction Joints

The position of construction joints, when not shown on the Drawings or otherwise required by this Specification, shall be decided on site having regard to the plant and labour made available by the Contractor for the manufacture, placing and compaction of the concrete as well as its curing, the climatic conditions prevailing at the time of concreting, the nature and size of the shuttering, and the conditions of operation of the work. The contractor shall submit his proposals to the Contract Administrator for his approval before commencing work.

Construction joint surfaces shall be treated by the “wash-off” method explained below, except in the case of Cold Weather Concreting (Clause

305.4) or where it cannot be practically effected, in which case it shall be treated in accordance with Clause 305.3 as for the placing of new concrete to hardened concrete.

When expanded metal lathing is used for the formation of construction joints a rebate will not be required to be formed. The expanded metal lathing shall be left in the work and shall not extend closer to the finished

surface of the concrete than 25mm. It shall be securely fixed to the reinforcement.

The following particular requirements shall also be observed: -

(i) Slabs supported on the ground

In order to ensure control in the placing of concrete the Contractor shall provide control boards to form panels not larger than 15m² in area. These shall be lifted as the concreting proceeds except where they are of expanded metal in which case they may be left in position as part of the permanent works, provided that they shall not extend closer to the finished surface of the concrete than 25mm. In the event of a breakdown in the supply of concrete the Contractor shall ensure that an alternative supply of concrete is made available (to finish the work against the control boards acting as stop ends). The joint so formed shall then be treated as a construction joint. Where ready-mixed concrete is permitted (Clause 307.4) the control boards shall be positioned so as to enclose a volume of concrete equal to that delivered by each truck.

Construction joints and control joints shall be formed normal to the surface of the retained concrete.

(ii) Suspended Beams and Slabs

The reference to control boards in the foregoing para. (I) shall apply, but generally, unless otherwise shown on the Drawings or permitted by the Contract Administrator, construction joints shall be positioned at approximately midspan in both beams and slabs.

T-beams shall be formed to their full depth integrally with the adjacent slab and without horizontal joints.

(iii) Walls

Horizontal construction joints in walls shall be formed along straight lines coinciding with the full height of the shuttering. The height of the shuttering thus controlling the height of the pour shall be determined with reference to the availability of concrete, the size, and amount of reinforcement and the means of compaction available.

Unless otherwise indicated on the Drawings or otherwise permitted by the Contract Administrator for the construction of circular tanks, concreting shall be carried out continuously for the full circumference without vertical joints. Where permission is granted for the use of vertical joints the Contract Administrator may order, at no extra cost to the Employer, the inclusion of an approved type of water stop.

In the case of rectangular tanks, vertical joints shall not be positioned closer to any corner than one metre. They shall be formed with properly rebated stop ends or, where conditions permit, by the use of expanded metal lathing.

Un-reinforced manholes shall be constructed without vertical joints.

305.9.1.1 The “Wash-off Method” of preparing Construction Joints

As soon as possible after concreting, and while the surface is still green, the surface of the concrete forming the joint shall be freed of loose aggregate and sprayed with a fine spray of water to prevent the formation of laitance. Subsequently all excess water shall be removed by a jet of compressed air and the surface left clean to receive further concrete.

Where expanded metal lathing is used for construction joints, this method of surface preparation shall be used in every case.

305.9.2 Movement Joints

These shall include contraction and expansion joints and shall be as indicated on the Drawings.

Contraction joints will be either full contraction joints or partial contraction joints. Where partial contraction joints are specified a period of at least five days shall elapse between the concreting of the section on each side of the joint.

Where the Drawings indicate a contraction gap to be formed in any panel (this gap will not exceed one metre), concreting on either side of the gap shall be carried out so as to form partial contraction joints at each side of the gap.

Prior to the concreting of the gap section, the joint surfaces shall be cleaned but otherwise left untreated. The concreting of the gap section shall not be carried out until a period of at least five days has elapsed after completion of the adjacent sections.

Alternate panel construction (other than contraction gap construction outlined above) will be permitted only with the approval of the Contract Administrator, or in those cases where either the reinforcement is not continuous through the joint or where the panels are separated by expansion or contraction joints.

Unless otherwise specified or permitted by the Contract Administrator all water stop shall consist of rubber. Jointing of water stop shall be by vulcanizing, except where PVC is specified or permitted in which case joints shall be by fusing or welding. Materials shall be obtained from an approved manufacturer whose recommendations as to jointing shall be fully complied with.

305.9.3 Water stop and Jointing Materials

305.9.3.1 Water stop and jointing materials shall be obtained from an approved manufacturer.

305.9.3.2 All water stop and jointing materials which are not required for immediate use shall be stored at all times in a cool damp place.

305.9.3.3 Water stop shall be manufactured of rubber or PVC (polyvinylchloride) as stated in the Bill of Quantities and shall be made strictly in accordance with the manufacturer's instructions and all intersections and junctions shall be obtained prefabricated from the approved manufacturer.

305.9.3.4 Joint filler shall be manufactured of natural bonded cork or other approved material. Joint filler shall be cut and trimmed accurately to suit the joint profile and shall be maintained accurately in position by means of an approved adhesive.

305.9.3.5 Joint sealing compounds shall be approved rubber/bituminous compounds suitable for sealing joints in horizontal and vertical/sloping concrete surfaces as appropriate. Sealing compounds shall be applied strictly in accordance with the manufacturer's instructions and shall completely fill the joint recess. Surface primers shall be from same manufacturer as the sealants themselves.

305.9.3.6 Water stop shall be located and maintained accurately in position and details of the proposed method of fixing shall be submitted to the Contract Administrator for approval. On no account shall waters top be secured by nails or by any other means involving puncture of or damage to the water stop material unless purpose made nailing flanges are incorporated

in the design of the water stop.

305.10 *Finishes to concrete - General*

305.10.1 All exposed faces of concrete unless otherwise specified shall be hard, smooth and free from honeycombing, air and water holes and other blemishes.

305.10.2 All projecting imperfections shall be rubbed down with carborundum stone or by other approved means and grit and dust there from shall be thoroughly washed off with clean water.

305.11 *Surface Finishes*

- (a) Wood float finishes shall be formed by smooth floating the accurately leveled and screeded surface. Care shall be taken to ensure that the concrete is worked no more than is necessary to produce a uniform surface free from screed marks.
- (b) Steel trowel finishes shall be formed while the concrete is still wet by means of a steel trowel applied to an accurately leveled and screeded surface (see also Clause 307.3)
- (c) Granolithic finishes shall conform to the recommendations laid down in "Specification for Granolithic floor toppings laid in in-situ concrete", as published by the cement and Concrete Association with special reference to monolithic construction.
- (d) Screeded finishes shall be formed by leveling and screeding the concrete to produce a uniform, plain or ridged surface as specified.
- (e) Bush-hammered or patter-worked finishes.

When exposed aggregate is to be the surface texture, the Contractor shall ensure that a uniform distribution of the coarse aggregate takes place at the face. The shuttering shall be removed as soon as possible from the face to be treated; the surface shall be thoroughly wetted and wire brushed, and bush-hammered or pattern-worked as and when instructed. Surface retarders shall be used only when permitted by the Contract Administrator.

Bush-hammering or patten-working shall not be relied upon to obscure any defects in the concreting face which arise from shuttering imperfections.

305.12 *Making Good*

Honeycombed or damaged surfaces of concrete, which in the opinion of the Contract Administrator, are not such as to warrant the cutting out and replacement of the concrete, shall be made good as soon as possible after removal of the shuttering as follows:-

1:1.5 Portland Cement and sand mixture shall be worked into the pores over the whole surface with a fine carborundum float in such a manner that no more material is left on the concrete face than is necessary completely to fill the pores so that a uniformly smooth and dense surface of uniform colour is finally presented.

305.13 *Removal and Replacement of Unsatisfactory Concrete*

The Contractor shall on the Contract Administrator's instructions to do so cut out and replace any concrete in any part of the structure if in the Contract Administrator's opinion:-

- (a) the concrete does not conform to the Specification, or
- (b) deleterious materials or materials which are likely to produce harmful effects have been included in the concrete, or
- (c) the honeycombed or damaged surfaces are too extensive, or
- (d) the finished concrete sizes are not in accordance with the Drawings within permissible tolerances, or
- (e) the setting-out is incorrect, or
- (f) the steel cover has not been maintained, or
- (g) the protection, including curing, of the concrete during the construction was inadequate, resulting in damage, or
- (h) the work of making good or other remedial measures the Contract Administrator may indicate are not carried out to

his satisfaction, or

- (i) Undue deformation of or damage to the works has taken place due to inadequate shuttering, or to premature traffic or to excessive loading, or (j) any combination of the above points has taken place resulting in unsatisfactory work.

306 TESTING

306.1 Sampling and Testing (see also Clauses 301.0 and 302.4)

306.1.1 The contractor shall provide on the Site equipment, staff and labour for carrying out the sampling and testing outlined in columns 3 and 4 of Table 3.8, and he shall carry out any or all of these tests at such times and with such frequency as may be requested by the Contract Administrator.

306.1.2 All equipment shall be calibrated and checked from time to time as the Contract Administrator may require.

306.1.3 The Contractor shall provide samples required by the Contract Administrator. Those samples to be tested in a laboratory as required by Column 5 of Table 3.8 shall be carefully forwarded by the Contractor to an approved laboratory. Results of laboratory and site tests shall be kept on site and copies of all test reports shall be forwarded in duplicate to the Contract Administrator's Representative.

306.1.4 Frequency of tests and the number of samples required will be governed by the results of the previous tests, the quality of the materials revealed during the tests, and the uniformity of the quality (see Clause 302.4). Should it become evident that the quality of concrete is deteriorating the Contract Administrator may require additional samples to be taken and test cubes to be made and tested to determine the cause.

306.2 Loading Tests

306.2.1 The Contract Administrator may direct that a loading test be made on the works or any part thereof if he deems such test to be necessary for one or more of the following reasons:-

- (a) failure of "Site Cubes" to attain the strength requirements of Clause 302.4;

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- (b) premature removal of shuttering;
 - (c) overloading of structure during construction;
 - (d) improper compaction and/or curing of concrete;
 - (e) any other circumstances attributable to alleged negligence on the part of the Contractor, which in the opinion of the Contract Administrator, may result in a structure being of less than the required strength;
- 306.2.2 If the loading test be ordered to be made solely or in part for reasons (a) to (d) The test shall be made at the Contractor's own cost.
- 306.2.3 If the loading test be ordered to be made for reason (e), the Contractor shall be reimbursed for the cost of the test if the result is satisfactory.
- 306.2.4 Loading test shall be carried out in accordance with Clause 9.5 or 9.6 of CP 110 as appropriate.
- 306.2.5 If the results of the test are not satisfactory, the Contract Administrator will direct that the part of the work concerned by taken down or removed and reconstructed to comply with the Specification, or that such other remedial measures as he may think fit be taken to make the work acceptable and the Contractor shall carry out such work at his own cost.
- 306.2.6 The Contract Administrator may also instruct the Contractor before a loading test takes place to take out cylindrical core specimens from the structures concerned and have them tested. The cutting equipment and the method of doing the work shall be to the Contract Administrator's approval. The specimens shall be dealt with in accordance with BS 1881. Prior to testing, the specimens shall be available for examination by the Contract Administrator. If the cores are ordered to be taken solely or in part of reasons (a) and (d) above, the work involved and the testing shall be made at the Contractor's own cost. If the cores are to be taken for reasons (b), (c) and (e) above, the Contractor will be reimbursed the cost if the loading test described in the previous paragraphs proves satisfactory.

307.1 *No-fines Concrete*

- 307.1.1 No-fines concrete for use in subsoil drainage shall consist of a 1:8 cement/aggregate mix by volume. Aggregate shall be 20mm to 10mm graded with no more than 5% passing the 10mm sieve. Only sufficient water shall be added to ensure complete coating of the aggregate. One half of this water shall be placed into the mixer first, after which the aggregate and cement shall be admitted. After partial mixing the balance of the water shall be added until a consistency of mix is achieved.
- 307.1.2 Preliminary tests shall be carried out on the site to prove the suitability of the finished concrete, and adjustments made to the proportions and or grading as may be required by the Contract Administrator.

307.2 *Air-Entrained Concrete*

- 307.2.1 Concrete for roads, and those structures where specified, shall include an approved air-entraining agent capable of producing a 5% air-entrainment with a tolerance of 0.5% (Clause 302.9)
- 307.2.2 The mix shall be purposely designed, having regard for the nature of grading of the aggregates and air-entraining agent being used.
- 307.2.3 Preference shall be given to the use of air-entraining agents which can be administered in fixed calibrated amounts through a dependable mechanical dispenser or sachet, and which are added to the mixing water.
- 307.2.4 Frequent air meter tests shall be carried out and the consistency of the air- entrainment maintained to the above tolerances by adjustments in the mix, as may be necessary.

307.3 *Concrete in Benching*

Concreting for benching in manholes, pumping stations, and works structures shall consist of Class 20 concrete unless otherwise specified. It shall be placed with low workability to the approximate shape required and, while still green, shall be finished with not less than 50mm of Class 25 concrete to a steel trowelled finish and to the contours indicated on the drawings.

307.4 *Ready Mixed Concrete*

- 307.4.1 Unless otherwise stated the relevant clauses of BS 1926 shall apply.
- 307.4.2 Ready mixed concrete shall only be used with the prior approval of the Contract Administrator. The Contractor shall not be relieved of his obligation to provide concrete to the standard laid down in this Specification by virtue of any approval given for the use of concrete supplied by others, and the Contract Administrator reserves the right to withdraw his approval at any time consequent on any deterioration in the quality of the Concrete, or unsatisfactory delivery or any other reason he considered detrimental to Works.
- 307.4.3 Ready mixed concrete manufactured off the site shall be transported in a revolving drum and shall be continuously agitated until it is used in the work unless otherwise approved. The time interval between adding water to the drum and placing shall not exceed 90 minutes. The time interval between completion of mixing and placing shall comply with Clause 305.3.

307.5 *Granolithic Concrete*

Refer to Clause 305.11

307.6 *Pneumatically Applied Mortar (Guniting)*

307.6.1 Requirements

The pneumatic application of mortar shall be carried out only by Contractors experienced in this type of work and who are in possession of proper plant and equipment. Nozzlemen employed on the works shall be skilled operators.

The finished product shall be dense, of even texture and colour, and to the requirements of strength, tolerance, and finish set out in this Specification.

307.6.2 Strength

After curing, the mortar shall be capable of producing cored samples with a 28-day characteristic strength of not less than 27.5 N/mm².

307.6.3 Materials

Sand, cement and water shall comply with the requirements of Clause 302.6, 7 and 8 of this Specification except that the sand shall conform to the grading of Zone 2 of BS 882.

307.6.4 Proportions

The proportions to be used in mix shall be determined with reference to the requirements outlined in sub-clause 307.6.1 and the mix shall be not weaker than one part of cement to the four parts of sand by volume, having regard to the adjustments for bulking of the sand.

307.6.5 Operation

Air and water pressures shall be such as to permit of the proper application of the mortar, and shall be determined with reference to hose lengths and nozzle diameter.

Rebound, recovered, cleaned and uncontaminated with extraneous matter, may be re-used but not for water-retaining structures. It shall be regarded as an equivalent volume of sand which shall not exceed 20 per cent of the total sand requirement. Rebound which has lodged in the shuttering or between reinforcement shall be removed by compressed air.

Reinforcement shall be completely embedded in the mortar by the proper direction of the nozzle and the mortar shall be applied as a steady and uninterrupted flow from the nozzle.

Mortar application shall be discontinued at any section of the work where sagging of the mortar is in evidence.

307.6.6 Joints

These shall be formed by sloping the surface to a thin edge. Before applying new mortar, the surface shall be thoroughly wetted. Laitance shall be removed by the initial discharge of fresh mortar.

307.6.7 Tolerance

The thickness of applied mortar shall be not less than the dimensions shown on the Drawings nor greater than 10mm over those dimensions, unless otherwise indicated on the Drawings or otherwise permitted.

307.6.8 Protection and Curing

Shall be carried out in accordance with the requirements of Clause 305.8

307.6.9 Finishes

Unless otherwise specified all surfaces shall be brought to a granular textured finish by means of wooden float.

307.6.10 Cold Weather Work
No application of mortar shall be made against frozen surfaces nor when the air temperature is below 5° C.

307.6.11 Making Good
Any defective work shall be cut out immediately and made good with fresh mortar pneumatically applied.

307.7 *Pumped Concrete*
Where pumping of concrete is permitted to be used not relaxation of this Specification will be permitted. Particular attention shall be paid to the proper grading of aggregates to prevent bleeding and/or segregation during the pumping operations. The inclusion of water-reducing additives or other materials, including flyash, to improve the flow characteristics of the concrete will only be permitted where it can be shown that they do not adversely affect the concrete either in the plastic phase or in the finished work (Clause 302.5).

308 PRECAST CONCRETE UNITS

308.1 Requirements

308.1.1 Precast concrete units, unless otherwise stated, shall be obtained from an approved manufacturer and shall be true to dimension and shape, with true arises and with perfectly smooth exposed faces free from surface blemishes, air holes, crazing and other defects, whether developed before or after building-in. They shall comply with the appropriate BS. (Note: Coping blocks and similarly exposed units are particularly susceptible to crazing when the concrete is manufactured using high water/cement ratios.

308.1.2 The requirements of Table 3.1 shall be rigidly adhered to on all occasions therefore, and where units are supplied by others, the Contractor shall

inform the Supplier of these requirements). In addition, the following requirements particular to the various units shall be complied with:- (Clause 308.2 to 308.8 inclusive.)

308.2 *Weir Blocks and sills*

- 308.2.1 Aggregates for the making of weir blocks and sills shall conform to BS 1201, except that the use of soft or weathered limestone coarse aggregate will not be permitted. Fine aggregate shall consist of sand resulting from the natural disintegration of rock. Blocks and sills shall be tested for water absorption in accordance with BS 340 and shall display neither greater absorption than 2.5% after 10 minutes nor 6.5% after 24 hours immersion, the percentage being based on the dry weight of the test pieces. In addition, they shall exhibit no visible signs of distress when subjected to an approved freeze-thaw test based on thirty cycles of exposure. After such a test the compressive strength of the test piece shall be not less than 80% of the strength of a similar piece which has not been subjected to the test.
- 308.2.2 Weir blocks shall be ground to a polished surface on the upper and discharge faces.

308.3 *Coping Blocks and Weir Blade Holders*

- 308.3.1 These units shall conform to the requirements for weir blocks stated above but without polishing shall be brought to a smooth surface on the exposed faces.
- 308.3.2 Coping blocks of thickness 60mm or less shall be formed by pressing, by employing pressures not less than 6.5 N/mm² over the entire surface receiving the pressure, before being brought to the required finish.

308.4 *Kerbs*

- 308.4.1 Precast concrete kerb shall conform to BS 340, except that coarse aggregate shall conform to BS 1201. Fine aggregate shall consist of sand resulting from the natural disintegration of rock.
- 308.4.2 Approved air-entraining agents may be permitted to be used providing that approved adjustments are made to the mix with regard to water and fine aggregate proportions (Clause 302.9). In such cases the moisture absorption limits set out in BS 340 may be neglected subject to the concrete satisfying the freeze thaw

test laid down under the heading “Weir Blocks and Sills”.

308.5 *Paving Slabs*

Paving slabs shall conform to BS 368 and shall be 50mm thick unless otherwise specified.

308.6 *Other Blocks*

Blocks used for building work and filter bed walls shall conform to BS 1364/BS 2028.

308.7 *Walls Units*

L-shaped wall units shall conform to the requirements of CP 116. Where it is not intended to use coping blocks for the protection of the upper exposed surface of the units, the uppermost 150mm, for the full width of the unit, shall be formed with concrete composed of aggregate complying with BS 1201. Such concrete shall be formed integrally with the main body of the concrete.

308.8 *Other Items*

Manhole ring units, tapers, cover slabs, segments, and concrete pipes are referred to under their particular heading.

309 **SITE BOOKS AND STANDARDS**

309.1 *Instructions to be Recorded*

The Contractor shall provide and keep permanently on the Site a numbered triplicate book wherein the Contractor shall record all instructions relating to concrete work issued by the Contract Administrator or the Contract Administrator’s Representative. One copy of every entry therein shall be sent to the Contract Administrator on the same day as the entry is made.

309.2 *Site Diary*

The Contractor shall provide and keep permanently on the site a continuous entry diary wherein the Contractor shall record details of shuttering, construction, placing of reinforcement, concreting and curing operations, striking of shuttering, making good and daily temperature, and weather conditions. This diary shall always be available for inspection by the Contract Administrator or Contract Administrator’s Representative.

309.3 *Copies of Standards and Codes*

The Contractor shall provide and keep permanently on the Site copies of the following British Standard Codes of Practice and Road Notes:-

BS	812
BS	882
BS	1478
BS	1881
CP	110
BS	5337

Road Note 4

The Contractor shall in addition provide and keep permanently on the site copies of such other Standards codes Notes and Specifications as may be approved by the Contract Administrator in accordance with Clause 7 of the Notice of Tenderers.

310 **WATER RETAINING STRUCTURES - SPECIAL CLAUSES**

Note: In the event of any difference between the “Special Clauses” and the previous Specification under Section 3 then the provision of these “Special Clauses” shall have precedence.

310.1 *Making Good*

The cement mortar used in filling recesses in the concrete formed by bobbins in connection with shuttering shall contain an approved expanding admixture.

310.2 *Construction joints in Water Retaining Structures.*

310.2.1 In water retaining structures PVC water stops not less than 130mm wide manufactured by an approved manufacturer shall be built into all construction joints in floors all vertical construction joints in walls which are exposed externally and construction joints in roofs of potable water retaining structures. Construction joints shall be formed at positions agreed by the Contract Administrator.

310.2.2 The cost of forming construction joints shall be included for by

the Contractor in his general concrete rates

310.3 *Water tightness of Structures*

The contractor shall be solely responsible for the water tightness of structures and any remedial measures necessary.

SECTION 3A - TESTING AND STERILIZING CONCRETE WATER- RETAINING STRUCTURES

3A.1 TESTING OF WATER-RETAINING STRUCTURES

3A.1.1 all water-retaining structures shall be tested for water-tightness on completion in the following manner. The structure shall be filled with clean water in stages of one metre and held at each water level for such time as the Contract Administrator may require. Should any dampness or leakage occur at any stage, the water shall be drawn off the defects remedied to the satisfaction of the Contract Administrator.

The procedure shall be continued and finally the structure shall be allowed to remain full for three days during which the total permissible loss of water, after allowing for evaporation, shall not exceed 1/1000 of the capacity of the structure. Notwithstanding the satisfactory completion of the seven day test, should any dampness or leakage or other defects occur they shall be made good to the satisfaction of the Contract Administrator and the structure re-tested until water-tightness is approved by the Contract Administrator.

3A.1.2 The Contractor shall provide a hook gauge to measure variations in the water level during the tests.

3A.1.3 The testing shall be carried out before the excavations are backfilled and Embankments placed.

3A.1.4 In the case of potable water reservoirs and tanks the roof shall be tested for water- tightness by flooding (in small areas at a time if necessary) to a minimum depth of 25 mm. The water shall be left standing for not less than 24 hours and the underside of the roof shall be made good by the Contractor and the tests continued until the water-tightness of the roof is approved by the Contract Administrator. Where it is not practicable to contain a depth of 25mm of water over the roof, the roof shall be thoroughly wetted by continuous hosing for a period of six hours.

- 3A.1.5 The Contractor shall be solely responsible for the water tightness of structures and any remedial measures necessary.
- 3A.1.6 The water used for testing shall be provided at his own expense by the Contractor and shall be free from impurities and of such quality which will not pollute or impair the water-retaining structure.
- 3A.1.7 The Contractor shall give the Contract Administrator's Representative at least 14 days' notice as to the source of water intended for use for testing purposes.
- 3A.1.8 The Contractor shall be solely responsible for making all arrangements for obtaining water and provision of all equipment and labour and other things necessary for testing water retaining structures.

CLEANSING AND STERILIZING WATER-RETAINING STRUCTURES

- 3A.2.1 The inside of all potable water-retaining structures and all interior pipe work and fittings shall be thoroughly cleaned and washed after the water- tightness test has been approved by the Contract Administrator to remove all contamination and the water from these operations shall be removed by squeegees and drained away.
- 3A.2.2 The internal surfaces of the structure shall then be thoroughly washed with cleaned water containing 20 parts per million of chlorine. The chlorinated water shall then be drained away and the structure filled with potable water from which, after 24 hours, samples shall be taken for analysis to the instruction of the Contract Administrator. If any of the results of the analyses are unsatisfactory when compared with those of the control sample of the supply water the sterilizing process shall be repeated until the results of the test are satisfactory.
- 3A.2.3. The costs of the initial sampling analysis and preparing reports on the bacteriological quality of the water shall be borne by the Employer but should initial reports be unsatisfactory the costs of any subsequent sampling analyses and preparing reports shall be borne by the Contractor.

TIME 3.8 SAMPLING, TESTING AND ACCEPTANCE STANDARDS

Materials	Test	Site Samplin g	Testing		Accepte d Standar ds	Remarks
			On Site	In Laborator y		
1	2	3	4	5	6	7

CEMENT	Ordinary Portland Rapid Hardening Sulphate Resisting			BS 4550	BS 12 BS 12 BS 4027	Manufacturers Test Certificate
AGGREGATES	Description and Classification		BS 812 Section 2		BS 882 or 1201	Whichever is applicable
	Particle size	BS 812 Sec.1	BS 812 Sec.5	-	BS 882 or 1201	
	Particle Shape	BS 812 Sec. 1	Visual	BS 812 Sec.3		
	Sp. Gravity	BS 812 Sec.1	-	BS 812 Sec.5		Mix design
	Density	BS 812 Sec.1	-	BS 812 Sec.3		Requirements
	Voids	BS 812 Sec.1	-	BS 812 Sec.4		
	Absorption	BS 812 Sec.1	-	BS 812 Sec.4	US 5337 CI.21.2	See Freeze-
	Organic Impurities		-	BS 812 Sec.5		
	Bulking of Fine Aggregate		CP 114 CI 602			Nominal Mix Proportionary
	Moisture Content			BS 812 Sec.5		For adjustment if added water for concrete making
	Mechanical Properties			BS 812 Sec.6	BS 882 or 1201	Ten per cent fines value

TABLE 3.8 SAMPLING, TESTING AND ACCEPTANCE STANDARD (Cont'd)

Materials	Test	Site Sampling	Testing		Accepted Standards	Remarks
			On site	In Laboratory		
Water	Suitability	BS 3148	-	BS 3148	BS 3148	Not required for potable water
Concrete	Compacting Factor Slump	BS 1881 Pt.1	BS 1881 Pt.2	BS 1881 Pt.2	This spec. Table 1 Cl.302	Workability Tests
	Crushing			BS 1880 Pt.4	Table 2 this Spec.	Cube Test
	Flexural			BS 1881 Pt.4	CP 114 Cl.208c	As required
	Water Absorption	CP 114		BS 1881 Pt.5	BS 340 Para 19(b)	Precast Concrete Cl.308
	Freeze-thaw	CI.601 BS 1881 Pt.3				Durability test for aggregate not complying with moisture absorption requirements of BS 5337 Cl.71.2
	Electrolytic Affluorescence					As required for salt containing aggregate or saline water

	Corea	BS 188 1 Pt.4		BS 1881 Pt.4	BS 1881 para 114 with ref . To concrete at strength this specificati o n	See Claus e 306.2
ADMIXT URES	Compatibil ity with cement	As required by Laborator y				Tests to be carried out by independent Laboratory as required.

RAINWATER PIPES AND GUTTERS

810.1 Asbestos-cement rainwater down pipes, fittings and gutters shall comply with BS 569.

810.2 PVC rainwater down pipes, fittings and gutters shall comply with BS 457.

810.3 Cast iron rainwater down pipes shall be of medium grade and comply with BS 460.

**PART 3 – CONDITIONS OF CONTRACT
AND CONTRACT FORMS**

GENERAL CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated below. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

“Accepted Contract Amount” means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

“Base Date” means a date 30 day prior to the submission of tenders.

“Bill of Quantities” means the priced and completed Bill of Quantities forming part of the tender. “Completion Date” means the date of completion of the Works as certified by the Engineer.

“Contract Price” means the price defined in the contract and thereafter as adjusted in accordance with the provisions of the Contract.

“Contract” means the agreement entered into between the Procuring Entity and the Contractor as recorded in the Agreement Form and signed by the parties including all attachments and appendices thereto and all documents incorporated by reference therein to execute, complete, and maintain the Works.

“Contractor's Documents” means the calculations, computer programs and other software, progress reports, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

“Contractor's Equipment” means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Procuring Entity's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

“Contractor's Personnel” means the Contractor's Representative and all personnel whom the Contractor utilizes on Site, who may include the staff, labor and other

employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

“Contractor's Representative” means the person named by the Contractor in the Contractor appointed from time to time by the Contractor who acts on behalf of the Contractor.

“Contractor” means the person(s) named as contractor in the Form of Tender accepted by the Procuring Entity.

“Cost” means expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

“Day” means a calendar day and “year” means 365 days.

“Day works” means Work inputs subject to payment on a time basis for labour and the associated materials and plant.

“Defect” means any part of the Works not completed in accordance with the Contract.

“Defects Liability Certificate” means the certificate issued by Engineer upon correction of defects by the Contractor.

“Defects Liability Period” means the period named in the Special Conditions of Contract and calculated from the Completion Date, within which the contractor is liable for any defects that may develop in the handed over works.

“Defects Notification Period” means the period for notifying defects in the Works or a Section (as the case maybe) under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], which extends over the days stated in the Special Conditions of Contract.

“Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract.

“Final Payment Certificate” means the payment certificate issued under Sub-Clause 14.13 [Issue of Final Payment Certificate].

“Final Statement” means the statement defined in Sub-Clause 14.11 [Application for Final Payment Certificate]. “Force Majeure” is defined in Clause 19 [Force Majeure].

“Foreign Currency” means a currency of another country (not Kenya) in which part (or all) of the Contract Price is payable, but not the Local Currency.

“Goods” means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

“Interim Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment], other than the Final Payment Certificate.

“Laws” means all national legislation, statutes, ordinances, and regulations and by-laws of any legally constituted public authority.

“Letter of Acceptance” means the letter of formal acceptance of a tender, signed by Procuring Entity, including any annexed memoranda comprising agreements between and signed by both Parties.

“Local Currency” means the currency of Kenya.

“Materials” means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

“Notice of Dissatisfaction” means the notice given by either Party to the other under Sub-Clause 20.3 indicating its dissatisfaction and intention to commence arbitration.

“Special Conditions of Contract” means the pages completed by the Procuring Entity entitled Special Conditions of Contract which constitute Part A of the Special Conditions.

“Party” means the Procuring Entity or the Contractor, as the context requires.

“Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment]. “Performance Certificate” means the certificate issued under Sub-Clause 11.9 [Performance Certificate]. “Performance Security” means the security (or securities, if any) under Sub-Clause 4.2 [Performance Security]. “Permanent Works” means the permanent works to be executed by the Contractor under the Contract.

“Plant” means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Procuring Entity and relating to the construction or operation of the Works.

“Procuring Entity's Equipment” means the apparatus, machinery and vehicles (if any) made available by the

Procuring Entity for the use of the Contract or in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Procuring Entity.

“Procuring Entity's Personnel” means the Engineer, the Engineer, the assistants and all other staff, labor and other employees of the Engineer and of the Procuring Entity; and any other personnel notified to the Contractor, by the Procuring Entity or the Engineer, as Procuring Entity's Personnel.

“Procuring Entity” means the Entity named in the Special Conditions of Contract.

“Engineer” is the person named in the Appendix to Conditions of Contract (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Engineer) who is responsible for supervising the execution of the Works and administering the Contract and shall be an “Engineer” or a “Quantity Surveyor” registered under the Engineer s and Quantity Surveyors Act Cap 525 or an “Engineer” registered under Engineers Registration Act Cap 530.

“Engineer” means the person appointed by the Procuring Entity to act as the Engineer for the purposes of the Contract and named in the Special Conditions of Contract, or other person appointed from time to time by the Procuring Entity and notified to the Contractor

“Provisional Sum” means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [Provisional Sums].

“Retention Money” means the accumulated retention moneys which the Procuring Entity retains under Sub-Clause

14.3 [Application for Interim Payment Certificates] and pays under Sub-Clause 14.9 [Payment of Retention Money].

“Schedules” means the document(s) entitled schedules, completed by the Contractor and submitted with the Form of Tender, as included in the Contract.

“Section” means a part of the Works specified in the Special Conditions of Contract as a Section (if any)

“Site Investigation Reports” are those reports that may be included in the tendering documents which a ref actual and interpretative about the surface and sub-surface condition sat the Site.

“Site” means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.

“Specification” means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

“Start Date” or “Commencement Date “is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with the Site possession date(s).

“Statement” means a statement submitted by the Contractor as part of an application, under Clause 14 [Contract Price and Payment], for a payment certificate.

“Subcontractor” means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works.

“Taking-Over Certificate” means a certificate issued under Clause 10 [Procuring Entity's Taking Over].

“Temporary Works” means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

“Temporary works” means works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

“Tender” means the Form of Tender and all other documents which the Contractor submitted with the Form of Tender, as included in the Contract.

“Tests after Completion” means the tests (if any) which are specified in the Contract and which are carried out in

accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Procuring Entity.

“Tests on Completion” means the tests which are specified in the Contractor agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [Tests on Completion] before the Works or a Section (as the case may be) are taken over by the Procuring Entity.

“Time for Completion” means the time for completing the Works or a Section (as the case may be) as stated in the Special Conditions of Contract (with any extension calculated from the Commencement Date.

“Unforeseeable” means not reasonably foreseeable by an experienced contractor by the Base Date.

“Variation” means any change to the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].

“Works” means the items the Procuring Entity requires the Contractor to undertake as defined in the Appendix to Conditions of Contract. “Works” may also mean the Permanent Works and the Temporary Works, or either of them as appropriate.

1.2 Interpretation

In the Contract, except where the context requires otherwise:

- a) Words indicating one gender include all genders;
- b) Words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) Provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
- d) “Written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

1.3 Communications

1.3.1 Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- a) In writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Special Conditions of Contract; and
- b) Delivered, sent or transmitted to the address of or the recipient's communications as stated in the Special Conditions of Contract. However:
 - i) If the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
 - ii) If the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

1.3.2 Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Engineer or the other Party, as the case may be.

1.4 Law and Language

1.4.1 The Contract shall be governed by the laws of Kenya.

1.4.2 The ruling language of the Contract shall be English.

1.5 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- a) The Contract Agreement,
- b) The Letter of Acceptance,
- c) The Special Conditions – Part A,

-
- d) The Special Conditions – Part B
 - e) The General Conditions of Contract
 - f) The Form of Tender,
 - g) The Specifications and Bills of Quantities
 - h) The Drawings, and
 - i) The Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

1.6 Contract Agreement

The Parties shall enter into a Contract Agreement within 14 days after the Contractor receives the Contract Agreement, unless the Special Conditions establish otherwise. The Contract Agreement shall be based upon the form annexed to the Special Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Procuring Entity.

1.7 Assignment

The Contractor shall not assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, the contractor:

- a) May as sign the whole or any part with the prior consent of the Procuring Entity, and
- b) May, as security in favor of a bank or financial institution, assign its right to moneys due, or to become due, under the Contract.

1.8 Care and Supply of Documents

1.8.1 The Specifications and Drawings shall be in the custody and care of the Procuring Entity. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawings and Bills of Quantities shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.

1.8.2 Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Procuring Entity. Unless otherwise

stated in the Contract, the Contractor shall supply to the Engineer two copies of each of the Contractor's Documents.

1.8.3 The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Procuring Entity's Personnel shall have the right of access to all these documents at all reasonable times.

1.8.4 If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

1.9 Timely provision of Drawings or Instructions

1.9.1 The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.

1.9.2 If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and

b) Payment of any other associated costs accrued, which shall be included in the Contract Price.

1.9.3 After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

1.9.4 However, if and to the extent that the Engineer failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of,

any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, or costs accrued.

1.10 Procuring Entity's Use of Contractor's Documents

1.10.1 As agreed between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.

1.10.2 The Contractor shall be deemed (by signing the Contract) to give to the Procuring Entity a non-terminable transferable non-exclusive royalty-free license to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This license shall:

- a) Apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
- b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and
- c) In the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.

1.10.3 The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Procuring Entity or purposes other than those permitted under Sub-Clause 1.10.2.

1.11 Contractor's Use of Procuring Entity's Documents

As agreed between the Parties, the Procuring Entity shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Procuring Entity. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not, without the Procuring Entity's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

1.12 Confidential Details

1.12.1 The Contractor's and the Procuring Entity's Personnel shall ensure confidentiality at all times. The confidentiality shall survive termination or completion of the contract. They shall disclose all such confidential and other information as may be reasonably required in order to verify compliance with the Contract and allow its proper implementation.

1.12.2 The Contractor's and the Procuring Entity's Personnel shall also treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.

1.13 Compliance with Laws

The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Special Conditions of Contract:

a) The Procuring Entity shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions described in the Specifications as having been (or to be) obtained by the Procuring Entity; and the Procuring Entity shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and

b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licenses and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Procuring Entity harmless against and from the consequences of any failure to do so, unless the Contractor is impeded to accomplish these actions and shows evidence of its diligence.

1.14 Joint and Several Liability

If the Contractor constitutes (under applicable Laws) a joint venture, consortium or other unincorporated grouping of two or more persons:

- a) These persons shall be deemed to be jointly and severally liable to the Procuring Entity for the performance of the Contract;
- b) These persons shall notify the Procuring Entity of their leader who shall have authority to bind the Contractor and each of these persons; and
- c) The Contractor shall not alter its composition or legal status without the prior consent of the Procuring Entity.

1.15 Inspections and Audit by the Procuring Entity

Pursuant to paragraph 2.2(e). of Appendix B to the General Conditions, the Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Public Procurement Regulatory Authority, Procuring Entity and/or persons appointed or designated by the Government of Kenya to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Procuring Entity if requested by the Procuring Entity. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 15.6 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Procuring Entity's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Procuring Entity's prevailing sanctions procedures).

2. THE PROCURING ENTITY

2.1 Right of Access to the Site

2.1.1 The Procuring Entity shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the Special Conditions of Contract. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Procuring Entity is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the

Procuring Entity shall do so in the time and manner stated in the Specification. However, the Procuring Entity may withhold any such right or possession until the Performance Security has been received.

2.1.2 If no such time is stated in the Special Conditions of Contract, the Procuring Entity shall give the Contractor right of access to, and possession of, the Site within such times as required to enable the Contractor to proceed without disruption in accordance with the programme submitted under Sub-Clause 8.3 [Programme].

2.1.3 If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Procuring Entity to give any such right or possession within such time, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) Payment of any such Cost-plus profit, which shall be included in the Contract Price.

2.1.4 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

2.1.5 However, if and to the extent that the Procuring Entity's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

2.2 Permits, Licenses or Approvals

2.2.1 The Procuring Entity shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:

- a) Copies of the Laws of Kenya which are relevant to the Contract but are not readily available, and
- b) Any permits, licenses or approvals required by the Laws of Kenya:
 - i) Which the Contractor is required to obtain under Sub-Clause 1.13 [Compliance with Laws],

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- ii) For the delivery of Goods, including clearance through customs, and
 - iii) For the export of Contractor's Equipment when it is removed from the Site.

2.3 Procuring Entity's Personnel

The Procuring Entity shall be responsible for ensuring that the Procuring Entity's Personnel and the Procuring Entity's other contractor son the Site:

- a) Co-operate with the Contractor's efforts under Sub-Clause 4.6 [Co-operation], and
- b) Take action similar to those which the Contractor is required to take under sub-paragraphs (a), (b) and (c) of Sub-Clause 4.8 [Safety Procedures] and under Sub-Clause 4.18 [Protection of the Environment].

2.4 Procuring Entity's Financial Arrangements

The Procuring Entity shall make and maintain all necessary financial arrangements which will enable the Procuring Entity to pay the Contract Price punctually (as estimated at that time) in accordance with Clause 14 [Contract Price and Payment].

3. THE ENGINEER

3.1 Engineer's Duties and Authority

3.1.1 The Procuring Entity shall appoint the Engineer who shall carry out the duties as signed to him in the Contract. The Engineer's staff shall include suitably qualified Assistants and other professionals who are competent to carry out these duties. The Engineer Name and Address shall be provided in the Special Conditions of Contract.

3.1.2 The Engineer shall have no authority to amend the Contract.

3.1.3 The Engineer shall issue instructions on use of P. C Sums in the Bills of quantities.

3.1.4 The Engineer May exercise the authority attributable to the Engineer as specified in or necessarily to be implied from the Contract. If the Engineer is required to obtain the approval of the Procuring Entity before exercising a specified authority, the requirements shall be as stated in the Special Conditions of Contract. The Procuring Entity shall promptly inform the Contractor of any change to the authority attributed to the Engineer.

3.1.5 However, whenever the Engineer exercises a specified authority for which the Procuring Entity's approval is required, then (for the purposes of the Contract) the

contractor shall require the Engineer to provide evidence of such approval before complying with the instruction.

3.1.6 Except as otherwise stated in these Conditions:

- a) Whenever carrying out duties or exercising authority, specified in or implied by the Contract, the Engineer shall be deemed to act for the Procuring Entity;
- b) The Engineer has no authority to relieve either Party of any duties, obligations or responsibilities under the Contract;
- c) Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances; and
- d) Any act by the Engineer in response to a Contractor's request shall be notified in writing to the Contractor within 14 days of receipt.

3.1.7 The following provisions shall apply:

The Engineer shall obtain the specific approval of the Procuring Entity before taking action under the following Sub-Clauses of these Conditions:

- a) Sub-Clause 4.12: agreeing or determining an extension of time and/or additional cost.
- b) Sub-Clause 13.1: instructing a Variation, except;
 - i) In an emergency situation as determined by the Engineer, or
 - ii) If such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the Special Conditions of Contract.
- c) Sub-Clause 13.3: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 or 13.2.
- d) Sub-Clause 13.4: Specifying the amount payable in each of the applicable three currencies.

3.1.8 Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forth with comply, despite the absence of approval of the Procuring Entity, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Procuring Entity.

3.2 Delegation by the Engineer

3.2.1 The Engineer may from time to time assign duties and delegate authority to assistants and may also revoke such assignment or delegation. These assistants may include a resident Engineer, and/or independent inspectors appointed to inspect and/ or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties. However, unless otherwise agreed by both Parties, the Engineer shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [Determinations].

3.2.2 Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorized to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:

- a) Any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant or Materials;
- b) If the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

3.3 Instructions of the Engineer

3.3.1 The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under Clause 3.2.1.

3.3.2 The Contractor shall comply with the instructions given by the Engineer or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Engineer's a delegated assistant:

- a) Gives an oral instruction,
- b) Receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction, and
- c) Does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation,

Then the confirmation shall constitute the written instruction of the Engineer or delegated assistant (as the case may be).

3.4 Replacement of the Engineer

If the Procuring Entity intends to replace the Engineer, the Procuring Entity shall, in not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended person to replace the Engineer.

3.5 Determinations

3.5.1 Whenever these Conditions provide that the Engineer shall proceed in accordance with this Sub-Clause 3.5 to agree or determine any matter, the Engineer shall consult with each Party in an endeavor to reach agreement. If agreement is not achieved, the Engineer shall make a fair determination in accordance with the Contract, taking due regard of all relevant circumstances.

3.5.1 The Engineer shall give notice to both Parties of each agreement or determination, with supporting particulars, within 30 days from the receipt of the corresponding claim or request except when otherwise specified. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [Claims, Disputes and Arbitration].

4. THE CONTRACTOR

4.1 Contractor's General Obligations

4.1.1 The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Engineer's instructions, and shall remedy any defects in the Works.

4.1.2 The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.

4.1.3 All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country.

4.1.4 The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent specified in the Contract, the Contractor (i) shall be responsible for all Contractor's Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the design or specification of the Permanent Works.

4.1.5 The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.

4.1.6 If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Special Conditions:

a) The Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract;

b) These Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-

Clause 1.4 [Law and Language], and shall include additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;

c) The Contractor shall be responsible for this part and it shall, when the Works are completed, befit for such purposes for which the part is intended as are specified in the Contract; and

d) prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the “as-built” documents and, if applicable, operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Procuring Entity to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

4.2 Performance Security

4.2.1 The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount stated in the Special Conditions of Contract and denominated in the currency (ies) of the Contract or in a freely convertible currency acceptable to the Procuring Entity. If an amount is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.

4.2.2 The Contractor shall deliver the Performance Security to the Procuring Entity within 30 days after receiving the Notification of Award and shall send a copy to the Engineer. The Performance Security shall be issued by a reputable bank selected by the Contractor and shall be in the form annexed to the Special Conditions, as stipulated by the Procuring Entity in the Special Conditions of Contract, or in another form approved by the Procuring Entity.

4.2.3 The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects. If the terms of the Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been completed and any defects have been remedied.

4.2.4 The Procuring Entity shall not make a claim under the Performance Security, except for amounts to which the Procuring Entity is entitled under the Contract.

4.2.5 The Procuring Entity shall indemnify and hold the Contractor harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from a claim under the Performance Security to the extent to which the Procuring Entity was not entitled to make the claim.

4.2.6 The Procuring Entity shall return the Performance Security to the Contractor within 14 days after receiving a copy of the Taking-Over Certificate.

4.2.7 Without limitation to the provisions of the rest of this Sub-Clause, whenever the Engineer determines an addition or a reduction to the Contract Price as a result of a change in cost and/ or legislation, or as a result of a Variation, amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor shall at the Engineer request promptly increase, or may decrease, as the case may be, the value of the Performance Security in that currency by an equal percentage.

4.3 Contractor's Representative

4.3.1 The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary to act on the Contractor's behalf under the Contract. The Contractor's Representative's Name and Address shall be provided in the Special Conditions of Contract.

4.3.2 Unless the Contractor's Representative is named in the Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked in terms of Sub-Clause 6.9 [Contractor's Personnel], or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

4.3.3 The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.

4.3.4 The whole time of the Contractor's Representative shall be given to directing the Contractor's performance of the Contract. If the Contractor's Representative is to be temporarily absent from the Site during the execution of the Works, a suitable replacement person shall be appointed, subject to the Engineer prior consent, and the Engineer shall be notified accordingly.

4.3.5 The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [Instructions of the Engineer].

4.3.6 The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Engineer has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

4.3.7 The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreter available during all working hours in a number deemed sufficient by the Engineer.

4.4 Sub-contractors

4.4.1 The Contractor shall not subcontract the whole of the Works. The contractor may however subcontract the works as provided in Clause 34.2.

4.4.2 The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor. Unless otherwise stated in the Special Conditions:

- a) The Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract;
- b) The prior consent of the Procuring Entity shall be obtained to other proposed Subcontractors;
- c) The Contractor shall give the Procuring Entity not less than 14 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site; and
- d) Each subcontract shall include provisions which would entitle the Procuring Entity to require the subcontract to be assigned to the Procuring Entity under Sub-Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [Termination by Procuring Entity].

4.4.3 The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [Confidential Details] apply equally to each Subcontractor.

4.4.4 Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from Kenya to be appointed as Subcontractors.

4.5 Assignment of Benefit of Subcontract

If a Subcontractor's obligations extend beyond the expiry date of the relevant Defects Notification Period and the Engineer, prior to this date, instructs the Contractor to assign the benefit of such obligations to the Procuring Entity, then the Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability to the Procuring Entity for the work carried out by the Subcontractor after the assignment takes effect.

4.6 Co-operation

4.6.1 The Contractor shall, as specified in the Contract or as instructed by the Engineer, allow appropriate opportunities for carrying out work to:

- a) The Procuring Entity's Personnel,
- b) Any other contractors employed by the Procuring Entity, and
- c) The personnel of any legally constituted public authorities, who may be employed in the execution on or near the Site of any work not included in the Contract.

4.6.2 Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to suffer delays and/or to incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.

4.6.3 If, under the Contract, the Procuring Entity is required to give to the Contractor possession of any foundation, structure, plant or means of access in accordance with Contractor's Documents, the Contractor shall submit such documents to the Engineer in the time and manner stated in the Specification.

4.7 Setting Out of the Works

4.7.1 The Contractor shall set out the Works in relation to original points, lines and levels of reference specified in the Contractor notified by the Engineer. The Contractor shall be responsible for the correct positioning of all parts of the Works,

and shall rectify any error in the positions, levels, dimensions or alignment of the Works.

4.7.2 The Procuring Entity shall be responsible for any errors in these specified or notified items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.

4.7.3 If the Contractor suffers delay and/or incurs Cost from executing work which was necessitated by an error in these items of reference, and an experienced contractor could not reasonably have discovered such error and avoided this delay and/ or Cost, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) Payment of any such costs accrued, which shall be included in the Contract Price.

4.7.4 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent the error could not reasonably have been discovered, and (ii) the matters described in sub-paragraphs (a) and (b) above related to these.

4.8 Safety Procedures

The Contractor shall:

- a) Comply with all applicable safety regulations,
- b) Take care for the safety of all persons entitled to be on the Site,
- c) Use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons,
- d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 [Procuring Entity's Taking Over], and
- e) Provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

4.9 Quality Assurance

4.9.1 The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Engineer shall be entitled to audit any aspect of the system.

4.9.2 Details of all procedures and compliance documents shall be submitted to the Engineer for information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor itself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.

4.10 Site Data

4.10.1 The Procuring Entity shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Procuring Entity's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Procuring Entity shall similarly make available to the Contractor all such data which come into the Procuring Entity's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

4.10.2 To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):

- a) The form and nature of the Site, including sub-surface conditions,
- b) The hydrological and climatic conditions,
- c) The extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects,
- d) The Laws, procedures and labour practices of Kenya, and
- e) The Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

4.11 Sufficiency of the Accepted Contract Amount

4.11.1 The Contractor shall be deemed to:

- a) Have satisfied itself as to the correctness and sufficiency of the Accepted Contract Amount, and
- b) Have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 [Site Data].

4.11.2 Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.

4.12 Unforeseeable Physical Conditions

4.12.1 In this Sub-Clause, “physical conditions” means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.

4.12.2 If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Engineer as soon as practicable.

4.12.3 This notice shall describe the physical conditions, so that they can be inspected by the Engineer and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may

give. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

4.12.4 If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to notice under Sub-Clause 20.1 [Contractor's Claims] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) Payment of any such Cost, which shall be included in the Contract Price.

4.12.5 Upon receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

4.12.6 However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Engineer may also review whether other physical conditions in similar parts of the Works (if any) were more favorable than could reasonably have been foreseen when the Contractor submitted the Tender. If and to the extent that these more favorable conditions were encountered, the E may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

4.12.7 The Engineer shall take account of any evidence of the physical conditions foreseen by the Contractor when submitting the Tender, which shall be made

available by the Contractor, but shall not be bound by the Contractor's interpretation of any such evidence.

4.13 Rights of Way and Facilities

Unless otherwise specified in the Contract the Procuring Entity shall provide effective access to and possession of the Site including special and/or temporary rights-of-way which are necessary for the Works. The Contractor shall obtain, at his risk and cost, any additional rights of way or facilities outside the Site which he may require for the purposes of the Works.

4.14 Avoidance of Interference

4.14.1 The Contractor shall not interfere unnecessarily or improperly with:

- a) The convenience of the public, or
- b) The access to and use and occupation of all roads and foot paths, irrespective of whether they are public or in the possession of the Procuring Entity or of others.

4.14.2 The Contractor shall indemnify and hold the Procuring Entity harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

4.15 Access Route

4.15.1 The Contractor shall be deemed to have been satisfied as to the suitability and availability of access routes to the Site at Base Date. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.

4.15.2 Except as otherwise stated in these Conditions:

- a) The Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;

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- b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
 - c) The Procuring Entity shall not be responsible for any claims which may arise from the use or otherwise of any access route;
 - d) The Procuring Entity does not guarantee the suitability or a availability of particular access routes; and
 - e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

4.16 Transport of Goods

Unless otherwise stated in the Special Conditions:

- a) The Contractor shall give the Engineer not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;
- b) The Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and
- c) The Contractor shall indemnify and hold the Procuring Entity harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods and shall negotiate and pay all claims arising from their transport.

4.17 Contractor's Equipment

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

4.18 Protection of the Environment

4.18.1 The contractor shall comply with the applicable environmental laws, regulations and policies.

4.18.2 The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

4.18.3 The Contractors shall ensure that emissions, surfaced is charges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.

4.19 Electricity, Water and Gas

4.19.1 The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require for his construction activities and to the extent defined in the Specifications, for the tests.

4.19.2 The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specifications. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed.

4.19.3 The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.

4.20 Procuring Entity's Equipment and Free-Issue Materials

4.20.1 The Procuring Entity shall make the Procuring Entity's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:

- a) The Procuring Entity's shall be responsible for the Procuring Entity's Equipment, except that
- b) The Contractor shall be responsible for each item of Procuring Entity's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.

4.20.1 The appropriate quantities and the amounts due (at such stated prices) for the use of Procuring Entity's Equipment shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Procuring Entity's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Procuring Entity.

4.20.2 The Procuring Entity shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Procuring Entity shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them and shall promptly give notice to the Engineer of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Procuring Entity shall immediately rectify the notified shortage, defect or default.

4.20.3 After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Procuring Entity of liability for any shortage, defect or default not apparent from a visual inspection.

4.21 Progress Reports

4.21.1 Unless otherwise stated in the Special Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.

4.21.2 Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works. Each report shall include:

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- a) Charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
 - b) Photographs showing the status of manufacture and of progress on the Site;
 - c) For the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
 - i) Commencement of manufacture,
 - ii) Contractor's inspections,
 - iii) Tests, and
 - iv) Shipment and arrival at the Site;
 - d) The details described in Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment];
 - e) Copies of quality assurance documents, test results and certificates of Materials;
 - f) List of notices given under Sub-Clause 2.5 [Procuring Entity's Claims] and notices given under Sub- Clause 20.1 [Contractor's Claims];
 - g) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
 - h) Comparison so factual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

4.22 Security of the Site

Unless otherwise stated in the Special Conditions:

- a) The Contractor shall be responsible for keeping unauthorized persons off the Site, and
- b) authorized persons shall be limited to the Contractor's Personnel and the Procuring Entity's Personnel; and to any other personnel notified to the Contractor,

by the Procuring Entity or the Engineer, as authorized personnel of the Procuring Entity's other contractors on the Site.

4.23 Contractor's Operations on Site

4.23.1 The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Engineer as additional working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.

4.23.2 During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.

4.23.3 Upon the issue of a Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which the Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave that part of the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, during the Defects Notification Period, such Goods as are required for the Contractor to fulfil obligations under the Contract.

4.24 Fossils

4.24.1 All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Procuring Entity. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.

4.24.2 The Contractor shall, upon discovery of any such finding, promptly give notice to the Engineer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the

Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) Payment of any such Cost, which shall be included in the Contract Price.

After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

5. NOMINATED SUBCONTRACTORS

5.1 Definition of “nominated Subcontractor”

In this Contract, “nominated Subcontractor” means a Subcontractor:

- a) Who is nominated by the Procuring Entity, or
- b) Contractor has nominated as a Subcontractor subject to Sub-Clause 5.2 [Objection to Notification].

5.2 Objection to Nomination

The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Procuring Entity as soon as practicable, with supporting particulars. An objection shall be deemed reasonable if it arises from (among other things) any of the following matters, unless the Procuring Entity agrees in writing to indemnify the Contractor against and from the consequences of the matter:

- a) There are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;
- b) The nominated Subcontractor does not accept to indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and employees; or
- c) The nominated Subcontractor does not accept to enter into a subcontract which specifies that, for the subcontracted work (including design, if any), the nominated Subcontractor shall:

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- i) undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract;
 - ii) Indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities, and
 - iii) Be paid only if and when the Contractor has received from the Procuring Entity payments for sums due under the Subcontract referred to under Sub-Clause 5.3 [Payment to nominated Subcontractors].

5.3 Payments to nominated Subcontractors

The Contractor shall pay to the nominated Subcontractor the amounts shown on the nominated Subcontractor's invoices approved by the Contractor which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph (b) of Sub-Clause 13.5 [Provisional Sums], except as stated in Sub-Clause 5.4 [Evidence of Payments].

5.4 Evidence of Payments

5.4.1 Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- (a) Submits this reasonable evidence to the Engineer, or
- (b) (i) Satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
- ii) Submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement, then the Procuring Entity may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the

evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Procuring Entity, the amount which the nominated Subcontractor was directly paid by the Procuring Entity.

6. STAFF AND LABOR

6.1 Engagement of Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labor, local or otherwise, and for their payment, feeding, transport, and, when appropriate, housing. The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualifications and experience from sources within Kenya.

6.2 Rates of Wages and Conditions of Labor

6.2.1 The Contractor shall pay rates of wages, and observe conditions of labor, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by Procuring Entity's whose trade or industry is similar to that of the Contractor.

6.2.2 The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in Kenya in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the Laws of Kenya for the time being in force, and the Contractor shall perform such duties in regard to such deductions there of as may be imposed on him by such Laws.

6.3 Persons in the Service of Procuring Entity

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Procuring Entity's Personnel.

6.4 Labor Laws

The Contractor shall comply with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, employment of children, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights. The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

6.5 Working Hours

No work shall be carried out on the Site on locally recognized days of rest, or outside the normal working hours stated in the Special Conditions of Contract, unless:

- a) Otherwise stated in the Contract,
- b) The Engineer gives consent, or
- c) The work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer, provided that work done outside the normal working hours shall be considered and paid for as overtime.

6.6 Facilities for Staff and Labor

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities on site for the Contractor's Personnel. The Contractor shall also provide facilities for the Procuring Entity's Personnel as stated in the Specifications. The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

6.7 Health and Safety

6.7.1 The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Procuring Entity's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

6.7.2 The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

6.7.3 The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make

reports concerning health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.

6.7.4 The Contractor shall conduct an awareness programme on HIV and other sexually transmitted diseases via an approved service provider and shall undertake such other measures taken to reduce the risk of the transfer of these diseases between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

6.8 Contractor's Superintendence

6.8.1 Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.

6.8.2 Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4 [Law and Language]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

6.9 Contractor's Personnel

6.9.1 The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Contractors Key personnel shall be named in the Special Conditions of Contract. The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:

- a) Persists in any misconduct or lack of care,
- b) Carries out duties in competently or negligently,
- c) Fails to conform with any provisions of the Contract,
- d) Persists in any conduct which is prejudicial to safety, health, or the protection of the environment, or
- e) Based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Works.

6.9.2 If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

6.10 Records of Contractor's Personnel and Equipment

The Contractor shall submit, to the Engineer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Engineer, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

6.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site.

6.12 Foreign Personnel

6.12.1 The Contractor shall not employ foreign personnel unless the contractor demonstrates that there are no Kenyans with the required skills.

6.12.2 The Contractor shall be responsible for the return of any foreign personnel to the place where they were recruited or to their domicile. In the event of the death in Kenya of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

6.13 Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

6.14 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

6.15 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of Kenya, onsite, import, sell, give, barter or otherwise dispose of any alcoholic liquor or

drugs, or permit or allow importation, sale, gift, barter or disposal thereof by Contractor's Personnel.

6.16 Prohibition of Forced or Compulsory Labour

The Contractor shall not employ forced labor, which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements.

6.17 Prohibition of Harmful Child Labor

The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant labour laws of Kenya have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.

6.18 Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment].

6.19 Workers' Organizations

The Contractor shall comply with the relevant labor laws that recognize workers' rights to form and to join workers' organizations of their choosing without interference.

6.20 Non-Discrimination and Equal Opportunity

The Contractor shall base the labour employment on the principle of equal opportunity and fair treatment and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment,

access to training, promotion, termination of employ mentor retirement, and discipline.

7. PLANT, MATERIALS AND WORKMANSHIP

7.1 Manner of Execution

The Contractor shall carry out the manufacture/assemble of plant, the production and manufacture of Materials, and all other execution of the Works:

- a) In the manner (if any) specified in the Contract,
- b) In a proper workman like and careful manner, in accordance with recognized good practice, and
- c) With properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.

7.2 Samples

The Contractor shall submit the following samples of Materials, and relevant information, to the Engineer for consent prior to using the Material sin or for the Works:

- a) manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost, and
- b) Additional samples instructed by the Engineer as a Variation.

Each sample shall be labeled as to origin and intended use in the Works.

7.3 Inspection

7.3.1 The Procuring Entity's Personnel shall at all reasonable times:

- a) Have full access to all parts of the Site and to all places from which natural Materials are being obtained, and
- b) During production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials.

7.3.2 The Contractor shall give the Procuring Entity's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.

7.3.3 The Contractor shall give notice to the Engineer whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Engineer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Engineer does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and there after reinstate and make good, all at the Contractor's cost.

7.4 Testing

7.4.1 This Sub-Clause shall apply to all tests specified in the Contract.

7.4.2 Except as otherwise specified in the Contract, the Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labor, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.

7.4.3 The Engineer may, under Clause 13 [Variations and Adjustments], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.

7.4.4 The Engineer shall give the Contractor not less than 24 hours' notice of the Engineer's intention to attend the tests. If the Engineer does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Engineer's presence.

7.4.5 If the Contractor suffers delay and/ or incurs Cost from complying with these instructions or as a result of a delay for which the Procuring Entity is responsible, the

Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) Payment of any such Cost-plus profit, which shall be included in the Contract Price.

7.4.6 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

7.4.7 The Contractor shall promptly forward to the Engineer duly certified reports of the tests. When the specified tests have been passed, the Engineer shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Engineer has not attended the tests, he shall be deemed to have accepted the readings as accurate.

7.5 Rejection

7.5.1 If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.

7.5.2 If the Engineer requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Procuring Entity to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay these costs to the Procuring Entity.

7.6 Remedial Work

7.6.1 Notwithstanding any previous test or certification, the Engineer may instruct the Contractor to:

- a) Remove from the Site and replace any Plant or Materials which is not in accordance with the Contract,
- b) Remove and re-execute any other work which is not in accordance with the Contract, and

c) Execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseen able event or otherwise.

7.6.2 The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under sub-paragraph (c).

7.6.3 If the Contractor fails to comply with the instruction, the Procuring Entity shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay to the Procuring Entity all costs arising from this failure.

7.6.4 If the contractor repeatedly delivers defective work, the Procuring Entity may consider termination in accordance with Clause 15.

7.7 Ownership of Plant and Materials

Except as otherwise provided in the Contract, each item of Plant and Materials shall become the property of the Procuring Entity at whichever is the earlier of the following times, free from liens and other encumbrances:

- a) When it is incorporated in the Works;
- b) When the Contractor is paid the corresponding value of the Plant and Materials under Sub-Clause 8.10 [Payment for Plant and Materials in Event of Suspension].

7.8 Royalties

Unless otherwise stated in the Specification, the Contractor shall pay all royalties, rents and other payments for:

- a) Natural materials obtained from outside the Site, and
- b) The disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal are as within the Site are specified in the Contract.

8. COMMENCEMENT, DELAYS AND SUSPENSION

8.1 Commencement of Works

8.1.1 Except as otherwise specified in the Special Conditions of Contract, the Commencement Date shall be the date at which the following precedent condition shave all been fulfilled and the Engineer's notification recording the agreement of both Parties on such fulfilment and instructing to commence the Work is received by the Contractor:

- a) Signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities of Kenya;
- b) Except if otherwise specified in the Special Conditions of Contract, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [Compliance with Laws] as required for the commencement of the Works.
- c) Receipt by the Contractor of the Advance Payment under Sub-Clause 14.2 [Advance Payment] provided that the corresponding bank guarantee has been delivered by the Contractor.

8.1.2 If the said Engineer's instruction is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract under Sub-Clause 16.2 [Termination by Contractor].

8.1.3 The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date and shall then proceed with the Works with due expedition and without delay.

8.2 Time for Completion

The Contractor shall complete the whole of the Works, and each Section (if any), within the Time for Completion for the Works or Section (as the case may be), including:

- a) Achieving the passing of the Tests on Completion, and
- b) Completing all work which is stated in the Contract as being required for the Works or Section to be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections].

8.3 Programme

8.3.1 The Contractor shall submit a detailed time programme to the Engineer within 4 days after receiving the notice under Sub-Clause 8.1 [Commencement of Works]. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:

- a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing,
- b) Each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
- c) The sequence and timing of inspections and tests specified in the Contract, and
- d) A supporting report which includes:
 - i) A general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and
 - ii) Details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

8.3.2 Unless the Engineer, within 14 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Procuring Entity's Personnel shall be entitled to rely upon the programme when planning their activities.

8.3.3 The Contractor shall promptly give notice to the Engineer of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works.

8.3.4 If, at any time, the Engineer gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contractor to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Engineer in accordance with this Sub-Clause.

8.4 Extension of Time for Completion

8.4.1 The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 10.1 [Taking Over of the Works and Sections] is or will be delayed by any of the following causes:

- a) A Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.3 [Variation Procedure]) or other substantial change in the quantity of an item of work included in the Contract,
- b) A cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions,
- c) Exceptionally adverse climatic conditions,
- d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions, or
- e) Any delay, impediment or prevention caused by or attributable to the Procuring Entity, the Procuring Entity's Personnel, or the Procuring Entity's other contractors.

8.4.2 If the Contractor considers itself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Engineer in accordance with Sub-Clause 20.1 [Contractor's Claims]. When determining each extension of time under Sub-Clause 20.1, the Engineer shall review previous determinations and may increase, but shall not decrease, the total extension of time.

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

- a) The Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in Kenya,
- b) These authorities delay or disrupt the Contractor's work, and
- c) The delay or disruption was Unforeseeable, then this delay or disruption will be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 [Extension of Time for Completion].

8.6 Rate of Progress

8.6.1 If, at any time:

- a) Actual progress is too slow to complete within the Time for Completion, and/or
- b) Progress has fallen (or will fall) behind the current programme under Sub-Clause 8.3 [Programme], other than as a result of a cause listed in Sub-Clause 8.4 [Extension of Time for Completion], then the Engineer may instruct the Contractor to submit, under Sub-Clause 8.3 [Programme], a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion.

8.6.2 Unless the Engineer notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Procuring Entity to incur additional costs, the Contractor shall subject to notice under Sub-Clause 2.5 [Procuring Entity's Claims] pay these costs to the Procuring Entity, in addition to delay damages (if any) under Sub-Clause 8.7 below.

8.6.3 Additional costs of revised methods including acceleration measures, instructed by the Engineer to reduce delays resulting from causes listed under Sub-Clause 8.4 [Extension of Time for Completion] shall be paid by the Procuring Entity, without generating, however, any other additional payment benefit to the Contractor.

8.7 Delay Damages

8.7.1 If the Contractor fails to comply with Sub-Clause 8.2 [Time for Completion], the Contractor shall subject to notice under Sub-Clause 2.5 [Procuring Entity's Claims] pay delay damages to the Procuring Entity for this default. These delay damages shall be the sum stated in the Special Conditions of Contract, which shall be paid for everyday which shall elapse between the relevant Time for Completion and the date stated in the taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the Special Conditions of Contract.

8.7.2 These delay damages shall be the only damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 15.2 [Termination by Procuring Entity] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Contract.

8.8 Suspension of Work

8.8.1 The Engineer may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.

8.8.2 The Engineer may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 8.9, 8.10 and 8.11 shall not apply.

8.9 Consequences of Suspension

8.9.1 If the Contractor suffers delay and/or incurs Cost from complying with the Engineer instructions under Sub-Clause 8.8 [Suspension of Work] and/or from resuming the work, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) Payment of any such Cost, which shall be included in the Contract Price.

8.9.2 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

8.9.3 The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with Sub-Clause 8.8 [Suspension of Work].

8.10 Payment for Plant and Materials in Event of Suspension

The Contractor shall be entitled to payment of the value (as at the date of suspension) of Plant and/ or Materials which have not been delivered to Site, if:

- a) The work on Plant or delivery of Plant and/ or Materials has been suspended for more than 30 days, and
- b) The Contractor has marked the Plant and/or Materials as the Procuring Entity's property in accordance with the Engineer's instructions.

8.11 Prolonged Suspension

If the suspension under Sub-Clause 8.8 [Suspension of Work] has continued for more than 84 days, the Contractor may request the Engineer's permission to proceed. If the Engineer does not give permission within 30 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [Variations and Adjustments] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [Termination by Contractor].

8.12 Resumption of Work

After the permission or instruction to proceed is given, the Contractor and the Engineer shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension after receiving from the Engineer an instruction to this effect under Clause 13 [Variations and Adjustments].

9. TESTS ON COMPLETION

9.1 Contractor's Obligations

9.1.1 The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [Testing], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [Contractor's General Obligations].

9.1.2 The Contractor shall give to the Engineer not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.

9.1.3 In considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Procuring Entity on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

9.2 Delayed Tests

9.2.1 If the Tests on Completion are being unduly delayed by the Procuring Entity, Sub-Clause 7.4 [Testing] (fifth paragraph) and/ or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.

9.2.2 If the Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.

9.2.3 If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Procuring Entity's Personnel may proceed with the Test at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

9.3 Retesting of related works

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [Rejection] shall apply, and the Engineer or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

9.4 Failure to Pass Tests on Completion

9.4.1 If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the Engineer shall be entitled to:

- a) Order further repetition of Tests on Completion under Sub-Clause 9.3; or
- b) if the failure deprives the Procuring Entity of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Procuring Entity shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 1.4 [Failure to Remedy Defects].

10. PROCURING ENTITY'S TAKING OVER

10.1 Taking Over of the Works and Sections

10.1.1 Except as stated in Sub-Clause 9.4 [Failure to Pass Tests on Completion], the Works shall be taken over by the Procuring Entity when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.

10.1.2 The Contractor may apply by notice to the Engineer for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.

10.1.3 The Engineer shall, within 30 days after receiving the Contractor's application:

- a) Issue the Taking-Over Certificate to the Contractor or, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or
- b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

10.1.4 If the Engineer fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 30 days, and if the Works or Section (as

the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

10.2 Taking Over of Parts of the Works

10.2.1 The Engineer may, at the sole discretion of the Procuring Entity, issue a Taking-Over Certificate for any part of the Permanent Works.

10.2.2 The Procuring Entity shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Engineer has issued a Taking-Over Certificate for this part. However, if the Procuring Entity does use any part of the Works before the Taking-Over Certificate is issued:

- a) The part which is used shall be deemed to have been taken over as from the date on which it is used,
- b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Procuring Entity, and
- c) if requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.

10.2.3 After the Engineer has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be necessary to carry out any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.

10.2.4 If the Contractor incurs Cost as a result of the Procuring Entity taking over and/or using a part of the Works, other than such use as is specified in the Contractor agreed by the Contractor, the Contractor shall (i) give notice to the Engineer and (ii) be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to payment of any such accrued costs, which shall be included in the Contract Price. After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this accrued cost.

10.2.5 If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages thereafter for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of

delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 8.7 [Delay Damages] and shall not affect the maximum amount of these damages.

10.3 Interference with Tests on Completion

10.3.1 If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Procuring Entity is responsible, the Procuring Entity shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.

10.3.2 The Engineer shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Engineer shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.

10.3.3 If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such accrued costs, which shall be included in the Contract Price.

10.3.4 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

10.4 Surfaces Requiring Reinstatement

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

11. DEFECTS LIABILITY

11.1 Completion of Outstanding Work and Remedying Defects

11.1.1 In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:

- a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer, and
- b) execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Procuring Entity on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).

11.1.2 If a defect appears or damage occurs, the Contractor shall be notified accordingly by the Engineer.

11.2 Cost of Remedying Defects

11.2.1 All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:

- a) Any design for which the Contractor is responsible,
- b) Plant, Materials or workmanship not being in accordance with the Contract, or
- c) Failure by the Contractor to comply with any other obligation.

11.2.2 If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Procuring Entity, and Sub-Clause 13.3 [Variation Procedure] shall apply.

11.3 Extension of Defects Notification Period

11.3.1 The Procuring Entity shall be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or by reason of damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.

11.3.2 If delivery and/ or erection of Plant and/ or Materials was suspended under Sub-Clause 8.8 [Suspension of Work] or Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/ or Materials would otherwise have expired.

11.4 Failure to Remedy Defects

11.4.1 If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by the Engineer, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.

11.4.2 If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2[Cost of Remedying Defects], the Procuring Entity may (at his option):

- (a) Carry out the work itself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 2.5 [Procuring Entity's Claims] pay to the Procuring Entity the costs reasonably incurred by the Procuring Entity in remedying the defect or damage;
- (b) Require the Engineer to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [Determinations]; or
- (c) if the defect or damage deprives the Procuring Entity of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contractor otherwise, the Procuring Entity shall then be entitled to recover all sums paid for the Works or for such part

(as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

11.5 Removal of Defective Work

If the defector damage cannot be remedied expeditiously on the Site and the Procuring Entity gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.

11.6 Further Tests

11.6.1 If the work of remedying of any defector damage may affect the performance of the Works, the Engineer may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 14 days after the defect or damage is remedied.

11.6.2 These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [Cost of Remedying Defects], for the cost of the remedial work.

11.7 Right of Access

Until the Completion Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Procuring Entity's reasonable security restrictions.

11.8 Contractor to Search

The Contractor shall, if required by the Engineer, search for the cause of any defect on parts of the works that have already accepted, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Cost of the search plus profit shall

be agreed or determined by the Engineer in accordance with Sub-Clause 3.5 [Determinations] and shall be included in the Contract Price.

11.9 Completion Certificate

11.9.1 Performance of the Contractor's obligations shall not be considered to have been completed until the Engineer has issued the Completion Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.

11.9.2 The Engineer shall issue the Completion Certificate within 30 days after the latest of the expiry dates of the Defects Liability Period, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects. A copy of the Completion Certificate shall be issued to the Procuring Entity.

11.9.3 Only the Completion Certificate shall be deemed to constitute acceptance of the Works.

11.10 Unfulfilled Obligations

After the Completion Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

11.11 Clearance of Site

11.11.1 Upon receiving the Completion Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

11.11.2 If all these items have not been removed within 30 days after receipt by the Contractor of the Completion Certificate, the Procuring Entity may sell or otherwise dispose of any remaining items. The Procuring Entity shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

11.11.3 Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Procuring Entity's costs, the Contractor shall pay the outstanding balance to the Procuring Entity.

12. MEASUREMENT AND DEVALUATION

12.1 Works to be Measured

12.1.1 The Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement on Completion] and 14.11 [Application for Final Payment Certificate] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract.

12.1.2 Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:

- a) promptly either attend or send another qualified representative to assist the Engineer in making the measurement, and
- b) supply any particulars requested by the Engineer.

12.1.3 If the Contractor fails to attend or send a representative, the measurement made by the Engineer shall be accepted as accurate.

12.1.4 Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

12.1.5 If the Contractor examines and disagrees the records, and/ or does not sign them as agreed, then the Contractor shall give notice to the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them and certify the payment of the undisputed part. If the Contractor does not so give notice to the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.

12.2 Method of Measurement

Except as otherwise stated in the Contract:

- a) Measurement shall be made of the net actual quantity of each item of the Permanent Works, and

b) the method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

12.3 Evaluation

12.3.1 Except as otherwise stated in the Contract, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of work one by evaluating each item of work, applying the measurement agreed or determined in accordance with the above Sub-Clauses 12.1 and 12.2 and the appropriate rate or price for the item.

12.3.2 For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contractor, if there is no such item, specified for similar work.

12.3.3 Any item of work included in the Bill of Quantities for which no rate or price was specified shall be considered as included in other rates and prices in the Bill of Quantities and will not be paid for separately.

12.3.4 However, for a new item of work, a new rate or price shall be appropriate for such item of work if:

- a) The work is instructed under Clause 13 [Variations and Adjustments],
- b) no rate or price is specified in the Contract for this item, and
- c) no specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

12.3.5 Each new rate or price shall be derived from any relevant rates or prices in the Contract. If no rates or prices are relevant for the new item of work, it shall be derived from the reasonable Cost of executing such work, prevailing market rates, together with profit, taking account of any other relevant matters.

12.3.6 Until such time as an appropriate rate or price is agreed or determined, the Engineer shall determine a provisional rate or price for the purposes of Interim Payment Certificates as soon as the concerned work commences.

12.3.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (which would be the tender price), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of

rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: (corrected tender price– tender price)/ tender price X 100.

12.4 Omissions

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

- a) The Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;
- b) The omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and
- c) this cost is not deemed to be included in the evaluation of any substituted work; then the Contractor shall give notice to the Engineer accordingly, with supporting particulars. Upon receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this cost, which shall be included in the Contract Price.

13. VARIATIONS AND ADJUSTMENTS

13.1 Right to Vary

13.1.1 Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal. No Variation instructed by the Engineer under this Clause shall in any way vitiate or in validate the Contract.

13.1.2 The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Engineer stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, or (ii) such Variation triggers a substantial change in the sequence or progress of the Works. Upon receiving this notice, the Engineer shall cancel, confirm or vary the instruction.

13.1.3 Each Variation may include:

- a) changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation),

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- b) changes to the quality and other characteristics of any item of work,
 - c) changes to the levels, positions and/ or dimensions of any part of the Works,
 - d) omission of any work unless it is to be carried out by others,
 - e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
 - f) changes to the sequence or timing of the execution of the Works.

13.1.4 The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Engineer instructs after obtaining approval of the Procuring Entity.

13.2. Variation Order Procedure

13.2.1 Prior to any Variation Order under Sub-Clause 13.1.4 the Engineer shall notify the Contractor of the nature and form of such variation. As soon as possible after having received such notice, the Contractor shall submit to the Engineer:

- a) A description of work, if any, to be performed and a programme for its execution, and
- b) the Contractor's proposals for any necessary modifications to the Programme according to Sub-Clause 8.3 or to any of the Contractor's obligations under the Contract, and
- c) the Contractor's proposals for adjustment to the Contract Price.

Following the receipt of the Contractor's submission the Engineer shall, after due consultation with the Employer and the Contractor, decide as soon as possible whether or not the variation shall be carried out. If the Engineer decides that the variation shall be carried out, he shall issue a Variation Order clearly identified as such in accordance with the Contractor's submission or as modified by agreement.

If the Engineer and the Contractor are unable to agree the adjustment of the Contract Price, the provisions of Sub-Clause 13.2.2 shall apply.

13.2.2 Disagreement on Adjustment of the Contract Price

If the Contractor and the Engineer are unable to agree on the adjustment of the Contract Price, the adjustment shall be determined in accordance with the rates specified in the Bills of Quantities or Schedule of Daywork Prices. If the rates

contained in the Bills of Quantities or Day works Prices are not directly applicable to the specific work in question, suitable rates shall be established by the engineer reflecting the level of pricing in the Day works Prices. Where rates are not contained in the said Prices, the amount shall be such as is in all the circumstances reasonable, reflecting a market price. Due account shall be taken of any over-or under-recovery of overheads by the Contractor in consequence of the variation. The Contractor shall also be entitled to be paid:

- a) The cost of any partial execution of the Works rendered useless by any such variation,
- b) The cost of making necessary alterations to Plant already manufactured or in the course of manufacture or of any work done that has to be altered in consequence of such a variation,
- c) any additional costs incurred by the Contractor by the disruption of the progress of the Works as detailed in the Programme, and
- d) the net effect of the Contractor's finance costs, including interest, caused by the variation.

The Engineer shall on this basis determine the rates or prices to enable on-account payment to be included in certificates of payment.

13.2.3 Contractor to Proceed

On receipt of a Variation Order, the Contractor shall forth with proceed to carry out the variation and be bound to these Conditions in so doing as if such variation was stated in the Contract. The work shall not be delayed pending the granting of an extension of the Time for Completion or an adjustment to the Contract Price under Sub-Clause 31.3.

13.3 Value Engineering

13.3.1 The Contractor may, at any time, submit to the Engineer written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii)

reduce the cost to the Procuring Entity of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Procuring Entity of the completed Works, or

(iv) otherwise be of benefit to the Procuring Entity.

13.3.2 The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 [Variation Procedure].

13.2.3 If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:

- a) The Contractor shall design this part,
- b) sub-paragraphs (a) to (d) of Sub-Clause 4.1 [Contractor's General Obligations] shall apply, and
- c) if this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be (50%) of the difference between the following amounts:
 - i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause

13.8 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost], and

- ii) the reduction (if any) in the value to the Procuring Entity of the varied works, taking account of any improvement in quality, anticipated life or operational efficiencies.

13.3.4 However, if the amount established in item 13.2.3 (c) (i) is less than amount established in item 13.2.3 (c) (ii), there shall not be a fee. However, if the if the amount established in item 13.2.3 (c) (i) is more than amount established in item 13.2.3 (c) (ii), it shall result in a price variation to the Procuring Entity.

13.4 Variation Procedure for Value Engineering proposal

13.4.1 If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

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- a) A description of the proposed work to be performed and a programme for its execution,
 - b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 [Programme] and to the Time for Completion, and
 - c) the Contractor's proposal for evaluation of the Variation.

13.4.2 The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [Value Project Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

13.4.3 Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.

13.4.4 Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Engineer instructs or approves otherwise in accordance with this Clause.

13.5 Payment in Applicable Currencies

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

13.6 Provisional Sums

13.6.1 Each Provisional Sum shall only be used, in whole or in part, in accordance with the Engineer instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Engineer shall have instructed. For each Provisional Sum, the Engineer May instruct:

- a) Work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 13.3 [Variation Procedure]; and/or

b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]) or otherwise; and for which there shall be included in the Contract Price:

- i) The actual amounts paid (or due to be paid) by the Contractor, and
- ii) a sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in the Special Conditions of Contract shall be applied.

13.6.2 The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

13.7 Day works

13.7.1 For work of a minor or incidental nature, the Engineer may instruct that a Variation shall be executed on a day work basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.

13.7.2 Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

13.7.3 Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Engineer accurate statements induplicate which shall include the following details of the resources used in executing the previous day's work:

- a) The names, occupations and time of Contractor's Personnel,
- b) the identification, type and time of Contractor's Equipment and Temporary Works, and
- c) the quantities and types of Plant and Materials used.

13.7.4 One copy of each statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. The Contractor shall then submit priced

statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [Application for Interim Payment Certificates].

13.8 Adjustments for Changes in Legislation

13.8.1 The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of Kenya (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

13.8.2 If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) Payment of any such Cost, which shall be included in the Contract Price.

13.8.3 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

13.8.4 Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause 13.8 [Adjustments for Changes in Cost].

13.9 Adjustments for Changes in Cost

13.9.1 In this Sub-Clause, “table of adjustment data” means the completed table of adjustment data for local and foreign currencies included in the Schedules. If there is no such table of adjustment data, this Sub-Clause shall not apply.

13.9.2 If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labor, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is

not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included a mounts to cover the contingency of other rises and falls in costs.

13.9.3 The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

13.9.4 The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. Forth is purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.

13.9.5 In cases where the “currency of index” is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the Central Bank of Kenya, of this relevant currency on the above date for which the index is required to be applicable.

13.9.6 Until such time as each current cost index is available, the Engineer shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.

13.9.7 If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices there after shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the

Works, or (ii) the current index or price, whichever is more favorable to the Procuring Entity.

13.9.8 The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.

14. CONTRACT PRICE AND PAYMENT

14.1 The Contract Price

14.1.1 Unless otherwise stated in the Special Conditions:

- a) The value of the payment certificate shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract;
- b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation];
- c) any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:

- i) of the Works which the Contractor is required to execute, or
- ii) for the purposes of Clause 12 [Measurement and Evaluation]; and
- d) the Contractor shall submit to the Engineer, within 30 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules. The Engineer may take account of the break down when preparing Payment Certificates but shall not be bound by it.

14.1.2 Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts there for, imported by the Contractor for the sole purpose of executing the Contract shall not be exempt from the payment of import duties and taxes upon importation.

14.2 Advance Payment

14.2.1 The Procuring Entity shall make an advance payment, as an interest-free loan for mobilization and cash flow support, when the Contractor submits a guarantee in accordance with this Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the Special Conditions of Contract.

14.2.2 Unless and until the Procuring Entity receives this guarantee, or if the total advance payment is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.

14.2.3 The Engineer shall deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate for the advance payment or its first instalment after receiving a Statement (under Sub-Clause 14.3 [Application for Interim Payment Certificates]) and after the Procuring Entity receives (i) the Performance Security in accordance with Sub-Clause 4.2 [Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by a reputable bank or financial institutions elected by the Contractor and shall be in the form annexed to the Special Conditions or in another form approved by the Procuring Entity.

14.2.4 The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

14.2.5 Unless stated otherwise in the Special Conditions of Contract, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Engineer in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates], as follows:

a) Deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds 30 percent (30%) of the Accepted Contract Amount Less Provisional Sums; and

b) deductions shall be made at the amortization rate stated in the Special Conditions of Contract of the amount of each Interim Payment Certificate (excluding the advance payment and deductions for its repayments as well as deductions for retention money) in the currencies and proportions of the advance payment until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.

14.2.6 If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [Termination by Procuring Entity], Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [Termination by Procuring Entity], except for Sub-Clause 14.2.7 [Procuring Entity's Entitlement to Termination for Convenience], payable by the Contractor to the Procuring Entity.

14.3 Application for Interim Payment Certificates

14.3.1 The Contractor shall submit a Statement (in number of copies indicated in the Special Conditions of Contract) to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers itself to be entitled, together with supporting documents which shall include there part on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].

14.3.2 The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

- a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
- b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost];
- c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in the Special Conditions of Contract to the total of the above amounts, until the amount so retained by the Procuring Entity reaches the limit of Retention Money (if any) stated in the Special Conditions of Contract;
- d) any amounts to be added for the advance payment and (if more than one instalment) and to be deducted for its repayments in accordance with Sub-Clause 14.2 [Advance Payment];
- e) any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [Plant and Materials intended for the Works];
- f) any other additions or deductions which may have become due under the Contractor otherwise, including those under Clause 20 [Claims, Disputes and Arbitration]; and
- g) the deduction of amounts certified in all previous Payment Certificates.

14.4 Schedule of Payments

14.4.1 If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

- a) The instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates];
- b) Sub-Clause 14.5 [Plant and Materials intended for the Works] shall not apply; and
- c) If these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less or more than that on which this schedule of payments was based, then the Engineer may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine revised instalments, which shall take account of the extent to which progress is less or more than that on which the instalments were previously based.

14.4.2 If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

14.5 Plant and Materials intended for the Works

14.5.1 If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3, (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates].

14.5.2 If the lists referred to in sub-paragraphs (b)(i) or (c)(i) below are not included in the Schedules, this Sub-Clause shall not apply.

14.5.3 The Engineer shall determine and certify each addition if the following conditions are satisfied:

a) The Contractor has:

i) kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection, and

(ii) submitted statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;

and either:

b) the relevant Plant and Materials:

i) are those listed in the Schedules for payment when shipped,

ii) have been shipped to Kenya, and route to the Site, in accordance with the Contract; and

iii) are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Engineer together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Procuring Entity in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration; or

c) the relevant Plant and Materials:

i) are those listed in the Schedules for payment when delivered to the Site, and

ii) have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration and appear to be in accordance with the Contract.

14.5.4 The additional amount to be certified shall be the equivalent of eighty percent (80%) of the Engineer determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

14.5.5 The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

14.6 Issue of Interim Payment Certificates

14.6.1 No amount will be certified or paid until the Procuring Entity has received and approved the Performance Security. Thereafter, the Engineer shall, within 30 days after receiving a Statement and supporting documents, deliver to the Procuring Entity and to the Contractor an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with all supporting particulars for any reduction or withholding made by the Engineer on the Statement if any.

14.6.2 However, prior to issuing the Taking-Over Certificate for the Works, the Engineer shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the Special Conditions of Contract. In this event, the Engineer shall give notice to the Contractor accordingly.

14.6.3 An Interim Payment Certificate shall not be withheld for any other reason, although:

- a) if anything supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or
- b) if the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

4.6.4 The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer acceptance, approval, consent or satisfaction.

14.7 Payment

14.7.1 The Procuring Entity shall pay to the Contractor:

- a) The advance payment shall be paid within 60 days after signing of the contract by both parties or within 60 days after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub- Clause 14.2 [Advance Payment], whichever is later;
- b) The amount certified in each Interim Payment Certificate within 60 days after the Engineer Issues Interim Payment Certificate; and
- c) the amount certified in the Final Payment Certificate within 60 days after the Procuring Entity Issues Interim Payment Certificate; or after determination of any disputed amount shown in the Final Statement in accordance with Sub-Clause 16.2 [Termination by Contractor].

14.7.2 Payment of the amount due in each currency shall be made into the bank account, nominated by the Contractor, in the payment country (forth is currency) specified in the Contract.

14.8 Delayed Payment

14.8.1 If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to receive financing charges (simple interest) monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7

[Payment], irrespective (in the case of its sub-paragraph (b) of the date on which any Interim Payment Certificate is issued.

14.8.2 These financing charges shall be calculated at the annual rate of three percentage points above the mean rate of the Central Bank in Kenya of the currency of payment, or if not available, the inter bank offered rate, and shall be paid in such currency.

14.8.3 The Contractor shall be entitled to this payment without formal notice and certification, and without prejudice to any other right or remedy.

14.9 Payment of Retention Money

14.9.1 When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.

14.9.2 Promptly after the latest of the expiry dates of the Defects Liability Periods, the outstanding balance of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a proportion of the second half of the Retention Money shall be certified and paid promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.

14.9.3 However, if any work remains to be executed under Clause 11 [Defects Liability], the Engineer shall be entitled to withhold certification of the estimated cost of this work until it has been executed.

14.9.4 When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost].

14.9.5 Unless otherwise stated in the Special Conditions, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a Retention Money Security guarantee, in the form annexed to the Special Conditions or in another form approved by the Procuring Entity and issued by a reputable bank or financial institution selected by the Contractor, for the second half of the Retention Money.

14.9.6 The Procuring Entity shall return the Retention Money Security guarantee to the Contractor within 14 days after receiving a copy of the Completion Certificate.

14.10 Statement at Completion

14.10.1 Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer three copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [Application for Interim Payment Certificates], showing:

- a) the value of all work done in accordance with the Contract up to the date stated in the Taking-Over Certificate for the Works,
- b) any further sums which the Contractor considers to be due, and
- c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

14.10.2 The Engineer shall then certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates].

14.11 Application for Final Payment Certificate

14.11.1 Within 60 days after receiving the Completion Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:

- a) The value of all work done in accordance with the Contract, and
- b) Any further sums which the Contractor considers to be due to him under the Contractor otherwise.

14.11.2 If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require within 30 days from receipt of said draft and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed. This agreed statement is referred to in these Conditions as the “Final Statement”.

14.11.3 However, if, following discussions between the Engineer and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Engineer shall deliver to the Procuring Entity (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 [Obtaining Dispute Board's Decision] or Sub-Clause 20.5 [Amicable Settlement], the Contractor shall then prepare and submit to the Procuring Entity (with a copy to the Engineer) a Final Statement.

14.12 Discharge

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

14.13 Issue of Final Payment Certificate

14.13.1 Within 30days after receiving the Final Statement and discharge in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall deliver, to the Procuring Entity and to the Contractor, the Final Payment Certificate which shall state:

- a) The amount which he fairly determines is finally due, and
- b) After giving credit to the Procuring Entity for all amounts previously paid by the Procuring Entity and for all sums to which the Procuring Entity is entitled, the balance (if any) due from the Procuring Entity to the Contractor or from the Contractor to the Procuring Entity, as the case may be.

14.13.2 If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 30 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

14.14 Cessation of Procuring Entity's Liability

14.14.1 The Procuring Entity shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- a) in the Final Statement and also,
- b) (except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [Statement at Completion].

14.14.2 However, this Sub-Clause shall not limit the Procuring Entity's liability under his indemnification obligations, or the Procuring Entity's liability in any case of fraud, deliberate default or reckless misconduct by the Procuring Entity.

14.15 Currencies of Payment

The Contract Price shall be paid in the currency or currencies named in the Schedule of Payment Currencies. If more than one currency is so named, payments shall be made as follows:

- a) If the Accepted Contract Amount was expressed in Local Currency only:
 - i) the proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Schedule of Payment Currencies, except as otherwise agreed by both Parties;
 - ii) payments and deductions under Sub-Clause 13.5 [Provisional Sums] and Sub-Clause 13.7 [Adjustments for Changes in Legislation] shall be made in the applicable currencies and proportions; and
 - iii) other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [Application for Interim Payment Certificates] shall be made in the currencies and proportions specified in sub-paragraph (a) (i) above;
- b) payment of the damages specified in the Special Conditions of Contract, shall be made in the currencies and proportions specified in the Schedule of Payment Currencies;
- c) other payments to the Procuring Entity by the Contractor shall be made in the currency in which the sum was expended by the Procuring Entity, or in such currency as may be agreed by both Parties;
- d) if any amount payable by the Contractor to the Procuring Entity in a particular currency exceeds the sum payable by the Procuring Entity to the Contractor in that currency, the Procuring Entity may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and
- e) if no rates of exchange are stated in the Schedule of Payment Currencies, they shall be those prevailing on the Base Date and determined by the Central Bank of Kenya.

15. TERMINATION BY PROCURING ENTITY

15.1 Notice to correct any defects or failures

If the Contractor fails to carry out any obligation under the Contract, the Engineer may by notice require the Contractor to make good the failure and to remedy it within 30 days.

15.2 Termination by Procuring Entity

15.2.1 The Procuring Entity shall be entitled to terminate the Contract if the Contractor breaches the contract based on following circumstances which shall include but not limited to:

- a) fails to comply with Sub-Clause 4.2 [Performance Security] or with a notice under Sub-Clause 15.1 [Notice to Correct],
- b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,
- c) without reasonable excuse fails:
 - i) to proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension], or
 - ii) to comply with a notice issued under Sub-Clause 7.5 [Rejection] or Sub-Clause 7.6 [Remedial Work], within 30 days after receiving it,
- d) subcontracts the major part or whole of the Works or assigns the Contract without the consent of the Procuring Entity,
- e) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or
- f) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an induce mentor reward:
 - i) for doing or for bearing to do any action in relation to the Contract, or
 - ii) for showing or for bearing to show favor or disfavor to any person in relation to the Contract, or
 - iii) if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such induce mentor reward as is

described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination, or

- g) If the contract or repeatedly fails to remedy delivers defective work,
- h) based on reasonable evidence, has engaged in Fraud and Corruption as defined in paragraph 2.2 of the Appendix B to these General Conditions, in competing for or in executing the Contract.

15.2.2 In any of these events or circumstances, the Procuring Entity may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub- paragraph (e) or (f) or (g) or (h), the Procuring Entity may by notice terminate the Contract immediately.

15.2.3 The Procuring Entity's election to terminate the Contract shall not prejudice any other rights of the Procuring Entity, under the Contractor otherwise.

15.2.4 The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

15.2.5 After termination, the Procuring Entity may complete the Works and/ or arrange for any other entities to do so. The Procuring Entity and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

15.2.6 The Procuring Entity shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Procuring Entity, these items may be sold by the Procuring Entity in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

15.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the Engineer shall proceed in

accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract.

15.4 Payment after Termination

After a notice of termination under Sub-Clause 15.2 [Termination by Procuring Entity] has taken effect, the Procuring Entity may:

- a) Proceed in accordance with Sub-Clause 2.5 [Procuring Entity's Claims],
 - b) withhold further payments to the Contractor until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Procuring Entity, have been established, and/ or
 - c) recover from the Contractor any losses and damages incurred by the Procuring Entity and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 [Valuation at Date of Termination].
- After recovering any such losses, damages and extra costs, the Procuring Entity shall pay any balance to the Contractor.

15.5 Procuring Entity's Entitlement to Termination for Convenience

The Procuring Entity shall be entitled to terminate the Contract, at any time at the Procuring Entity's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 30 days after the later of the dates on which the Contractor receives this notice or the Procuring Entity returns the Performance Security. The Procuring Entity shall not terminate the Contract under this Sub-Clause in order to execute the Works itself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor under Clause 16.2 [Termination by Contractor]. After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid in accordance with Sub-Clause 16.4 [Payment on Termination].

15.6 Fraud and Corruption

The Contractor shall ensure compliance with the Kenya Government's Anti-Corruption Laws and its prevailing sanctions.

15.7 Corrupt gifts and payments of commission

15.7.1 The Contractor shall not;

a) Offer or give or agree to give to any person in the service of the Procuring Entity any gift or consideration of any kind as an inducement or reward for doing or for bearing to door for having done or for borne to do any act in relation to the obtaining or execution of this or any other Contract for the Procuring Entity or for showing or for bearing to show favor or disfavor to any person in relation to this or any other contract for the Procuring Entity.

b) Enter into this or any other contract with the Procuring Entity in connection with which commission has been paid or agreed to be paid by him or on his behalf or to his knowledge, unless before the Contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the Procuring Entity.

15.7.2 Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the provisions of the Public Procurement and Asset Disposal Act (2015) and the Anti-Corruption and Economic Crimes Act (2003) of the Laws of Kenya.

16. SUSPENSION AND TERMINATION BY CONTRACTOR

16.1 Contractor's Entitlement to Suspend Work

16.1.1 If the Engineer fails to certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates] or Sub-Clause 14.7 [Payment], or not receiving instructions that would enable the contractor to proceed with the works in accordance with the program, the Contractor may, after giving not less than 30 days' notice to the Procuring Entity, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case may be and as described in the notice.

16.1.2 The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 [Delayed Payment] and to termination under Sub-Clause 16.2 [Termination by Contractor].

16.1.3 If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.

16.1.4 If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) payment of any such Cost-plus profit, which shall be included in the Contract Price.

16.2 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

16.3 Termination by Contractor

16.3.1 The Contractor shall be entitled to terminate the Contract if:

- a) the Engineer fails, within 60 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate,
- b) the Contractor does not receive the amount due under an Interim Payment Certificate within 90 days after the expiry of the time stated in Sub-Clause 14.7 [Payment] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 [Procuring Entity's Claims]),
- c) the Procuring Entity substantially fails to perform his obligations under the Contract in such manner as to materially and adversely affect the economic balance of the Contract and/or the ability of the Contractor to perform the Contract,

d) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [Prolonged Suspension], or

e) the Procuring Entity becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events.

f) the Contractor does not receive the Engineer instruction recording the agreement of both Parties on the fulfilment of the conditions for the Commencement of Works under Sub-Clause 8.1 [Commencement of Works].

16.3.2 In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Procuring Entity, terminate the Contract. However, in the case of sub-paragraph (f) or (g), the Contractor may by notice terminate the Contract immediately.

16.3.3 The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract otherwise.

16.4 Cessation of Work and Removal of Contractor's Equipment

After a notice of termination under Sub-Clause 15.5 [Procuring Entity's Entitlement to Termination for Convenience], Sub-Clause 16.2 [Termination by Contractor] or Sub-Clause 19.6 [Optional Termination, Payment and Release] has taken effect, the Contractor shall promptly:

a) cease all further work, except for such work as may have been instructed by the Engineer for the protection of life or property or for the safety of the Works,

b) hand over Contractor's Documents, Plant, Materials and other work, for which the Contractor has received payment, and

c) remove all other Goods from the Site, except as necessary for safety, and leave the Site.

16.5 Payment on Termination

After a notice of termination under Sub-Clause 16.2 [Termination by Contractor] has taken effect, the Procuring Entity shall promptly:

a) Return the Performance Security to the Contractor,

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- b) pay the Contractor in accordance with Sub-Clause 19.6 [Optional Termination, Payment and Release], and
 - c) pay to the Contractor the amount of any loss or damage sustained by the Contractor as a result of this termination.

17. RISK AND RESPONSIBILITY

17.1 Indemnities

17.1.1 The Contractor shall indemnify and hold harmless the Procuring Entity, the Procuring Entity's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

- a) Bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, or any of their respective agents, and
- b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

17.1.2 The Procuring Entity shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, willful act or breach of the Contract by the Procuring Entity, the Procuring Entity's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [Insurance Against Injury to Persons and Damage to Property], unless and to the extent that any such damage or loss is attributable to any negligence, willful act or breach of the Contract by the contractor, the

contractor's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

17.2 Contractor's Care of the Works

17.2.1 The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [Taking Over of the Works and Sections]) for the Works, when responsibility for the care of the Works shall pass to the Procuring Entity. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Procuring Entity.

17.2.2 After responsibility has accordingly passed to the Procuring Entity, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.

17.2.3 If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

17.2.4 The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

17.3 Procuring Entity's Risks

The risks referred to in Sub-Clause 17.4 [Consequences of Procuring Entity's Risks] below, in so far as they directly affect the execution of the Works in Kenya, are:

- a) War hostilities (whether war be declared or not),
- b) rebellion, riot, commotion or disorder, terrorism, sabotage by persons other than the Contractor's Personnel,

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- c) explosive materials, ionizing gradiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such explosives, radiation or radio-activity,
 - d) pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds,
 - e) use or occupation by the Procuring Entity of any part of the Permanent Works, except as may be specified in the Contract,
 - f) design of any part of the Works by the Procuring Entity's Personnel or by others for whom the Procuring Entity is responsible, and
 - g) any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventive precautions.

17.4 Consequences of Procuring Entity's Risks

17.4.1 If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

17.4.2 If the Contractor suffers delay and/ or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) Payment of any such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (e) and

(g) of Sub-Clause 17.3 [Procuring Entity's Risks], Accrued Costs shall be payable.

17.4.3 After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

17.5 Intellectual and Industrial Property Rights

17.5.1 In this Sub-Clause, “infringement” shall refer to an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and “claim” shall refer to a claim (or proceedings pursuing a claim) alleging an infringement.

17.5.2 Whenever a Party does not give notice to the other Party of any claim within 30 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

17.5.3 The Procuring Entity shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:

- a) An unavoidable result of the Contractor's compliance with the Contract, or
- b) A result of any Works being used by the Procuring Entity:
 - i) for a purpose other than that indicated by, or reasonably to be inferred from, the Contract, or
 - ii) in conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.

17.5.4 The Contractor shall indemnify and hold the Procuring Entity harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.

17.5.5 If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.

17.5.6 For operation and maintenance of any plan to equipment installed, the contractor shall grant a non-exclusive and non-transferable license to the Procuring Entity under the patent, utility models, or other intellectual rights owned by the contractor or a third party from whom the contract or has received the rights to grant sub-licenses and shall also grant to the Procuring Entity a non-exclusive and non-transferable rights (without the rights to sub-license) to use the knowhow and other technical information disclosed to the contract or under the contract. Nothing contained here-in shall be construed as transferring ownership of any patent, utility model, trademark, design, copy right, know-how or other intellectual rights from the contractor or any other third party to the Procuring Entity.

17.6 Limitation of Liability

17.6.1 Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contractor for any in director consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than as specifically provided in Sub-Clause 8.7 [Delay Damages]; Sub-Clause 11.2 [Cost of Remedying Defects]; Sub-Clause 15.4 [Payment after Termination]; Sub-Clause 16.4 [Payment on Termination]; Sub-Clause 17.1 [Indemnities]; Sub-Clause 17.4(b) [Consequences of Procuring Entity's Risks] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights].

17.6.2 The total liability of the Contractor to the Procuring Entity, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Procuring Entity's Equipment and Free- Issue Materials], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in the Special Conditions of Contract, or (if such multiplier or other sum is not so stated) the Accepted Contract Amount.

17.6.3 This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

17.7 Use of Procuring Entity's Accommodation/Facilities

17.7.1 The Contractor shall take full responsibility for the care of the Procuring Entity provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation

(where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

17.7.2 If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Procuring Entity is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

18. INSURANCE

18.1 General Requirements for Insurances

18.1.1 In this Clause, “insuring Party” means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.

18.1.2 Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Procuring Entity. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

18.1.3 Wherever the Procuring Entity is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Contractor. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

18.1.4 If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Procuring Entity shall act for Procuring Entity's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

18.1.5 Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

18.1.6 The relevant insuring Party shall, within the respective periods stated in the Special Conditions of Contract (calculated from the Commencement Date), submit to the other Party:

- a) Evidence that the insurances described in this Clause have been affected, and
- b) copies of the policies for the insurances described in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment] and Sub-Clause 18.3 [Insurance against Injury to Persons and Damage to Property].

18.1.7 When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

18.1.8 Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in accordance with this Clause.

18.1.9 Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.

18.1.10 If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contractor fails to provide satisfactory evidence and copies of policies in accordance with this Sub-Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.

18.1.11 Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Procuring Entity, under the other terms of the Contract otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Procuring Entity.

18.1.12 Procuring Entity in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.

18.1.13 Payments by one Party to the other Party shall be subject to Sub-Clause 2.5 [Procuring Entity's Claims] or Sub-Clause 20.1 [Contractor's Claims], as applicable.

18.1.14 The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 18) with insurers from any eligible source country.

18.2 Insurance for Works and Contractor's Equipment

18.2.1 The insuring Party shall insure the Works, Plant, Material and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under subparagraph (a) of Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.

18.2.2 The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).

18.2.3 The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's

Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

18.2.4 Unless otherwise stated in the Special Conditions, insurances under this Sub-Clause:

- a) Shall be effected and maintained by the Contractor as insuring Party,
- b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated to the Party actually bearing the costs of rectifying the loss or damage,
- c) shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [Procuring Entity's Risks],
- d) shall also cover, to the extent specifically required in the tendering documents of the Contract, loss or damage to a part of the Works which is attributable to the use or occupation by the Procuring Entity of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [Procuring Entity's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated in the Special Conditions of Contract (if an amount is not so stated, this sub-paragraph (d) shall not apply), and
- e) may however exclude loss of, damage to, and reinstatement of:
 - i) a part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),
 - ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,
 - iii) a part of the Works which has been taken over by the Procuring Entity, except to the extent that the Contractor is liable for the loss or damage, and
 - iv) Goods while they are not in Kenya, subject to Sub-Clause 14.5 [Plant and Materials intended for the Works].

18.2.5 If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the

Contractor shall (as insuring Party) give notice to the Procuring Entity, with supporting particulars. The Procuring Entity shall then (i) be entitled subject to Sub-Clause 2.5 [Procuring Entity's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

18.3 Insurance against Injury to Persons and Damage to Property

18.3.1 The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 18.4 [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

18.3.2 This insurance shall be for a limit per occurrence of not less than the amount stated in the Special Conditions of Contract, with no limit on the number of occurrences. If an amount is not stated in the Special Conditions of Contract, this Sub-Clause shall not apply.

18.3.3 Unless otherwise stated in the Special Conditions, the insurances specified in this Sub-Clause:

- a) Shall be effected and maintained by the Contractor as insuring Party,
- b) shall be in the joint names of the Parties,
- c) shall be extended to cover liability for all loss and damage to the Procuring Entity's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract, and
- d) may however exclude liability to the extent that it arises from:
 - i) the Procuring Entity's right to have the Permanent Works executed on, over, under, in or
 - ii) through any land, and to occupy this land for the Permanent Works,
 - iii) damage which is an unavoidable result of the Contractor's obligations to execute the

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- iv) Works and remedy any defects, and
 - v) a cause listed in Sub-Clause 17.3 [Procuring Entity's Risks], except to the extent that cover is available at commercially reasonable terms.

18.4 Insurance for Contractor's Personnel

18.4.1 The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

18.4.2 The insurance shall cover the Procuring Entity and the Engineer against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Procuring Entity or of the Procuring Entity's Personnel.

18.4.3 The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

19. FORCE MAJEURE

19.1 Definition of Force Majeure

19.1.1 In this Clause, "Force Majeure" means an exceptional event or circumstance:

- a) Which is beyond a Party's control,
- b) Which such Party could not reasonably have provided against before entering into the Contract,
- c) which, having arisen, such Party could not reasonably have avoided or overcome, and
- d) which is not substantially attributable to the other Party.

19.1.2 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

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- a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
 - b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,
 - c) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,
 - d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and
 - e) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

19.2 Notice of Force Majeure

19.2.1 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

19.2.2 The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

19.2.3 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

19.3 Duty to Minimize Delay

Each Party shall at all times use all reasonable endeavors to minimize any delay in the performance of the Contract as a result of Force Majeure. A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

19.4 Consequences of Force Majeure

19.4.1 If the Contractor is prevented from performing his substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], and suffers delay and/ or incurs Cost by

reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [Definition of Force Majeure] and, in sub-paragraphs (ii) to (iv), occurs in Kenya, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment].

19.4.2 After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

19.5 Force Majeure Affecting Subcontractor

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

19.6 Optional Termination, Payment and Release

19.6.1 If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment].

19.6.2 Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include:

- a) The amounts payable for any work carried out for which a price is stated in the Contract;

-
- b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Procuring Entity when paid for by the Procuring Entity, and the Contractor shall place the same at the Procuring Entity's disposal;
 - c) Other Cost or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;
 - d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
 - e) the Cost of repatriation of the Contractor's staff and lab or employed wholly in connection with the Works at the date of termination.

19.7 Release from Performance

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

- a) The Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and
- b) The sum payable by the Procuring Entity to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [Optional Termination, Payment and Release] if the Contract had been terminated under Sub-Clause 19.6.

20. SETTLEMENT OF CLAIMS AND DISPUTES

20.1 Contractor's Claims

20.1.1 If the Contractor considers itself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the

Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.

20.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.

20.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.

20.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Procuring Entity's liability, the Engineer 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 Engineer to inspect all these records and shall (if instructed) submit copies to the Engineer.

20.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer 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 Engineer may reasonably require; and
- c) The Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.

20.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars but shall nevertheless give his response on the principles of the claim within the above defined time period.

20.1.7 Within the above defined period of 42 days, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

20.1.8 Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

20.1.9 If the Engineer does not respond within the time frame defined in this Clause, either Party may consider that the claim is rejected by the Engineer and any of the Parties may refer the dispute for amicable settlement in accordance with Clause 20.3.

20.1.10 The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/ or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause 20.3.

20.2 Procuring Entity's Claims

20.2.1 If the Procuring Entity considers itself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Contract, and/or to any extension of the Defects Notification Period, the Procuring Entity or the Engineer shall give notice and particulars to the Contractor. However, notice is not required

for payments due under Sub-Clause 4.19 [Electricity, Water and Gas], under Sub-Clause 4.20 [Procuring Entity's Equipment and Free-Issue Materials], or for other services requested by the Contractor.

20.2.2 The notice shall be given as soon as practicable and no longer than 30 days after the Procuring Entity became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.

20.2.3 The particulars shall specify the Clause or other basis of the claim and shall include substantiation of the amount and/or extension to which the Procuring Entity considers itself to be entitled in connection with the Contract. The Engineer shall then proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the amount (if any) which the Procuring Entity is entitled to be paid by the Contractor, and/ or (ii) the extension (if any) of the Defects Notification Period in accordance with Sub-Clause 11.3 [Extension of Defects Notification Period].

20.2.4 This amount may be included as a deduction in the Contract Price and Payment Certificates. The Procuring Entity shall only be entitled to set off against or make any deduction from an amount certified in a Payment Certificate, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.

20.3 Amicable Settlement

Where a notice of a claim has been given, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a notice of a claim in accordance with Sub-Clause 20.1 above should move to commence arbitration after 60 days from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

20.4 Matters that may be referred to arbitration

Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:

- a) Whether or not the issue of an instruction by the Engineer is empowered by these Conditions.

b) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.

c) Any dispute arising in respect risks arising from matters referred to in Clause 17.3 and Clause 19.

e) All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Procuring Entity and the Contractor agree otherwise in writing.

20.5 Arbitration

20.5.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 20.3 shall be finally settled by arbitration.

20.5.2 No arbitration proceedings shall be commenced on any claim or dispute where notice of a claim or dispute has not been given by the applying party within ninety days of the occurrence or discovery of the matter or issue giving rise to the dispute.

20.5.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.

20.5.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.

20.5.5 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision require mentor notice had been given.

20.5.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, relevant

to the dispute. Nothing shall disqualify representatives of the Parties and the Engineer from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

20.5.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.

20.5.7 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Engineer shall not be altered by reason of any arbitration being conducted during the progress of the Works.

20.5.8 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

20.6 Arbitration with National Contractors

20.6.1 If the Contract is with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;

- i) Institute of Engineering Technology of Kenya
- ii) Institute of Quantity Surveyors of Kenya
- iii) Association of Consulting Engineers of Kenya
- iv) Chartered Institute of Arbitrators (Kenya Branch)
- v) Institution of Engineers of Kenya

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

20.7 Arbitration with Foreign Contractors

20.7.1 Arbitration with foreign contractors shall be conducted in accordance with the arbitration rules of the United Nations Commission on International Trade Law

(UNCITRAL); or with proceedings administered by the International Chamber of Commerce (ICC) and conducted under the ICC Rules of Arbitration; by one or more arbitrators appointed in accordance with said arbitration rules.

20.7.2 The place of arbitration shall be a location specified in the SCC; and the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.4 [Law and Language].

20.8 Alternative Arbitration Proceedings

Alternatively, the Parties may refer the matter to the Nairobi Centre for International Arbitration (NCIA) which offers a neutral venue for the conduct of national and international arbitration with commitment to providing institutional support to the arbitral process.

20.9 Failure to Comply with Arbitrator's Decision

20.9.1 The award of such Arbitrator shall be final and binding up on the parties.

20.9.2 In the event that a Party fails to comply with a final and binding Arbitrator's decision, then the other Party may, without prejudice to any other rights it may have, refer the matter to a competent court of law.

20.10 Contract operations to continue

Notwithstanding any reference to arbitration herein,

1.1.1 the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

1.1.2 the Procuring Entity shall pay the Contractor any monies due the Contractor.

Special Conditions of Contract (SCC)

The following Special Conditions (SCC) shall supplement the General Conditions (GCC). Whenever there is a conflict, the provisions here in shall prevail over those in the GCC. The clause number of the SCC is the corresponding clause number of the GCC.

Conditions	Sub-Clause	Data
Part A - Contract Data		
Procuring Entity's name and address	Heading	<i>National Environment Management Authority (NEMA)</i>
Name and Reference No. of the Contract	Heading and 1.1	<i>ESTABLISHMENT OF APPROPRIATE WATER HARVESTING TECHNOLOGIES IN NAROK AND KAJIADO COUNTIES</i> <i>(TENDER RESERVED FOR AGPO-WOMEN FIRMS ONLY)</i> <i>TENDER REF. NO. NEMA/T/14/2023-2024</i>
Engineers Name and address	Heading and 3.1.1	<i>Senior Civil Engineer, NEMA</i>
Contractor's Representative's name	4.3.1	<i>[insert the name of the Contractor's Representative agreed by the Procuring Entity prior to Contract signature]</i>
Key Personnel names	16.9.1	<i>[insert the name of each Key Personnel agreed by the Procuring Entity prior to Contract signature]</i>
Time for Completion	1.1.	<u>180</u> days <i>If Sections are to be used, refer to Table: Summary of Sections below</i>
Defects Notification Period	1.1	<u>90</u> days
Sections	1.1	<i>If Sections are to be used, refer to Table: Summary of Sections below</i>
Electronic transmission systems	1.3	Allowed
Time for the Parties entering into a Contract Agreement	1.6	Within 28 days of notification of award

Conditions	Sub-Clause	Data
Commencement Date	8.1.1	The date of the Engineer's instruction to commence but not later than 30 days from contract signing
Time for access to the Site	2.1.1	No later than the Commencement Date, and not later than <u>21</u> days after Commencement Date
E Duties and Authority	3.1.6 (b) (ii)	Variations resulting in an increase of the Accepted Contract Amount in excess of <u>15</u> % shall require approval of the Procuring Entity.
Performance Security	4.2.1	N/A
Normal working hours	6.5	Monday to Friday – 8.00am – 5.00 Pm except for public holidays
Delay damages for the Works	8.7 & 14.15(b)	<u>N/A</u> % of the Contract Price per day. <i>If Sections are to be used, refer to Table: Summary of Sections below</i>
Maximum amount of delay damages	8.7.1	<u>N/A</u> % of the final Contract Price.
Provisional Sums	13.6. (b)(ii)	<u>N/A</u> %
Adjustments for Changes in Cost	13.9	N/A
Total advance payment	14.2.1	20%
Repayment amortization rate of advance payment	14.2.5 (b)	N/A
Percentage of Retention	14.3.2 (c)	N/A
Limit of Retention Money	14.3.2 (c)	N/A
Plant and Materials	14.5.3(b)(i)	N/A
	14.5.3(c)(i)	N/A
Minimum Amount of Interim Payment Certificates	14.6.2	Maximum of Three(3) 1. After completion of installation of gutters 2. After completion of superstructure walling of the tanks 3. Final Certificate
Publishing source of commercial interest rates for financial charges in case of delayed payment	14.8	Specify <u>3</u> % above CBK rate per month of delayed payment.
Maximum total liability of the Contractor to the Procuring Entity	17.6.2	N/A
Periods for submission of insurance: a. evidence of insurance. b. relevant policies	18.1.6	<i>[Insert period for submission of evidence of insurance and policy. Period may be from 14 days to 30days.]</i> <u>21</u> days <u>21</u> days
Maximum amount of deductibles for insurance of the Procuring Entity's risks	18.2.4 (d)	N/A
Minimum amount of third-party	18.3.2	1,000,000

Conditions	Sub- Clause	Data
insurance		
The place of arbitration	20.7.2	<i>Nairobi, Kenya</i>

SECTION VIII - CONTRACT FORMS

Notification of Award - Form of Acceptance

Contract Agreement

Appendix 1. Terms and Procedures of Payment

Appendix 2. Price Adjustment

Appendix 3. Insurance Requirements

Appendix 4. Time Schedule

Appendix 5. List of Major Items of Plant and Installation Services and List of Approved Subcontractors

Appendix 6. Scope of Works and Supply by the Procuring Entity

Appendix 7. List of Documents for Approval or Review

Appendix 8. Functional Guarantees

Performance Security Form OPTION 1 – Demand Bank Guarantee

Performance Security Form OPTION 2 – Performance Bond

Advance Payment Security- Demand Bank Guarantee

Beneficial Ownership Disclosure

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 Tenderer Information Form]

1) For the attention of Tenderer's Authorized Representative
Name:*[insert Authorized Representative's name]*

Address: *[insert Authorized Representative's Address]*

Telephone/Fax numbers: *[insert Authorized Representative' s telephone /fax numbers]*

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.]

DATE OF TRANSMISSION: This Notification is sent by: *[email/fax]* on *[date]* (local time)

Notification of Intention to Award

Procuring Entity:*[insert the name of the Procuring Entity]*

Project:*[insert name of project]*

Contract title:*[insert the name of the contract]*

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:

- a) Request a debriefing in relation to the evaluation of your Tender, and/or
- b) Submit a Procurement-related Complaint in relation to the decision to award the contract.

2) The successful Tenderer

Name:	[insert name of successful Tenderer]
Address:	[insert address of the successful Tenderer]
Contract price:	[insert contract price of the successful Tender]

3) Other Tenderers *[INSTRUCTIONS: insert 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.]*

Name of Tenderer	Tender price	Evaluated Tender Cost
[insert name]	[insert Tender price]	[insert evaluated cost]
[insert name]	[insert Tender price]	[insert evaluated cost]
[insert name]	[insert Tender price]	[insert evaluated cost]
[insert name]	[insert Tender price]	[insert evaluated cost]
[insert name]	[insert Tender price]	[insert evaluated cost]

4) Reason/s why your Tender was unsuccessful

[INSTRUCTIONS: State the reasons/why this Tenderer's Tender was unsuccessful. Do NOT include: (a) appoint by point comparison with another Tenderer's Tender, or (b) information that is marked "Confidential" by the Tenderer in its Tender.]

5) How to request a debriefing?

DEADLINE: The deadline to request a debriefing expires at midnight on [insert date] (local time).

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 (3) Business Days of receipt of this Notification of Intention to Award.

Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

Attention:[insert full name of person, if applicable]

Title/position:[insert title/position]

Agency:[insert name of Procuring Entity] Email address:[insert email address]

Fax number:[insert fax number] delete if not used

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) 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 (5) Business 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.

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.

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) Business Days from the date of publication of the Contract Award Notice.

6) How to make a complaint

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [insert date] (local time).

Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement- related Complaint as follows:

Attention:[insert full name of person, if applicable]

Title/position:[insert title/position]

Agency:[insert name of Procuring Entity]

Email address:[insert email address]

Fax number:[insert fax number] delete if not used

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.

Further information:

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.

In summary, there are four essential requirements:

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.

The complaint can only challenge the decision to award the contract.

You must submit the complaint within the period stated above.

You must include, in your complaint, all of the information required by the Procurement Regulations (as described in Annex III).

7) Standstill Period

DEADLINE: *The Standstill Period is due to end at midnight on [insert date] (local time). The Standstill Period lasts ten (10) Business Days after the date of transmission of this Notification of Intention to Award. The Standstill Period may be extended as stated in Section 4 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:.....

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 ofdated the...day of20.....in the matter of Tender No.....of20..... 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 of20.....

SIGNED

Board Secretary

3. LETTER OF AWARD

To:.....

This is to notify you that your Tender dated.....for execution of the.....for the Contract Price in the aggregate of_____, as corrected and modified in accordance with the Instructions to Tenderers is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms included in Section X, - Contract Forms, of the Tendering document.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement:

4. CONTRACT AGREEMENT

THIS AGREEMENT is made the.....day of.....,.....,
BETWEEN

1)a corporation incorporated under the laws of and having its principal place of business at (hereinafter called “the Procuring Entity”), and (2)....., a corporation incorporated under the laws of.....and having its principal place of business at.....(herein after called “the Contractor”).

WHEREAS the Procuring Entity desires to engage the Contractor to design, manufacture, test, deliver, install, complete and commission certain Facilities, viz.....(“the Facilities”), and the Contractor has agreed to such engagement upon and subject to the terms and conditions herein after appearing.

NOW IT IS HEREBY AGREED as follows:

Article 1. Contract Documents

1.1 Contract Documents (Reference GCC Clause2)

The following documents shall constitute the Contract between the Procuring Entity and the Contractor, and each shall be read and construed as an integral part of the Contract:

- a) This Contract Agreement and the Appendices hereto
- b) Form of Tender and Price Schedules submitted by the Contractor
- c) Special Conditions of Contract
- d) General Conditions of Contract
- e) Specification
- f) Drawings
- g) Other completed Tendering forms submitted with the Tender
- h) Any other documents forming part of the Procuring Entity's Requirements
- i) Any other documents shall be added here

1.2 Order of Precedence (Reference GCC Clause2)

In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.1 (Contract Documents) above.

1.3 Definitions (Reference GCC Clause 1)

Capitalized words and phrases used here in shall have the same meanings as ascribed to them in the General Conditions.

Article 2. Contract Price and Terms of Payment

2.1 Contract Price (Reference GCC Clause 11)

The Procuring Entity hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price shall be the aggregate of:as specified in Price Schedule No 5 (Grand Summary), and....., or such other sums as may be determined in accordance with the terms and conditions of the Contract.

2.2 Terms of Payment (Reference GCC Clause 12)

The terms and procedures of payment according to which the Procuring Entity will reimburse the Contractor are given in the Appendix (Terms and Procedures of Payment) hereto.

The Procuring Entity may instruct its bank to issue an irrevocable confirmed documentary credit made available to the Contractor in a bank in the country of the Contractor. The credit shall be for an amount of.....; and shall be subject to the Uniform Customs and Practice for Documentary Credits 2007 Revision, ICC Publication No.600.

In the event that the amount payable under Schedule No.1 is adjusted in accordance with GCC 11.2 or with any of the other terms of the Contract, the Procuring Entity shall arrange for the documentary credit to be amended accordingly.

Article 3. Effective Date

3.1 Effective Date (Reference GCC Clause 1)

The Effective Date from which the Time for Completion of the Facilities shall be counted is the date when all of the following conditions have been fulfilled:

-
- a) This Contract Agreement has been duly executed for and on behalf of the Procuring Entity and the Contractor;
 - b) The Contractor has submitted to the Procuring Entity the Performance Security and the advance payment guarantee;
 - c) The Procuring Entity has paid the Contractor the advance payment
 - d) The Contractor has been advised that the documentary credit referred to in Article 2.2 above has been issued in its favor.

Each party shall use its best efforts to fulfill the above conditions for which it is responsible as soon as practicable.

3.2 If the conditions listed under 3.1 are not fulfilled within two (2) months from the date of this Contract notification because of reasons not attributable to the Contractor, the Parties shall discuss and agree on an equitable adjustment to the Contract Price and the Time for Completion and/or other relevant conditions of the Contract.

Article 4. Communications

4.1 The address of the Procuring Entity for notice purposes, pursuant to GCC 4.1is:.....

4.2 The address of the Contractor for notice purposes, pursuant to GCC 4.1is:.....

Article 5. Appendices

5.1 The Appendices listed in the attached List of Appendices shall be deemed to form an integral part of this Contract Agreement.

5.2 Reference in the Contract to any Appendix shall mean the Appendices attached here to, and the Contract shall be read and construed accordingly.

IN WITNESS WHEREOF the Procuring Entity and the Contractor have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

Signed by, for and on behalf of the Procuring Entity

.....[Signature]

.....[Title]

in the presence of

Signed by, for and on behalf of the Contractor

.....[Signature]

.....[Title]

in the presence of

<p>APPENDICES</p>

APPENDIX 1: TERMS AND PROCEDURES OF PAYMENT

In accordance with the provisions of GCC Clause12 (Terms of Payment), the Procuring Entity shall pay the Contractor in the following manner and at the following times, on the basis of the Price Break down given in the section on Price Schedules. Payments will be made in the currencies quoted by the Tenderer unless otherwise agreed between the Parties. Applications for payment in respect of part deliveries may be made by the Contractor as work proceeds.

TERMS OF PAYMENT

Schedule No. 1. Plant and Equipment Supplied from Abroad

In respect of plant and equipment supplied from abroad, the following payments shall be made:

Ten percent (10%) of the total CIP amount as an advance payment against receipt of invoice and an irrevocable advance payment security for the equivalent amount made out in favor of the Procuring Entity. The advance payment security may be reduced in proportion to the value of the plant and equipment delivered to the site, as evidenced by shipping and delivery documents.

Eighty percent (80%) of the total or pro rata CIP amount upon Incoterm "CIP", upon delivery to the carrier within forty- five (45) days after receipt of documents.

Five percent (5%) of the total or pro rata CIP amount upon issue of the Completion Certificate, within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata CIP amount upon issue of the Operational Acceptance Certificate, within forty- five (45) days after receipt of invoice.

Schedule No. 2. Plant and Equipment Supplied from within Kenya

In respect of plant and equipment supplied from Kenya, the following payments shall be made:

Ten percent (10%) of the total EXW amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Procuring Entity. The advance payment security may be

reduced in proportion to the value of the plant and equipment delivered to the site, as evidenced by shipping and delivery documents.

Eighty percent (80%) of the total or pro rata EXW amount upon Incoterm “Ex-Works,” upon delivery to the carrier within forty-five (45) days after receipt of invoice and documents.

Five percent (5%) of the total or pro rata EXW amount upon issue of the Completion Certificate, within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata EXW amount upon issue of the Operational Acceptance Certificate, within forty-five (45) days after receipt of invoice.

Schedule No. 3. Design Services

In respect of design services for both the foreign currency and the local currency portions, the following payments shall be made:

Ten percent (10%) of the total design services amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Procuring Entity.

Ninety percent (90%) of the total or pro rata design services amount upon acceptance of design in accordance with GCC Clause 20 by the Project Manager within forty-five (45) days after receipt of invoice.

Schedule No. 4. Installation Services

In respect of installation services for both the foreign and local currency portions, the following payments shall be made:

Ten percent (10%) of the total installation services amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Procuring Entity. The advance payment security may be reduced in proportion to the value of work performed by the Contractor as evidenced by the invoices for installation services.

Eighty percent (80%) of the measured value of work performed by the Contractor, as identified in the said Program of Performance, during the preceding month, as evidenced by the Procuring Entity's authorization of the Contractor's application, will be made monthly within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of installation services performed by the Contractor as evidenced by the Procuring Entity's authorization of the Contractor's monthly applications, upon issue of the Completion Certificate, within forty-five (45) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of installation services performed by the Contractor as evidenced by the Procuring Entity's authorization of the

Contractor's monthly applications, upon issue of the Operational Acceptance Certificate, within forty-five (45) days after receipt of invoice.

In the event that the Procuring Entity fails to make any payment on its respective due date, the Procuring Entity shall pay to the Contractor interest on the amount of such delayed payment at the rate of 1 (ONE) percent (%) per month for period of delay until payment has been made in full.

PAYMENT PROCEDURES

The procedures to be followed in applying for certification and making payments shall be as follows:.....

APPENDIX 2. PRICE ADJUSTMENT

Where the Contract Period (excluding the Defects Liability Period) exceeds eighteen (18) months, it is normal procedure that prices payable to the Contractor shall be subject to adjustment during the performance of the Contract to reflect changes occurring in the cost of labor and material components. In such cases the Tendering document shall include in this Appendix 2 a formula of the following general type, pursuant to GCC Sub-Clause 11.2.

Where Contracts are of a shorter duration than eighteen (18) months or in cases where there is to be no Price Adjustment, the following provision shall not be included. Instead, it shall be indicated under this Appendix 2 that the prices are to remain firm and fixed for the duration of the Contract.

Sample Price Adjustment Formula

If in accordance with GCC 11.2, prices shall be adjustable, the following method shall be used to calculate the price adjustment:

Prices payable to the Contractor, in accordance with the Contract, shall be subject to adjustment during performance of the Contract to reflect changes in the cost of labor and material components, in accordance with the following formula:

in which:

P_1 = adjustment amount payable to the Contractor

P_0 = Contract price (base price)

a = percentage of fixed element in Contract price ($a = \%$)

b = percentage of labor component in Contract price ($b = \%$)

c = percentage of material and equipment component in Contract price ($c = \%$)

L_0, L_1 = labor indices applicable to the appropriate industry in the country of origin on the base date and the date for adjustment, respectively

M_0, M_1 = material and equipment indices in the country of origin on the base date and the date for adjustment, respectively

N.B. $a+b+c = 100\%$.

Conditions Applicable to Price Adjustment

The Tenderer shall indicate the source of labor and materials indices, source of exchange rates and the base date indices in its Tender.

<u>Item</u>	<u>Source of Indices Used</u>	<u>Base Date Indices</u>
-------------	-------------------------------	--------------------------

The base date shall be the date twenty-eight (28) days prior to the Tender closing date.

The date of adjustment shall be the mid-point of the period of manufacture or installation of component or Plant.

The following conditions shall apply:

(a) No price increase will be allowed beyond the original delivery date unless covered by an extension of time awarded by the Procuring Entity under the terms of the Contract. No price increase will be allowed for periods of delay for which the Contractor is responsible. The Procuring Entity will, however, be entitled to any price decrease occurring during such periods of delay.

(b) If the currency in which the Contract price, P_0 , is expressed is different from the currency of the country of origin of the labor and/or materials indices, a correction factor will be applied to avoid incorrect adjustments of the Contract price. The correction factor shall be: Z_0 / Z_1 , where,

Z_0 = the number of units of currency of the origin of the indices which equal to one unit of the currency of the Contract Price P_0 on the Base date, and

Z_1 = the number of units of currency of the origin of the indices which equal to one unit of the currency of the Contract Price P_0 on the Date of Adjustment.

-
- (c) No price adjustment shall be payable on the portion of the Contract price paid to the Contractor as an advance payment.

APPENDIX 3. INSURANCE REQUIREMENTS

Insurances to be Taken Out by the Contractor

In accordance with the provisions of GCC Clause 34, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurances set forth below in the sums and with the deductibles and other conditions specified. The identity of the insurers and the form of the policies shall be subject to the approval of the Procuring Entity, such approval not to be unreasonably withheld.

a) Cargo Insurance

Covering loss or damage occurring, while in transit from the supplier's or manufacturer's works or stores until arrival at the Site, to the Facilities (including spare parts therefor) and to the construction equipment to be provided by the Contractor or its Subcontractors.

Amount Deductible Limits Parties insured from To

b) Installation All Risks Insurance

Covering physical loss or damage to the Facilities at the Site, occurring prior to completion of the Facilities, with an extended maintenance coverage for the Contractor's liability in respect of any loss or damage occurring during the defect liability period while the Contractor is on the Site for the purpose of performing its obligations during the defect liability period.

Amount Deductible Limits Parties insured from To

c) Third Party Liability Insurance

Covering bodily injury or death suffered by third parties (including the Procuring Entity's personnel) and loss of or damage to property (including the Procuring Entity's property and any parts of the Facilities that have been accepted by the Procuring Entity) occurring in connection with the supply and installation of the Facilities.

Amount Deductible Limits Parties insured From To

d) Automobile Liability Insurance

Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the supply and installation of the Facilities. Comprehensive insurance in accordance with statutory requirements.

e) Workers' Compensation

In accordance with the statutory requirements applicable in any country where the Facilities or any part thereof is executed.

f) Procuring Entity's Liability

In accordance with the statutory requirements applicable in any country where the Facilities or any part thereof is executed.

g) Other Insurances

The Contractor is also required to take out and maintain at its own cost the following insurances:

Details:

Amount Deductible Limits Parties insured from To

The Procuring Entity shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GCC Sub-Clause 34.1, except for the Third-Party Liability, Workers' Compensation and Procuring Entity's Liability Insurances, and the Contractor's Subcontractors shall be named as co-insureds under all insurance policies taken out by the Contractor pursuant to GCC Sub-Clause 34.1, except for the Cargo, Workers' Compensation and Procuring Entity's Liability Insurances. All insurer's rights of subrogation against such co-insureds for losses or claims arising out of the performance of the Contract shall be waived under such policies.

Insurances to Be Taken Out by The Procuring Entity

The Procuring Entity shall at its expense take out and maintain in effect during the performance of the Contract the following insurances.

Details:

Amount	Deductible	Limits	Parties	insured	from	_____
To	_____					

APPENDIX 4. TIME SCHEDULE

APPENDIX 5. LIST OF MAJOR ITEMS OF PLANT AND INSTALLATION SERVICES AND LIST OF APPROVED SUBCONTRACTORS

A list of major items of Plant and Installation Services is provided below.

The following Subcontractors and/or manufacturers are approved for carrying out the items of the Facilities indicated below. Where more than one Subcontractor is listed, the Contractor is free to choose between them, but it must notify the Procuring Entity of its choice in good time prior to appointing any selected Subcontractor. In accordance with GCC Sub-Clause 19.1, the Contractor is free to submit proposals for Subcontractors for additional items from time to time. No Subcontracts shall be placed with any such Subcontractors for additional items until the Subcontractors have been approved in writing by the Procuring Entity and their names have been added to this list of Approved Subcontractors.

Major Items of Plant and Installation Services	Approved Subcontractors/Manufacturers	Nationality

APPENDIX 6. SCOPE OF WORKS AND SUPPLY BY THE PROCURING ENTITY

The following personnel, facilities, works and supplies will be provided/supplied by the Procuring Entity, and the provisions of GCC Clauses 10, 21 and 24 shall apply as appropriate.

All personnel, facilities, works and supplies will be provided by the Procuring Entity in good time so as not to delay the performance of the Contractor, in accordance with the approved Time Schedule and Program of Performance pursuant to GCC Sub-Clause 18.2.

Unless otherwise indicated, all personnel, facilities, works and supplies will be provided free of charge to the Contractor.

Personnel	Charge to Contractor (if any)
-----------	-------------------------------

Facilities	Charge to Contractor (if
------------	--------------------------

Works	Charge to Contractor (if
-------	--------------------------

Supplies	Charge to Contractor (if
----------	--------------------------

APPENDIX 7. LIST OF DOCUMENTS FOR APPROVAL OR REVIEW

Pursuant to GCC Sub-Clause 20.3.1, the Contractor shall prepare, or cause its Subcontractor to prepare, and present to the Project Manager in accordance with the requirements of GCC Sub-Clause 18.2 (Program of Performance), the following documents for

A. Approval

- 1.
- 2.
- 3.

B. Review

- 1.
- 2.
- 3.

APPENDIX 8. FUNCTIONAL GUARANTEES

1. General

This Appendix sets out

- a) The functional guarantees referred to in GCC Clause 28 (Functional Guarantees)
- b) The pre-conditions to the validity of the functional guarantees, either in production and/or consumption, set forth below
- c) The minimum level of the functional guarantees
- d) The formula for calculation of liquidated damages for failure to attain the functional guarantees.

2. Preconditions

The Contractor gives the functional guarantees (specified herein) for the facilities, subject to the following preconditions being fully satisfied:.....

3. Functional Guarantees

Subject to compliance with the foregoing preconditions, the Contractor guarantees as follows:

3.1 Production Capacity.....
and/or

3.2 Raw Materials and Utilities Consumption

4. Failure in Guarantees and Liquidated Damages

4.1 Failure to Attain Guaranteed Production Capacity

If the production capacity of the facilities attained in the guarantee test, pursuant to GCC Sub-Clause 25.2, is less than the guaranteed figure specified in para. 3.1 above, but the actual production capacity attained in the guarantee test is not less than the minimum level specified in para. 4.3 below, and the Contractor elects to pay liquidated damages to the Procuring Entity in lieu of making changes, modifications and/or additions to the Facilities,

pursuant to GCC Sub-Clause 28.3, then the Contractor shall pay liquidated damages at the rate of..... for every complete one percent (1%) of the deficiency in the production capacity of the Facilities, or at a proportionately reduced rate for any deficiency, or part thereof, of less than a complete one percent (1%).

- 4.2 Raw Materials and Utilities Consumption in Excess of Guaranteed Level____ If the actual measured figure of specified raw materials and utilities consumed per unit (or their average total cost of consumption) exceeds the guaranteed figure specified in para.3.2 above (or their specified average total cost of consumption), but the actual consumption attained in the guarantee test, pursuant to GCC Sub-Clause 25.2, is not more than the maximum level specified in para. 4.3 below, and the Contractor elects to pay liquidated damages to the Procuring Entity in lieu of making changes, modifications and/or additions to the Facilities pursuant to GCC Sub-Clause 28.3, then the Contractor shall pay liquidated damages at the rate of [amount in the contract currency] for every complete one percent (1%) of the excess consumption of the Facilities, or part thereof, of less than a complete one percent (1%).

4.3 Minimum Levels

Notwithstanding the provisions of this paragraph, if as a result of the guarantee test(s), the following minimum levels of performance guarantees (and consumption guarantees) are not attained by the Contractor, the Contractor shall at its own cost make good any deficiencies until the Facilities reach any of such minimum performance levels, pursuant to GCC Sub-Clause 28.2:

- a) production capacity of the Facilities attained in the guarantee test: ninety-five percent (95%) of the guaranteed production capacity (the values offered by the Contractor in its Tender for functional guarantees represents 100%).
and/or
- b) average total cost of consumption of all the raw materials and utilities of the Facilities: one hundred and five percent (105%) of the guaranteed figures (the figures offered by the Contractor in its Tender for functional guarantees represents 100%).

4.4 Limitation of Liability

Subject to para.4.3 above, the Contractor's aggregate liability to pay liquidated damages for failure to attain the functional guarantees shall not exceed_____percent (_____%) of the Contract

price.

PERFORMANCE SECURITY FORM

OPTION 1 – Demand Bank Guarantee

[Guarantor Form head or SWIFT identifier code]

Beneficiary:.....*[insert name and Address of Procuring Entity]*

Date:.....*[Insert date of issue]*

PERFORMANCE GUARANTEE No.:.....*[Insert guarantee reference number]*

Guarantor:.....*[Insert name and address of place of issue, unless indicated in the Form head]*

We have been informed that.....(herein after called “the Applicant”) has entered into Contract No.datedwith the Beneficiary, for the execution of(herein after called “the Contract”).

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

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(.)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 there in.

This guarantee shall be reduced by half upon our receipt of:

- a) A copy of the Operational Acceptance Certificate; or

-
- b) a registered Form from the Applicant (i) attaching a copy of its notice requesting issuance of the Operational Acceptance Certificate and (ii) stating that the Project Manager has failed to issue such Certificate within the time required or provide in writing justifiable reasons why such Certificate has not been issued, so that Operational Acceptance is deemed to have occurred.

This guarantee shall expire no later than the earlier of:2

- a) twelve months after our receipt of either (a) or (b) above; or
- b) eighteen months after our receipt of:
 - i) a copy of the Completion Certificate; or
 - ii) a registered Form from the Applicant, attaching a copy of the notice to the Project Manager that the Facilities are ready for commissioning, and stating that fourteen days have elapsed from receipt of such notice (or seven days have elapsed if the notice was a repeated notice) and the Project Manager has failed to issue a Completion Certificate or in form the Applicant in writing of any defects or deficiencies; or
 - iii) a registered Form from the Applicant stating that no Completion Certificate has been issued but the Procuring Entity is making use of the Facilities; or
- c) the _____ day of __,2____.3

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

1The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Contract and denominated either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Procuring Entity.

2This text shall be revised as and where necessary to take into account (i) partial acceptance of the Facilities in accordance with Sub-Clause 25.4 of the GCC; and (ii) extension of the Performance Security when the Contractor is liable for an extended warranty obligation pursuant to Sub-Clause 27.10 of the GCC (although in this latter case the Procuring Entity might want to consider an extended warranty security in lieu of the extension of the Performance Security).

3Insert the date twenty-eight days after the expected expiration date of the Defect Liability Period. 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. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the pen ultimate paragraph: "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 Procuring Entity's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No.758, except that the supporting statement under Article15 (a) is hereby excluded.

.....

[signature(s)]

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

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 Form head 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 Form head]*

1. By this Bond _____ as Principal (herein after called “the Contractor”) and _____] as Surety (herein after called “the Surety”), are held and firmly bound unto] as Obligated (herein after 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 in to a written Agreement with the Procuring Entity dated the day of, 20, for _____ in accordance with the documents, plans, specifications, and amendments there to, which to the extent herein provided for, are by reference in a part here of and are herein after referred to as the Contract.
3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments there to), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations there under, the Surety may promptly remedy the

default, or shall promptly:

- 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 here under, the amount set for thin 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 here in 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_____.

SIGNED ON_____on behalf of

By

_____i

n the capacity of in the presence of

SIGNED ON _____ on behalf of

By

_____ i

n the capacity of in the presence of

ADVANCE PAYMENT SECURITY - Demand Bank Guarantee

[Guarantor Form head or SWIFT identifier code]

Beneficiary: _____ *[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 Form head]*

We have been informed that _____ (herein after called "the Applicant")
has entered into Contract No. _____ dated _____ with the
Beneficiary, for the execution of, _____ (herein after called "the
Contract").

Furthermore, we understand that, according to the Conditions of the Contract, an
advance payment in the sum _____ (_____) is to be made

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
(.....)⁴ 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 Facilities; 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.

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 Applicant on its account number at _____.

The maximum amount of this guarantee shall be progressively reduced by the
amount of the advance payment repaid by the Applicant as indicated 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 documentation indicating
full repayment by the Applicant of the amount of the advance payment, or on the _____ day of _____.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010
Revision, ICC Publication No. 758, except that the supporting statement under
Article 15 (a) is hereby excluded.

[signature(s)]

BENEFICIAL OWNERSHIP DISCLOSURE FORM

(Amended and issued pursuant to PPRA CIRCULAR No. 02/2022)

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful tenderer pursuant to Regulation 13 (2A) and 13 (6) of the Companies (Beneficial Ownership Information) Regulations, 2020. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.

Tender Reference No.: _____ [insert

identification no] Name of the Tender Title/Description: _____

_____ [insert name of the assignment] to:

_____ [insert complete name of Procuring

Entity]

In response to the requirement in your notification of award dated _____ [insert date of notification of award] to furnish additional information on beneficial ownership: _____ [select one option as applicable and delete the options that are not applicable]

I) We here by provide the following beneficial ownership information.

Details of beneficial ownership

Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
1.	Full Name	Directly----- % of shares Indirectly----- % of shares	Directly.....% of voting rights Indirectly---- -----% of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes ----No--- - 2. Is this right held directly or indirectly?: Direct..... Indirect.....	1. Exercises significant influence or control over the Company body of the Company (tenderer) Yes ----- No---- 2. Is this influence or control exercised directly or indirectly? Direct.....
	National identity card number or Passport number				
	Personal Identification Number (where applicable)				
	Nationality				
	Date of birth [dd/mm/yyyy]				
	Postal address				
	Residential address				
	Telephone number				
	Email address				
	Occupation or profession				

Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
				 Indirect...
2.	Full Name		Directly----- % of shares Indirectly----- % of shares	Directly.....% of voting rights Indirectly---- -----% of voting rights	1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes ----No--- - 2. Is this right held directly or indirectly?: Direct.....
	National identity card number or Passport number				1. Exercises significant influence or control over the Company body of the Company (tenderer)) Yes ---- No---- 2. Is this influence or
	Personal Identification Number (where applicable)				

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights a person holds in the company	Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No)	Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No)
	Nationality(ies)				control exercised directly or indirectly?
	Date of birth [dd/mm/yyyy]				Indirect.....	
	Postal address				
	Residential address					
	Telephone number					
	Email address					Direct.....
	Occupation or profession				
						Indirect...
					
3.						
e.						
t.						
c						

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 13(5) of the Companies (Beneficial Ownership Information) Regulations,

2020.(Notwithstanding this paragraph Personally Identifiable Information in line with the Data Protection Act shall not be published or made public). *Note that Personally Identifiable Information (PII) is defined as any information that can be used to distinguish one person from another and can be used to deanonymize previously anonymous data. This information includes National identity card number or Passport number, Personal Identification Number, Date of birth, Residential address, email address and Telephone number.*

III) In determining who meets the threshold of who a beneficial owner is, the Tenderer must consider a natural person who in relation to the company:

- (a) holds at least ten percent of the issued shares in the company either directly or indirectly;
- (b) exercises at least ten percent of the voting rights in the company either directly or indirectly;
- (c) holds a right, directly or indirectly, to appoint or remove a director of the company; or
- (d) exercises significant influence or control, directly or indirectly, over the company.

IV) What is stated to herein above is true to the best of my knowledge, information and belief.

Name of the Tenderer:[insert complete name of the Tenderer]*

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

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

Designation of the person signing the Tender: [insert complete title of the person signing the Tender]

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date this [insert date of signing] day of..... [Insert month],

[insert year]

Bidder Official Stamp