

COAST WATER SERVICES BOARD



BIDDING DOCUMENTS

COMPLETION OF BURA WATER TREATMENT PLANT AND ASSOCIATED WORKS

Issued on: 18th December 2018

Tender NO. CWSB/T/SPB/W/23/2018-2019

Employer:

**COAST WATER SERVICES BOARD
P.O. BOX 90417-80100
MOMBASA, KENYA**

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ABBREVIATIONS AND ACRONYMS

CWSB	Coast Water Services Board
CDS	Contract Data Sheet
GCC	General Conditions of Contract
IFT	Invitation for Tender
ITT	Instruction to Tenderers
PE	Procuring Entity
PM	Project Manager
PPDA 20015	Public Procurement and Disposal Act, 20015
PPDR 2006	Public Procurement and Disposal Regulations, 2006
PPOA	Public Procurement Oversight Authority
STD	Standard Tender Documents
SOR	Statement of Requirements
SP	Service Provider
TDS	Tender Data Sheet
VAT	Value Added Tax

SECTION II: INSTRUCTIONS TO TENDERERS (ITT)

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A. Introduction

- 1. Scope of Tender**
- 1.1** The Procuring Entity indicated in the **Tender Data Sheet** (TDS) invites Tenders for the construction of works as specified in the **Tender Data Sheet** and Sections VI (Technical Specifications) and VII (Drawings).
- 1.2** The successful Tenderer will be expected to complete the works by the required completion date specified in the **Tender Data Sheet**.
- 1.3** The objectives of the works are listed in the **Tender Data Sheet**. These are mandatory requirements. Any subsequent detail is offered to support these objectives and must not be used to dilute their importance.
- 2. Source of Funds**
- 2.1** Coast Water Services Board has received funding the Government of Kenya through the Ministry of Water and Sanitation for Development Programme towards completion of Bura Water Treatment Plant and Associated Works.
- 2.2** Payments will be made directly by the Procuring Entity and will be subject in all respects to the terms and conditions of the resulting contract placed by the Procuring Entity.
- 3. Eligible Tenderers**
- 3.1** A Tenderer may be a natural person, private or public company, government-owned institution, subject to sub-Clause 3.4 or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a joint venture, consortium, or association. In the case of a joint venture, consortium, or association, unless otherwise specified in the **Tender Data Sheet**, all parties shall be jointly and severally liable.
- 3.2** The Invitation for Tenders is open to all suppliers as defined in the Public Procurement and Disposal Act, 2015 and the Public Procurement and Disposal Regulations, 2006 except as provided hereinafter.

3.3 National Tenderers shall satisfy all relevant licensing and/or registration with the appropriate statutory bodies in Kenya, such as the Ministry of Public Works or the Energy Regulatory Commission.

3.4 A Tenderer shall not have a conflict of interest. All Tenderers found to have a conflict of interest shall be disqualified. A Tenderer may be considered to have a conflict of interest with one or more parties in this Tendering process, if they:

- a) Are associated or have been associated in the past directly or indirectly with employees or agents of the Procuring Entity or a member of a board or committee of the Procuring Entity;
- b) Are associated or have been associated in the past, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Entity to provide consulting services for the preparation of the design, specifications and other documents to be used for the procurement of the works under this Invitation for Tenders;
- c) Have controlling shareholders in common; or
- d) Receive or have received any direct or indirect subsidy from any of them; or
- e) Have the same legal representative for purposes of this Tender; or
- f) Have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Tender of another Tenderer, or influence the decisions of the Procuring Entity regarding this Tendering process; or

g) Submit more than one Tender in this Tendering process. However, this does not limit the participation of subcontractors in more than one Tender, or as Tenderer and subcontractor simultaneously.

3.5 A Tenderer will be considered to have a conflict of interest if they participated as a consultant in the preparation of the design or technical specification of the project and related services that are the subject of the Tender.

3.6 Tenderers shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Government of Kenya in accordance with GCC sub-Clause 3.2.

3.7 Government owned enterprises in Kenya may participate only if they are legally and financially autonomous, if they operate under commercial law, are registered by the relevant registration board or authorities and if they are not a dependent agency of the Government.

3.7 Tenderers shall provide such evidence of their continued eligibility satisfactory to the Procuring Entity, as the Procuring Entity shall reasonably request.

4. One Tender per Tenderer

4.1 A firm shall submit only one Tender, in the same Tendering process, either individually as a Tenderer or as a partner in a joint venture pursuant to ITT Clause 5.

4.2 No firm can be a subcontractor while submitting a Tender individually or as a partner of a joint venture in the same Tendering process.

4.3 A firm, if acting in the capacity of subcontractor in any Tender, may participate in more than one Tender but only in that capacity.

4.4 A Tenderer who submits or participates in more than one Tender (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the Tenders in

which the Tenderer has participated to be disqualified.

- 5. Alternative Tenders by Tenderers**
- 5.1** Tenderers shall submit offers that comply with the requirements of the Tendering documents, including the basic Tenderer's technical design as indicated in the specifications and Drawings and Bill of Quantities. Alternatives will not be considered, unless specifically allowed for in the **Tender Data Sheet**. If so allowed, sub-Clause 5.2 and 5.3 shall govern.
- 5.2** When alternative times for completion are explicitly invited, a statement to that effect will be included in the **Tender Data Sheet** as will the method of evaluating different times for completion.
- 5.3** If so allowed in the **Tender Data Sheet**, Tenderers wishing to offer technical alternatives to the requirements of the Tendering documents must also submit a Tender that complies with the requirements of the Tendering documents, including the basic technical design as indicated in the specifications. In addition to submitting the basic Tender, the Tenderer shall provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, including technical specifications, breakdown of prices, and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Tenderer conforming to the basic technical requirements shall be considered by the Procuring Entity.
- 6. Cost of Tendering**
- 6.1** The Tenderer shall bear all costs associated with the preparation and submission of its Tender, and the Procuring Entity shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Tendering process.
- 7. Site Visit and Pre-Tender Meeting**
- 7.1** The Tenderer, at the Tenderer's own responsibility and risk, is required to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Tenderer's own expense.

- 7.2 The Procuring Entity will conduct a site visit and a pre-Tender meeting. The purpose of the pre-Tender meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 7.3 The Tenderer's designated representative is invited to attend a site visit and pre-Tender meeting which, if convened, will take place at the venue and time stipulated in the **Tender Data Sheet**.
- 7.4 The Tenderer is requested as far as possible, to submit any questions in writing or by electronic means to reach the procuring Entity before the pre-Tender meeting. It may not be practicable at the meeting to answer all questions, but questions and responses will be transmitted in accordance with sub-Clause 7.5.
- 7.5 Minutes of the pre-Tender meeting, including the text of the questions raised and the responses given together with any responses prepared after the pre-Tender meeting will be transmitted within the time stated in the **Tender Data Sheet** to all purchasers of the Tendering documents. Any modification of the Tendering documents listed in sub-Clause 8.1 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 ITT sub Clause 10.2 and not through the minutes of the pre-Tender meeting.
- 7.6 Non attendance during the site visit or pre-Tender meeting will be a cause for disqualification of a Tenderer.

B. Tendering Documents

- 8. Content of Tendering Documents** of 8.1 The works required, Tendering procedures, and contract terms are prescribed in the Tendering Documents. In addition to the Section I Invitation for Tenders, Tendering documents which should be read in conjunction with any addenda issued in accordance with ITT sub Clause 10.2 include:

Section II	Instructions to Tenderers
Section III	Tender Data Sheet
Section IV	General Conditions of Contract
Section V	Contract Data Sheet
Section VI	Specifications
Section VII	Drawings
Section VIII	Bill of Quantities
Section IX	Forms of Tender
	<ul style="list-style-type: none">• Form of Tender• Appendix to Tender• Confidential Business Questionnaire• Integrity Declaration• Letter of Acceptance• Form of Contract Agreement
Section X	Forms of Security
	<ul style="list-style-type: none">• Tender Security Form• Tender Securing Declaration• Performance Bank or Insurance Guarantee• Advance Payment Guarantee
Section XI	Form RB 1 Application to Public Procurement Administrative Review Board

8.2 The number of copies to be completed and returned with the Tender is specified in the **Tender Data Sheet**.

8.3 The Invitation for Tenders (Section I) issued by the Procuring Entity is not part of the Tendering Documents and is included for reference purposes only. In case of discrepancies between the Invitation for Tenders and the Tendering Documents listed in sub-Clause 8.1 above, the said Tendering Documents will take precedence.

8.4 The Procuring Entity is not responsible for the completeness of the Tendering Documents and their addenda, if they were not obtained directly from the authorized staff of the Procuring Entity.

8.5 The Tenderer is expected to examine all instructions, forms, terms and specifications in the Tendering documents. Failure

to furnish all information required by the Tendering Documents or to submit a Tender substantially responsive to the Tendering documents in every respect will be at the Tenderer's risk and may result in the rejection of its Tender.

9. Clarification of Tendering Documents

- 9.1** A prospective Tenderer requiring any clarification of the Tendering documents may notify the Procuring Entity in writing, e-mail or facsimile at the Procuring Entity's address indicated in the **Tender Data Sheet**.
- 9.2** The Procuring Entity will within the period stated in the **Tender Data Sheet** respond in writing to any request for clarification provided that such request is received no later than the period indicated in the **Tender Data Sheet** prior to the deadline for the submission of Tenders prescribed in sub-Clause 22.1.
- 9.3** Copies of the procuring entity's response will be forwarded to all Purchasers of the Tendering documents, including a description of the inquiry, but without identifying its source.
- 9.4** Should the Procuring Entity deem it necessary to amend the Tendering documents as a result of a clarification, it shall do so following the procedure under ITT Clause 10.

10. Amendments of the Tendering Documents

- 10.1** Before the deadline for submission of Tenders, the Procuring Entity may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Tenderer, modify the Tendering documents by issuing addenda.
- 10.2** Any addendum issued shall be part of the Tender documents pursuant to sub-Clause 8.1 and shall be communicated in writing, by e-mail or facsimile to all who have obtained the Tendering documents directly from the Procuring Entity.
- 10.3** In order to allow prospective Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity at its discretion shall extend, as

necessary, the deadline for submission of Tenders, in accordance with sub-Clause 22.2

C. Preparation of Tenders

- 11. Language of Tender** **11.1** The Tender, and all correspondence and documents related to the Tender exchanged by the Tenderer and the Procuring Entity shall be written in the Tender language stipulated in the **Tender Data Sheet**. Supporting documents and printed literature furnished by the Tenderer may be in another language provided they are accompanied by an accurate translation of the relevant passages in the above stated language, in which case, for purposes of interpretation of the Tender, the translation shall prevail.
- 12. Documents Constituting the Tender** **12.1** The Tender submitted by the Tenderer shall consist of the following components:
- a) The Form of Tender (in the format indicated in Section IX) completed in accordance with ITT Clause 15, 16 and 17;
 - b) Information requested by Instructions to Tenderers ITT sub-Clause 13.2; 13.3 and 13.4;
 - c) Tender Security or Tender Securing Declaration in accordance with Instructions to Tenderers ITT Clause 19;
 - d) Priced Bill of Quantities;
 - e) Qualification Information Form and Documents;
 - f) Alternative offers where invited in accordance with Instructions to Tenderers ITT Clause 5;
 - g) Written confirmation authorizing the signatory of the

Tender to commit the Tenderer in accordance with Instructions to Tenderers ITT sub Clause 19.2; and

- h) And any information or other materials required to be completed and submitted by Tenderers, as specified in the **Tender Data Sheet**.

**13. Documents
Establishing
Eligibility and
Qualifications of
the Tenderer**

13.1 Pursuant to ITT Clause 13, the Tenderer shall furnish, as part of its Tender, documents establishing the Tenderer's eligibility to Tender and its qualifications to perform the contract if its Tender is accepted.

13.2 In the event that pre-qualification of potential Tenderers has been undertaken, only Tenders from pre-qualified Tenderers will be considered for award of contract. These qualified Tenderers should submit their Tenders with any information updating the original pre-qualification applications or, alternatively, confirm in their Tenders that the originally submitted pre-qualification information remains essentially correct as of the date of Tender submission. The update or confirmation should be provided in Section IX.

13.3 If the Procuring Entity has not undertaken pre-qualification of potential Tenderers, to qualify for award of the contract, Tenderers shall meet the minimum qualifying criteria specified in the **Tender Data Sheet**:

13.4 Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless otherwise stated in the **Tender Data Sheet**:

- a) The Tender shall include all the information listed in the **Tender Data Sheet** pursuant to sub-Clause 13.3 above for each joint venture partner;
- b) The Tender shall be signed so as to be legally binding on all partners;

- c) One of the partners will be nominated as being in charge, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
- d) The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of a joint venture and the entire execution of the Contract, including payment, shall be done exclusively with the partner in charge;
- e) All partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms and a statement to this effect shall be included in the authorization mentioned under (c) above as well as in the Tender and in the Agreement (in case of a successful Tender); and
- f) A copy of the joint venture agreement entered into by all partner shall be submitted with the Tender. Alternatively, a Letter of Intent to execute a joint venture agreement in the event of a successful Tender shall be signed by all partners and submitted with the Tender, together with a copy of the proposed Agreement.
- g) The Tender Security and Tender Securing Declaration as stated in accordance with ITT Clause 19, and in case of a successful Tender, the Agreement, shall be signed so as to be legally binding on all partners.

14. Lots Package

14.1 When Tendering for more than one contract under the lots arrangements, the Tenderer must provide evidence that it meets or exceeds the sum of all the individual requirements for the lots being tendered in regard to:

- a) Average annual turnover;
- b) Particular experience including key production rates;

- c) Financial means, etc;
- d) Personnel capabilities; and
- e) Equipment capabilities.

14.2 In case the Tenderer fail to fully meet any of these criteria, it may be qualified only for those lots for which the Tenderer meets the above requirement.

15. Form of Tender

15.1 The Tenderer shall fill the Form of Tender furnished in the Tendering Documents. The Form of Tender must be completed without any alterations to its format and no substitute shall be accepted.

16. Tender Prices

16.1 The Contract shall be for the whole Works, as described in sub-Clause 1.1, based on the priced Bill of Quantities submitted by the Tenderer.

16.2 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items for which no rate or price is entered by the Tenderer will not be paid for by the Procuring Entity when executed and shall be deemed covered by the other rates and prices in the Bill of quantities.

16.3 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 15 days prior to the deadline for submission of Tenders, shall be included in the rates, prices and total Tender price submitted by the Tenderer.

16.4 The rates and prices quoted by the Tenderer shall be subject to adjustment during the performance of the Contract if provided for in the **Tender Data Sheet** and the provisions of the Conditions of Contract. The Tenderer shall submit with the Tender all the information required under the **Contract Data Sheet**.

**17. Tender
Currencies**

17.1 The unit rates and prices shall be quoted by the Tenderer in the currency as specified in the **Tender Data Sheet**.

17.2 Tenderers shall indicate details of their expected foreign currency requirements in the Tender, if any. The rates of exchange to be used by the Tenderers in arriving at the local currency equivalent shall be the selling rates for similar transactions established by the authority specified in the **Tender Data Sheet** prevailing on the date 28 days prior to the latest deadline for submission of Tenders. These exchange rates shall apply for all payments so that no exchange risk will be borne by the Tenderer. In any case, payments will be computed using the rates quoted in the Tender.

17.3 Tenderers may be required by the Procuring Entity to clarify their foreign currency requirements and to substantiate that the amounts included in the rates and prices and in the Contract Data Sheet are reasonable and responsive to sub-Clause 17.1.

18. Tender Validity Period

18.1 Tenders shall remain valid for the period specified in the **Tender Data Sheet** after the Tender submission deadline prescribed by the Procuring Entity, pursuant to ITT Clause 22. A Tender valid for a shorter period shall be rejected by the Procuring Entity as non responsive.

18.2 In exceptional circumstances, prior to expiry of the original Tender validity period, the Procuring Entity may request that the Tenderers extend the period of validity for a specified additional period. The request and the Tenderers' responses shall be made in writing or by cable. A Tenderer may refuse the request without forfeiting its Tender Security or causing to be executed its Tender Securing declaration. A Tenderer agreeing to the request will not be required or permitted to otherwise modify the Tender, but will be required to extend the validity of its Tender Security or Tender Securing declaration for the period of the extension, and in compliance with ITT Clause 19 in all respects.

- 18.3** In the case of fixed price contracts, if the award is delayed by a period exceeding ninety (90) days beyond the expiry of the initial Tender validity period, the contract price will be increased by a factor specified in the request for extension. The Tender evaluation shall be based on the Tender price without taking into consideration on the above correction.
- 19. Tender Security and Tender Securing Declaration**
- 19.1** Pursuant to ITT Clause 12, where required in the **Tender Data Sheet**, the Tenderer shall furnish as part of its Tender, a Tender Security in original form and in the amount and currency specified in the **Tender Data Sheet**.
- A Tender Securing Declaration as specified in the **Tender Data Sheet** in the format provided in section X shall be provided as a mandatory requirement.
- 19.2** The Tender Security or Tender Securing Declaration is required to protect the Procuring Entity against the risk of Tenderer's conduct which would warrant the security's forfeiture, pursuant to ITT sub-Clause 19.9.
- 19.3** The Tender Security shall be denominated in the currency of the Tender and shall be in one of the following forms:
- a) Cash;
 - b) A Bank Guarantee;
 - c) An Insurance Bond issued by an insurance firm approved by the PPOA located in Kenya;
 - d) An irrevocable letter of credit issued by a reputable bank.
- 19.4** The Tender Security shall be in accordance with the Form of the Tender Security included in Section X or another form approved by the Procuring Entity prior to the Tender submission.

- 19.5** The Tender Security shall be payable promptly upon written demand by the Procuring Entity in case any of the conditions listed in sub-Clause 19.8 are invoked.
- 19.6** Any Tender not accompanied by a Tender Security in accordance with sub-Clauses 19.1 or 19.3 shall be rejected by the Procuring Entity as non-responsive, pursuant to ITT Clause 28.
- 19.7** The Procuring Entity shall immediately release any Tender Security if:
- a) The procuring proceedings are terminated;
 - b) The Procuring Entity determines that none of the submitted Tenders is responsive;
 - c) A contract for the procurement is entered into.
- 19.8** The Tender Security shall be forfeited and the Tender Securing Declaration executed if the Tenderer:
- a) Withdraws its Tender after the deadline for submitting Tenders but before the expiry of the period during which Tenders must remain valid;
 - b) Rejects a correction of an arithmetic error pursuant to sub-Clause 29.2;
 - c) Refuse to enter into a written contract in accordance with ITT Clause 40;
 - d) Fails to furnish the Performance Security in accordance with ITT Clause 41.
- 19.9** The Tender Security and Tender Securing Declaration of a joint venture must be in the name of the joint venture submitting the Tender.

19.10 A Tenderer shall be suspended from being eligible for Tendering in any contract with the Procuring Entity for the period of time indicated in the Tender Securing Declaration:

a) If the Tenderer withdraws its Tender, except as provided in ITT sub-Clauses 18.2 and 29.2; or

b) In the case of a successful Tenderer, if the Tenderer fails within the specified time limit to:

(i) Sign the contract; or

(ii) Furnish the required Performance Security.

20. Format and Signing of Tender

20.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT Clause 12 of these Instructions to Tenderers, with the Form of Tender, and clearly marked “**ORIGINAL**”. In addition, the Tenderer shall submit copies of the Tender, in the number specified in the **Tender Data Sheet**, and clearly marked as “**COPIES**”. In the event of discrepancy between them, the original shall prevail.

20.2 The original and all copies of the Tenders shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Tenderer. This authorization shall consist of a written confirmation as specified in the **Tender Data Sheet** 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, except for un-amended printed literature, shall be initialled by the person or persons signing the Tender.

20.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialled by the person or persons signing the Tender.

- 20.4** The Tenderer shall furnish information as described in the Form of Tender on commissions or gratuities, if any, paid or to be paid to agents relating to this Tender and to contract execution if the Tenderer is awarded the contract

D. Submission of Tenders

**21. Sealing
Marking
Tenders**

**and
of**

- 21.1** The Tenderer shall seal the original and each copy of the Tender in separate envelopes, duly marking the envelopes as “**ORIGINAL**” and “**COPY**”. The envelopes shall then be sealed in an outer envelope securely sealed in such a manner that opening and resealing cannot be achieved undetected.

- 21.2** The inner and outer envelopes shall:

- a) Be addressed to the Procuring Entity at the address given in the **Tender Data Sheet**; and
- b) Bear the Project name indicated in the **Tender Data Sheet**, the Invitation for Tenders (IFB) title and number indicated in the **Tender Data Sheet**, and a statement: “**DO NOT OPEN BEFORE,**” to be completed with the time and the date specified in the **Tender Data Sheet**, pursuant to ITT sub-Clause 22.1.

- 21.3** In addition to the identification required in sub-Clause 21.2, the inner envelopes shall also indicate the name and address of the Tenderer to enable the Tender be returned unopened in case it is declared late, pursuant to sub-Clause 22.1 and for matching purpose under ITT Clause 23

- 21.4** If the outer envelope is not sealed and marked as required by ITT sub clause 21.2, the Procuring Entity shall assume no responsibility for misplacement or premature opening of the Tender.

- 22. Deadline for Submission of Tenders**
- 22.1** Tenders shall be received by the Procuring Entity at the address specified under ITT sub-Clause 21.2 no later than the date and time specified in the **Tender Data Sheet**.
- 22.2** The Procuring Entity may, in exceptional circumstances and at its discretion, extend the deadline for the submission of Tenders by amending the Tendering documents in accordance with ITT Clause 9, in which case all rights and obligations of the Procuring Entity and Tenderers previously subject to the deadline will thereafter be subject to the new deadline.
- 22.3** The extension of the deadline for submission of Tenders shall not be made later than the period specified in the **Tender Data Sheet** before the expiry of the original deadline.
- 23. Late Tenders**
- 23.1** The Procuring Entity shall not consider for evaluation any Tender that arrives after the deadline for submission of Tenders, in accordance with ITT Clause 22.
- 23.2** Any Tender received by the Procuring Entity after the deadline for submission of Tenders shall be declared late, rejected and returned unopened to the Tenderer
- 24. Modification, Substitution and Withdrawal of Tenders**
- 24.1** A Tenderer may modify or substitute or withdraw its Tender after it has been submitted, provided that written notice of the modification, including substitution or withdrawal of the Tender, is received by the Procuring Entity prior to the deadline prescribed for submission of Tenders prescribed under ITT sub-Clause 22.1.
- 24.2** The Tenderer’s modification or substitution or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of ITT Clauses 20 and 21 with the outer and inner envelopes additionally marked “**MODIFICATION**” or **SUBSTITUTION** or “**WITHDRAWAL**” as appropriate. The notice may also be sent by electronic mail and facsimile, but followed by a

signed confirmation copy, postmarked not later than the deadline for submission of Tenders.

- 24.3** No Tender may be withdrawn, replaced 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 Tender Form. Withdrawal of a Tender during this interval shall result in the Tenderer's forfeiture of its Tender Security or execution of Tender Securing Declaration, pursuant to the ITT sub-Clause 19.9.
- 24.4** Withdrawal of a Tender between the deadline for submission of Tenders and the expiration of the period of Tender validity specified in the **Tender Data Sheet** or as extended pursuant to sub-Clause 22.2 shall result in the forfeiture of the Tender Security and execution of Tender Securing Declaration pursuant to ITT sub-Clause 19.9.
- 24.5** Tenderers may only offer discounts to, or otherwise modify the prices of their Tenders by submitting Tender modifications in accordance with this Clause, or included in the original Tender submission.

E. Opening and Evaluation of Tenders

25. Opening Tenders

- of 25.1** The Procuring Entity will open all Tenders including modifications, substitution or withdraw notices made pursuant to ITT Clause 24, in public, in the presence of Tenderers or their representatives who choose to attend and other parties with legitimate interest and Tender proceedings, at the place on the date and at time specified in the **Tender Data Sheet**. The Tenderers' representatives who are present shall sign a register as proof of their attendance.
- 25.2** Envelopes marked "**WITHDRAWAL**" shall be opened and read out first. Tenders for which an acceptable notice of withdrawal has been submitted pursuant to ITT Clause 24 shall not be opened but returned to the Tenderer. If the

withdrawal envelope does not contain a copy of the "Power of Attorney" confirming the signature as a person duly authorized to sign on behalf of the Tenderer, the corresponding Tender will be opened. Subsequently, all envelopes marked "**MODIFICATION**" shall be opened and the submissions therein read out in appropriate detail. Thereafter all envelopes marked or "**SUBSTITUTION**" opened and the submissions therein read out in appropriate detail.

- 25.3** All other envelopes shall be opened one at a time. The Tenderers' names, the Tender prices, the total amount of each Tender and of any alternative Tender (if alternatives have been requested or permitted), any discounts, the presence or absence of Tender security, and such other details as the appropriate tender opening committee may consider appropriate, will be announced by the Secretary of the Tender Opening Committee at the opening.
- 25.4** Tenders or modifications that are not opened and not read out at Tender opening shall not be considered further for evaluation, irrespective of the circumstances. In particular, any discount offered by a Tenderer which is not read out at Tender opening shall not be considered further.
- 25.5** Tenderers are advised to send in a representative with the knowledge of the content of the Tender who shall verify the information read out from the submitted documents. Failure to send a representative or to point out any un-read information by the sent Tenderer's representative shall indemnify the Procuring Entity against any claim or failure to read out the correct information contained in the Tenderer's Tender.
- 25.6** No Tender will be rejected at Tender opening except for late Tenders which will be returned unopened to the Tenderer, pursuant to ITT Clause 23.
- 25.7** The Secretary of the appropriate tender opening committee

shall prepare minutes of the Tender opening. The record of the Tender opening shall include, as a minimum: the name of the Tenderers and whether or not there is a withdrawal, substitution or modification, the Tender price per Lot if applicable, including any discounts and alternative offers and the presence or absence of a Tender Security or Tender Securing Declaration.

25.8 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 affect the record.

25.9 A copy of the minutes of the Tender opening shall be furnished to individual Tenderers upon request.

26. Confidentiality

26.1 Information relating to the examination, clarification, evaluation, and comparison of Tenders and recommendations for the award of a Contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced.

26.2 Any effort by a Tenderer to influence the Procuring Entity's processing of Tenders or award decisions may result in the rejection of his Tender.

26.3 Notwithstanding sub-Clause 26.2, 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.

27. Clarification of Tenders

27.1 To assist in the examination, evaluation, comparison of Tenders and post-qualification of the Tenderer, the Procuring Entity may, at its discretion, ask a Tenderer for clarification of its Tender including breakdown of prices. Any clarification submitted by a Tenderer that is not in response to a request by the Procuring Entity shall not be considered.

- 27.2** The 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 Tenders in accordance with ITT Clause 29.
- 27.3** 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 Tender it should do so in writing.
- 28. Preliminary Examination of Tenders**
- 28.1** Prior to the detailed evaluation of Tenders, the Procuring Entity will determine whether:
- a) The Tender has been submitted in the required format;
 - b) Any Tender Security submitted is in the required form, amount and validity period;
 - c) The Tender has been signed by the person lawfully authorized to do so;
 - d) The required number of copies of the Tender have been submitted;
 - e) The Tender is valid for the period required;
 - f) All required documents and information have been submitted; and
 - g) Any required samples have been submitted.
- 28.2** The Procuring Entity will confirm that the documents and information specified under ITT Clause 12 and ITT Clause 13 have been provided in the Tender. If any of these documents or information is missing, or is not provided in accordance with the Instructions to Tenderers, the Tender

shall be rejected.

28.3 The Procuring Entity may waive any minor informality, nonconformity, or irregularity in a Tender which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Tenderer

28.4 A substantially responsive Tender is one which conforms to all the terms, conditions, and specifications of the Tendering documents, without material deviation or reservation. A material deviation or reservation is one that:

- a) Affects in any substantial way the scope, quality, or execution of the Works;
- b) Limits in any substantial way, inconsistent with the Tendering documents, the Procuring Entity's rights or the Tenderer's obligations under the Contract; or
- c) If rectified, would affect unfairly the competitive position of other Tenderers presenting substantially responsive Tenders.

28.5 If a Tender is not substantially responsive, it will be rejected by the Procuring Entity, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

**29. Correction
Errors**

of 29.1 Tenders determined to be substantially responsive will be checked by the Procuring Entity for any arithmetic errors. Errors will be corrected by the Procuring Entity as follows:

- a) If there is a discrepancy between unit prices 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 the total price as quoted shall govern and the unit price shall be

corrected;

- b) 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
- c) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

29.2 The amount stated in the Tender will, be adjusted by the Procuring Entity in accordance with the above procedure for the correction of errors and, with, the concurrence of the Tenderer, shall be considered as binding upon the Tenderer. If the Tenderer does not accept the corrected amount, its Tender will then be rejected, and the Tender Security may be forfeited and the Tender Securing Declaration may be executed in accordance with sub-Clause 19.9.

30. Conversion to Single Currency **30.1** To facilitate the evaluation and comparison, the Procuring Entity will convert all Tender prices expressed in the amounts in various currencies in which the Tender prices are payable to Kenya Shillings at the selling exchange rate established for similar transactions by the Central Bank of Kenya ruling on the date specified in the **Tender Data Sheet**.

31. Comparison of Tenders **31.1** The Procuring Entity shall evaluate and compare only the Tenders determined to be substantially responsive in accordance with ITT Clause 28.

31.2 In evaluating the Tenders, the Procuring Entity will determine for each Tender the evaluated Tender price by adjusting the Tender price as follows:
Making any correction for errors pursuant to ITT Clause 29;
Excluding provisional sums and the provision, if any for contingencies in the Bill of Quantities, but including Day work , where priced competitively ; and

Making appropriate adjustments to reflect discounts or other price modifications offered in accordance with sub-Clause 24.5.

31.3 The Procuring Entity may waive any minor informality or non-conformity, which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative standing of any Tenderer. Variations, deviations, and alternative offers and other factors, which are in excess of the requirements of the Tendering documents or otherwise result in unsolicited benefits for the Procuring Entity will not be taken into account in Tender evaluation.

32. National Preference

32.1 In the evaluation of Tenders the Procuring Entity shall apply exclusive preference to citizens of Kenya where:

- a) The funding is 100% from the Government of Kenya or a Kenyan body;
- b) The amounts are below the prescribed threshold of KShs.200 million;

32.2 To qualify for the preference the candidate shall provide evidence of eligibility by:

- a) Proving Kenyan citizenship by production of a Kenyan Identity Card; or
- b) Providing proof of being a “citizen contractor” in terms of section 3(1) of the Act, i.e. being a natural person or an incorporated company wholly owned and controlled by persons who are citizens of Kenya.

32.3 The Minister of Finance may prescribe additional preference and/or reservation schemes, for example for procurements above these thresholds. If such additional preference schemes apply, details will be given in the **Tender Data Sheet**.

- 33. Determination of the Lowest Evaluated Tender**
- 33.1** The Tender with the lowest evaluated price from among those which are eligible, compliant and substantially responsive shall be the lowest evaluated Tender.
- 34. Post-qualification of Tenderer**
- 34.1** If specified in the **Tender Data Sheet**, post-qualification shall be undertaken.
- 34.2** The Procuring Entity will determine to its satisfaction whether the Tenderer that is selected as having submitted the lowest evaluated responsive Tender is qualified to perform the contract satisfactorily, in accordance with the criteria listed in sub-Clause 13.3.
- 34.3** The determination will take into account the Tenderer's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to sub-Clause 13.3, as well as such other information as the Procuring Entity deems necessary and appropriate. Factors not included in these Tendering documents shall not be used in the evaluation of the Tenderer's qualifications.
- 34.4** An affirmative determination will be a prerequisite for award of the contract to the Tenderer. A negative determination will result in rejection of the Tenderer's Tender, in which event the Procuring Entity will proceed to the next lowest evaluated Tender to make a similar determination of that Tenderer's capabilities to perform satisfactorily.

F. Award of Contract

- 35. Criteria of Award**
- 35.1** Subject to ITT Clause 35 and 36, the Procuring Entity will award the Contract to the Tenderer whose Tender has been determined to be substantially responsive to the Tendering documents and who has offered the lowest

Evaluated Tender Price, provided that such Tenderer has been determined to be:

- a) Eligible in accordance with the provisions of ITT Clause 3;
- b) Is determined to be qualified to perform the Contract satisfactorily;
- c) Successful negotiations have been concluded.

35.2 If, pursuant to sub-Clause 14.1, this Contract is being awarded on a “lot and package” basis, the lowest evaluated Tender price will be determined when evaluating this Contract in conjunction with other Contracts to be awarded concurrently, taking into account any discounts offered by the Tenderer for award of more than one Contract.

36. Clarifications

36.1 Clarifications may be undertaken with the lowest evaluated Tenderer relating to the following areas:

- a) A minor alteration to the technical details of the statement of requirements;
- b) Reduction of quantities for budgetary reasons, where the reduction is in excess of any provided for in the Tendering documents;
- c) A minor amendment to the Contract Data Sheet;
- d) Finalizing payment arrangements;
- e) Mobilization arrangements;
- f) Agreeing final delivery or work schedule to accommodate any changes required by the Procuring Entity;

g) The methodology or staffing; or

h) Clarifying details that were not apparent or could not be finalized at the time of Tendering.

36.2 Clarifications shall not change the substance of the tender.

37. Procuring Entity's Right to Accept any Tender and to Reject any or all Tenders

37.1 Notwithstanding ITT Clause 35, the Procuring Entity reserves the right to accept or reject any Tender, and to cancel the Tendering process and reject all Tenders, at any time prior to the award of Contract, without thereby incurring any liability to the affected Tenderer or Tenderers.

37.2 Notice of the rejection of all Tenders shall be given promptly within 14 days to all Contractors that have submitted Tenders.

37.3 The Procuring Entity shall upon request communicate to any Tenderer the grounds for its rejection of its Tenders, but is not required to justify those grounds.

38. Procuring Entities Right to Vary Quantities at the Time of Award

38.1 The Procuring Entity reserves the right at the time of contract award to increase or decrease the quantity of goods or related services originally specified in these Tendering documents (schedule of requirements) provided this does not exceed by the percentage indicated in the **Tender Data Sheet**, without any change in unit price or other terms and conditions of the Tender and Tendering documents.

39. Notification of Award

39.1 The Tenderer whose Tender has been accepted will be notified of the award by the Procuring Entity prior to expiration of the Tender validity period by e-mail or facsimile confirmed by

registered letter. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") will state the sum that the Procuring Entity will pay the Contractor in consideration of the provision and maintenance of the Work(s) as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

39.2 The notification of award will constitute the formation of the Contract, subject to the Tenderer furnishing the Performance Security in accordance with ITT Clause 41 and signing the Contract in accordance with sub-Clause 40.2

39.3 At the same time as the person submitting the successful Tender is notified, the Procuring Entity will notify each unsuccessful Tenderer, the name of the successful Tenderer and the Contract amount and will discharge the Tender Security and Tender Securing Declaration of the Tenderer pursuant to ITT sub Clause 19.7.

39.4 If, after notification of award, a Tenderer wishes to ascertain the grounds on which its Tender or application for pre-qualification was unsuccessful, it should address its request to the secretary of the Tender Committee that authorized the award of contract. The secretary of the Tender Committee shall, within fourteen days after a request, provide written reasons as to why the Tender, proposal or application to be pre-qualified was unsuccessful. However, failure to take this opportunity to clarify the grounds for rejection does not affect the Tenderer's right to seek immediate review by the Public Procurement Administrative Review Board under Clause 45.

40. Signing of Contract

40.1 Promptly, and in no case later than 14 days, after notification, Procuring Entity shall send the

successful Tenderer the Agreement and Contract Data Sheet, incorporating all agreements between the parties obtained as a result of Contract negotiations.

40.2 Within the period specified in the notification or Tender Data Sheet but not earlier than fourteen (14) days since notification of award of contract, the successful Tenderer shall sign and date the contract and return it to the Procuring Entity.

41. Performance Security

41.1 Within thirty (30) days but after 14 days after receipt of the Letter of Acceptance, the successful Tenderer shall deliver to the Procuring Entity a Performance Security in the amount and in the form stipulated in the Tender Data Sheet and the Contract Data Sheet, denominated in the type and proportions of currencies in the Letter of Acceptance and in accordance with the Conditions of Contract.

41.2 If the Performance Security is provided by the successful Tenderer in the form of a Bank Guarantee or Insurance Bond, it shall be issued either:

a) At the Tenderer's option, by a bank or insurance firm located in Kenya, or a foreign bank or insurance firm through a correspondent bank or insurance firm located in Kenya;

b) With the consent of the Procuring entity, directly by a foreign bank acceptable to the Procuring entity.

41.3 Failure of the successful Tenderer to comply with the requirement of sub-Clause 41.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security, in which

event the Procuring Entity may make the award to the next lowest evaluated Tenderer or call for new Tenders.

42. Advance Payment

42.1 The Procuring Entity will provide an Advance Payment as stipulated in the Conditions of Contract, subject to a maximum amount, as stated in the Tender Data Sheet.

42.2 The Advance Payment request shall be accompanied by an Advance Payment Security (Guarantee) in the form provided in Section X. For the purpose of receiving the Advance Payment, the Tenderer shall make an estimate of, and include in its Tender, the expenses that will be incurred in order to commence work. These expenses will relate to the purchase of equipment, machinery, materials, and on the engagement of labour during the first month beginning with the date of the Procuring Entity's "Notice to Commence" as specified in the Contract Data Sheet.

43. Adjudicator

43.1 The Procuring Entity proposes the person named in the Tender Data Sheet to be appointed as Adjudicator under the Contract, at an hourly fee specified in the Tender Data Sheet, plus reimbursable expenses. If the Tenderer disagrees with this proposal, the Tenderer should so state in the Tender. If, in the Letter of Acceptance, the Procuring Entity has not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed by the Appointing Authority designated in the Contract Data Sheet at the request of either party.

G. Review of Procurement Decisions

- 44. Right to Review**
- 44.1** A Tenderer who claims to have suffered or risk suffering, loss or damage or injury as a result of breach of a duty imposed on a Procuring Entity or an Approving Authority by the Public Procurement and Disposal Act, 2005 and the Public Procurement and Disposal Regulations 2006, the procurement proceedings or processes, may seek administrative review as prescribed by the Act. The following matters, however, shall not be subject to the administrative review:
- a) The choice of procurement method;
 - b) a decision by the Procuring Entity to reject all Tenders, proposals or quotations;
 - c) Where a contract is signed in accordance to Section 68 of the Public Procurement and Disposal Act,2005;
 - d) Where an appeal is frivolous.
- 45. Time Limit on Review**
- 45.1** The Tenderer shall submit an application for review in the number of copies and pay fees as prescribed by the Public Procurement and Disposal Regulations 2006 within fourteen (14) days of the time the Tenderer became or should have become aware of the circumstances giving rise to the complaint or dispute.
- 46. Submission of Applications for Review by the Public Procurement Administrative Review Board**
- 46.1** Any application for administrative review shall be submitted in writing to the Secretary, Public Procurement Administrative Review Board on Form RB 1 at the address shown in the Tender Data Sheet. The secretary to the review board shall immediately after filing of the request, serve a copy thereof on the Procuring Entity or Director-General as the case may be.
- 46.2** The application for administrative review shall be in accordance with the requirements of Regulation 73 of the Public Procurement and Disposals

Regulations,2006, including:

- a) Reasons for the complaint ,including any alleged breach of the Act or Regulations;
- b) An explanation of how the provisions of the Act and or Regulation has been breached or omitted, including the dates and name of the responsible public officer, where known;
- c) Statements or other evidence supporting the complaint where available as the applicant considers necessary in support of its request;
- d) Remedies sought;
- e) Any other information relevant to the complaint.

47. Decision by the Public Procurement Administrative Review Board

47.1 The Administrative Review Board shall within thirty days after receipt of an application for administrative review deliver a written decision which shall indicate:

- a) Annuling anything the Procuring Entity has done in the procurement proceedings, including annulling the procurement proceedings in their entirety;
- b) Giving directions to the Procuring Entity with respect to anything to be done or redone in the procurement proceedings;
- c) Substituting the decision of the Review Board for any decision of the Procuring Entity in the procurement proceedings;
- d) Order the payment of costs as between parties to the review.

47.2 The decision made by the Review Board shall, be final and binding on the parties unless judicial review thereof

commences within fourteen (14) days from the date of the Review Board's decision.

- 48. Appeal on the decision of the Review Board**
- 48.1** Any party to the review aggrieved by the decision of the Review Board may appeal to the High Court and the decision of the High Court shall be final.

SECTION III: TENDER DATA SHEET

Tender Data Sheet (TDS)**Instructions to Tenderers Clause Reference**

TDS Reference Number	ITT Clause Number	Amendments of, and Supplements to, Clauses in the Instruction to Tenderers
A. Introduction		
1.	1.1	The Procuring Entity is Coast Water Services Board
2.	1.1	Name of Project is Completion of Bura Water Treatment Plant and associated Works
3.	1.2	The expected completion date of the works is 8 months after commencement
4.	1.3	The Objective of the Project is to Rehabilitate the inlet works, Vertical Sedimentation and Filtration Units and associated works at Bura as well as rehabilitation of water storage tanks and pipelines to enable communities get portable water in Bura Irrigation Scheme area
5.	2.1	<p>Name of financing institution is the Governments of Kenya (GoK)</p> <p>Name of the Procuring entity is Coast Water Services Board</p> <p>Financial Year 2018/19 Financial Year</p> <p>Works under the contract include:</p> <ul style="list-style-type: none"> • Rehabilitation of Treatment Plant (Raw Water Reservoirs, chlorine Contact Tanks, Chemical dosing platform, vertical sedimentation tanks and rapid sand filters. • Rehabilitation of Concrete paved sections within the Treatment Works and Storage tank sites • Cleaning the storm and waste water drainage system • Rehab of transmission main pipelines (DN160-350 UPVC) including replacement of non-working valves and other appurtenances. • Rehabilitation and extension of Main pipelines (DN 63 -150 uPVC) including replacement of non-working valves and other appurtenances. • Rehabilitation of the distribution tanks (1No. concrete tower and 5No. steel elevated tanks • Completion of office block
6.	2.2	The credit number is NOT APPLICABLE
7.	5.1	Alternative Tenders are NOT in this Tender.
8.	5.2	Alternative time for completion NOT APPLICABLE

SECTION III: TENDER DATA SHEET

9.	3.1	Only Tenderers registered as Civil Engineering Contractors (Water Works) in minimum of Class NCA 6 with the National Construction Authority of Kenya
10.	7.3	MANDATORY Pre-Tender meeting will take place at Bura Water Treatment Works on 28th December 2018 .at 10:00AM
11.	7.5	The minutes of the pre-Tender meeting will be transmitted 5 days before the close of the bidding period.
	7.6	Non-attendance at the pre-tender meeting WILL result in disqualification

B. Tendering Documents		
12.	8.2	The number of copies to be completed and returned with the Tender is: One original and three copies
13.	8.1	Address for clarification of Tendering Document is: Chief Executive Officer, Coast Water Services Board, Mikindani Street, Off Nkuruma Road, P.O Box 90417-80100 Telephone (041) 2315230, Fax (041) 20 316471 Email: Info@cwsb.go.ke MOMBASA.
14.	8.2	Period to Respond to request for clarification by the Procuring Entity 5 days before the close of the bidding period. Period Prior to deadline for submission of Tenders for Tenderers to request clarification 7 days

C. Preparation of Tenders		
15.	11.1	Language of Tender and all correspondence shall be English
16.	13.3	Other information or materials required to be completed and submitted by Tenderers : a) Copies of original documents defining the constitution or legal status, place of registration, and principal, place of business; written power of attorney authorizes the signatory of the Tender to commit the Tenderer. b) The minimum required annual volume of construction work for the successful Tenderer in any of the last 3 years shall be: Kshs 30,000,000

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		<p>c) Experience as prime contractor in the construction of at least two (2) projects of a nature and complexity equivalent to the Works the in the last 5 years or the period stated in a) above (to comply with this requirement, works cited should be at least 70 percent complete).</p> <p>(i) Experience under contracts in the role of contractor, subcontractor, or management contractor for at least the last three (3) years prior to the application submission deadline and with activity in at least (9) months in each year.</p> <p>(ii) Participation as a contractor, subcontractor, or management contractor in at least one (1) contract within the last three (3) years with a value of at least Kshs 30,000,000 (Kenya Shillings Thirty million), or equivalent in a freely convertible currency, that have been successfully and substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, method/technology or other characteristics as described as Employer's requirements as below:</p> <ul style="list-style-type: none"> • Construction of Water Treatment Plant Capacity 1200m³/day • Construction of Water Kiosks • Construction of Water Pipelines • Construction of Water Storage tanks • Construction of Electro- mechanical components <p>d) The essential equipment to be made available for the Contract by the successful Tenderer (proposals for timely acquisition or own, lease, hire, etc) shall be:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Equipment Detail</th> <th style="text-align: right;">Minimum number required</th> </tr> </thead> <tbody> <tr> <td>7 Ton lorry</td> <td style="text-align: right;">2</td> </tr> <tr> <td>2kva Genset</td> <td style="text-align: right;">1</td> </tr> <tr> <td>1 Ton Pick up</td> <td style="text-align: right;">2</td> </tr> <tr> <td>1m³ Concrete mixer</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Concrete vibrator (90mm)</td> <td style="text-align: right;">2</td> </tr> <tr> <td>Mechanical pressure testing Equipment</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Back Hoe Excavator</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Portable dewatering pumps</td> <td style="text-align: right;">1</td> </tr> <tr> <td>7 m³ water bowser</td> <td style="text-align: right;">1</td> </tr> </tbody> </table> <p>e) A Project Manager with a minimum of 7 years experience in works of an equivalent nature and volume (Bsc Civil Engineering)</p> <p>f) A site agent with Degree in Civil Engineering with at least 5 years experience in Water and Sanitation Project Management</p> <p>g) An Electro- Mechanical expert with at least 5 years experience in Water and Sanitation operations.</p>	Equipment Detail	Minimum number required	7 Ton lorry	2	2kva Genset	1	1 Ton Pick up	2	1m ³ Concrete mixer	1	Concrete vibrator (90mm)	2	Mechanical pressure testing Equipment	1	Back Hoe Excavator	1	Portable dewatering pumps	1	7 m ³ water bowser	1
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7 m ³ water bowser	1																					

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		<p>h) Evidence of adequate working capital for this contract.</p> <p>(i) Submission of audited balance sheets for the last three (3) years</p> <p>(ii) Annual turnover of Kshs 30,000,000 (Thirty Million) or equivalent in a freely convertible currency, calculated as total certified payments received for contracts in progress or completed, within the last Three (3) years</p> <p>(iii) Demonstrate access to, or availability of, financial resources such as liquid assets, lines of credit, and other financial means, other than any contractual advance payments to meet:</p> <ul style="list-style-type: none"> • Cash flow of Kshs 5,000,000 or equivalent in a freely convertible currency, and • The overall cash requirements for this contract and its concurrent commitments. <p>i) Information regarding litigation, current</p>
17.	13.4	In the case of joint venture each partner shall submit information required under Clause ITT Clause 13.4. NIL
18.	16.4	The price shall be “ fixed ” Information to be submitted with the Tender are: N/A
19.	17.1	The currency in which the prices shall be quoted shall be: Kenyan Shilling
20.	17.2 30.2	The authority for establishing the rates of exchange shall be: Not Applicable. All payments shall be in Kenya shilling.
21.	18.1	The Tender validity period shall be 90 days.
22.	19.1	The amount of Tender Security shall be 2% of the Tender sum in form of bank guarantee or Insurance approved by Insurance Regulatory Authority
23.	20.1	In addition to the original of the Tender, the Tenderer should submit Three copies of the Tender
24.	20.2	Written confirmation of authorization to on behalf of the Tenderer shall be the power of attorney.

D. Submission of Tenders		
25.	21.2 a)	Tenders shall be submitted to: Chief Executive Officer, Coast Water Services Board, Mikindani Street, Off Nkuruma Road, Telephone (041) 2315230,

SECTION III: TENDER DATA SHEET

		<p>Fax (041) 20 316471 Email: Info@cwsb.go.ke MOMBASA</p>
26.	21.2 b)	<p>Project name: Completion of Bura Water Treatment Plant and associated Works Tender number: CWSB/T/SPB/W/23/2018-2019</p>
27.	22.1	<p>The deadline for Tender submission is a) Day - 9th January 2019 b) Time:12 Noon</p>
28.	22.3	<p>The extension of the deadline for submission of Tenders shall be made not later than Seven days before the expiry of the original deadline.</p>
29	24.4	<p>Expiry of Tender validity is 90 DAYS</p>

valuation of Tenders		
29.	25.1	<p>The Tender opening shall take place at:</p> <p style="text-align: center;">The CEO'S BOARD ROOM, Coast Water Services Board, Mikindani Street, Off Nkuruma Road, MOMBASA. Kenya</p> <p style="text-align: center;">Date 9th January 2019 Time 12.05 pm</p>
30.	32.3	<p>Additional Preference None</p>
31.	34.1	<p>Post- qualification will be undertaken</p>
32.	38.1	<p>Maximum Percentage for quantities increase or decrease is twenty one percent (21%)</p>
33.	41.1	<p>The amount of Performance Security shall be a minimum of ten percent (10%) of the contract price.</p>
34.	42.1	<p>The Advance Payment shall be a maximum of fifteen percent (10%) of the Contract Price</p>
35.	43.1	<p>The proposed adjudicator for the project will be proposed by the Employer from names recommended by the Kenya Chapter of the Chartered Institute of Arbitrators, P.O. Box 50163 -0200 Nairobi.</p> <p>The hourly fee for the proposed Adjudicator shall be Ksh 20,000</p>
Procurement Decisions		
37.	46.1	<p>The address for submitting appeals to Administrative Review Board : The Secretary,</p>

SECTION III: TENDER DATA SHEET

		<p>Public Procurement Administrative Review Board , The Public Procurement Oversight Authority, 10th Floor ,National Bank House, P.O. Box 58583-00200, NAIROBI, Kenya. Tel: +254 (0) 20 3244000 Email: info@ppoa.go.ke Website: www.ppoa.go.ke</p>
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A. General

1. Definitions

1.1 Boldface type is used to identify defined terms.

The **Adjudicator** is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in Clauses 27 and 28 hereunder.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Tender.

Compensation Events are those defined in Clause 47 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with Sub-Clause 58.1.

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

The **Contractor** is a person or corporate body whose Tender to carry out the Works has been accepted by the Procuring Entity.

The **Contractor's Tender** is the completed Tendering document submitted by the Contractor to the Procuring Entity.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

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

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

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

The **Defects Liability Period** is the period named in the **Contract Data Sheet** and calculated from the Completion Date.

Drawings include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

The **Procuring Entity** is the party who employs the Contractor to carry out the Works.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The **Initial Contract Price** is the Contract Price listed in the Procuring Entity's Letter of Acceptance.

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

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

Plant is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

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

The **Site** is the area defined as such in the **Contract Data Sheet**.

Site Investigation Reports are those that were included in the Tendering documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.

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

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

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

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

A **Variation** is an instruction given by the Project Manager that varies the Works.

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

“**Force Majeure**” means an event which is beyond the reasonable control of a Party and which makes a Party’s performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also

means plural, male also means female or neuter, and the other way round. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager will provide instructions clarifying queries about these Conditions of Contract.

- 2.2 If sectional completion is specified in the **Contract Data Sheet**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming the Contract shall be interpreted in the order of priority given in the **Contract Data Sheet**:
- (1) Agreement;
 - (2) Letter of Acceptance;
 - (3) Contract Data Sheet;
 - (4) Conditions of Contract;
 - (5) Technical Specifications;
 - (6) Contractor's Tender;
 - (7) Drawings;
 - (8) Bill of Quantities; and
 - (9) Any other document listed in the **Contract Data Sheet** as forming part of the Contract.

3. Language, Law, Fraud and Corruption

- 3.1 The language of the Contract and the law governing the Contract are stated in the **Contract Data Sheet**.
- 3.2 The Government requires that Procuring Entities (including beneficiaries of Government funded projects) as well as Tenderers/Suppliers/Contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. It is the responsibility of the Procuring Entity to ensure that Tenderers, suppliers, and contractors and their subcontractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy:

For the purpose of this provision, the following definitions are provided:

- (i). **"Corruption"** has the meaning assigned to it in the Anti Corruption and Economic Crime Act 2003 and includes the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement or disposal process or in contract execution;
- (ii). **"Fraudulent Practice"** includes a misrepresentation

of fact in order to influence a procurement or disposal process or the execution of a contract to the detriment of the Procuring Entity and includes collusive practices amongst Tenderers prior to or after Tender submission designed to establish Tender prices at artificial non competitive levels and deprive the Procuring Entity of the benefits of free and open competition;

- (iii). **“Collusive Practice”** means an arrangement between two or more suppliers, contractors and subcontractors designed to achieve an improper purpose, including to influence improperly the actions of the Procuring Entity prior to or after Tender submission , designed to establish Tender prices at artificial non competitive levels and to deprive the Procuring Entity of the benefit of free and open competition;
- (iv). **“Coercive Practice”** means impairing or harming, or threatening to impair or harm, directly or indirectly a supplier, contractor or subcontractor or the property of any of them to influence improperly the actions of a Procuring Entity;
- (v). **“Obstructive Practice”** means deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and /or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation.

A Procuring Entity has the right to require that Tenderers, suppliers, and contractors and their subcontractors permit persons duly appointed by KACC/PPOA/KNAO to inspect their accounts and records and other documents relating to the Tender submission and contract performance;

The Procuring Entity will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt, fraudulent practices or others stated under Clause 44.1.a in competing for the contract;

In pursuit of the policy defined in sub-Clause 44.1 the Procuring Entity will cancel the portion of the funds allocated to a contract for goods, works, or services if it at any time determines that corrupt or fraudulent practices were engaged in by representatives of the Procuring Entity or Approving Authority or of a beneficiary of the funds during the procurement or the execution of that contract;

In the event that the Procuring Entity or Approving Authority does not take timely and appropriate action satisfactory to the Government of Kenya to remedy the situation, then the

Director-General may order an investigation of procurement proceedings for the purpose of determining whether there has been a breach of the Public Procurement and Disposal Act, 2005.

3.3 The Director-General may, on the advice of the Advisory Board, debar a person from participating in procurement proceedings on the ground that the person has committed an offence under the Public Procurement and Disposal Act, 2005. A debarment shall be for a period of time of not less than five years. Before a person is so debarred, he/she will be given an opportunity to make representations to the Director-General and may request the Review Board to review the debarment.

3.4 Any communication between the Tenderers and the Procuring Entity related to matters of alleged fraud or corruption must be made in writing.

4. Confidentiality 4.1 The Service Providers, their Subcontractors, and the Personnel of either of them shall not disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Procuring Entity's business or operations without the prior written consent of the Procuring Entity.

5. Project Manager's Decisions 5.1 Except where otherwise specifically stated, the Project Manager will decide contractual matters between the Procuring Entity and the Contractor in the role representing the Procuring Entity.

6. Delegation 6.1 The Project Manager may delegate any of his duties and responsibilities to other people except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

7. Communications 7.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

8. Subcontracting 8.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Procuring Entity in writing. Subcontracting shall not alter the Contractor's obligations.

9. Other Contractors 9.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the Schedule of Other Contractors, as referred to in the **Contract Data Sheet**. The Contractor shall also provide facilities and services for them as described in the Schedule. The Procuring Entity may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification

10. Personnel 10.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the **Contract Data Sheet**, who shall be appropriately qualified and registered with the appropriate bodies to carry out the functions stated in the

Schedule or other personnel approved by the Project Manager. The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Schedule.

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

11. Procuring Entity's and Contractor's Risks

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

12. Procuring Entity's Risks

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

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

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

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

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

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

(a) A Defect which existed on the Completion Date;

(b) An event occurring before the Completion Date, which was not itself an Procuring Entity's risk; or

(c) The activities of the Contractor on the Site after the Completion Date.

13. Contractor's Risks

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

- 14. Insurance**
- 14.1 The Contractor shall provide, in the joint names of the Procuring Entity and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the **Contract Data Sheet** for the following events which are due to the Contractor's risks:
- (a) Loss of or damage to the Works, Plant, and Materials;
 - (b) Loss of or damage to Equipment;
 - (c) Loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
 - (d) Personal injury or death.
- 14.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
- 14.3 If the Contractor does not provide any of the policies and certificates required, the Procuring Entity may effect the insurance which the Contractor should have provided and recover the premiums the Procuring Entity has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 14.4 Alterations to the terms of insurance shall not be made without the approval of the Project Manager.
- 14.5 Both parties shall comply with any conditions of the insurance policies.
- 15. Site Investigation Reports**
- 15.1 The Contractor, in preparing the Tender, shall rely on any Site Investigation Reports referred to in the **Contract Data Sheet**, supplemented by any information available to the Tenderers.
- 16. Queries about the Contract Data Sheet**
- 16.1 The Project Manager will clarify queries on the **Contract Data Sheet**.
- 17. Contractor to Construct the Works**
- 17.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.
- 18. Commencement and Completion**
- 18.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Programme submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.
- 19. Approval by the Project Manager**
- 19.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them if they comply with the Specifications and Drawings.

- 19.2 The Contractor shall be responsible for the design of Temporary Works.
- 19.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 19.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
- 19.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before their use.
- 20. Protection of the Environment**
- 20.1 The Contractors shall take all reasonable steps to protect the environment and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.
- 20.2 The Contractors shall ensure that emissions, surface discharges and effluent from his activities shall not exceed prescribed values in the environmental laws.
- 21. Labour Laws**
- 21.2 The Contractor shall comply with all the relevant labour laws applicable in the Country, including laws relating to workers employment, working hours, health, safety, welfare, and immigration, and shall allow them all their legal rights.
- 21.2 The Contractor shall require his employees to obey all applicable laws, including those concerning safety at work.
- 22. Health and Safety**
- 22.1 The Contractor shall at all times take all reasonable precautions to maintain the health and safety of his personnel.
- 22.2 The Contractor shall ensure that first aid facilities are available at all times at the site and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.
- 22.3 The Contractor shall notify the Procuring Entity 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 the property, as the Procuring Entity may reasonably require.
- 22.4 The Contractor shall conduct an HIV-Aids awareness programme, and shall take other such measures as specified in the **Contract Data Sheet** to reduce the risk of transfer of HIV virus between and among Contractor personnel, the Procuring Entity's Staff and the surrounding community.
- 23. Discoveries**
- 23.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Procuring Entity. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

SECTION IV: GENERAL CONDITIONS OF CONTRACT

- 24. Possession of the Site** 24.1 The Procuring Entity shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the **Contract Data Sheet**, the Procuring Entity will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event.
- 25. Access to the Site** 25.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
- 26. Instructions, Inspections and Audits** 26.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.
- 26.2 The Contractor shall permit the Kenya Government to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Kenya Government, if so required by the Kenya Government
- 27. Disputes** 27.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 14 days of the notification of the Project Manager's decision.
- 28. Procedure for Disputes** 28.1 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.
- 28.2 The Adjudicator shall be paid by the hour at the rate specified in the **Tender Data Sheet** and **Contract Data Sheet**, together with reimbursable expenses of the types specified in the **Contract Data Sheet**, and the cost shall be divided equally between the Procuring Entity and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision will be final and binding.
- 28.3 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place shown in the **Contract Data Sheet**.
- 29. Replacement of Adjudicator** 29.1 Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the **Contract Data Sheet** at the request of either party, within 14 days of receipt of such request.

B. Time Control

- 30. Programme**
- 30.1 Within the time stated in the **Contract Data Sheet**, the Contractor shall submit to the Project Manager for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 30.2 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
- 30.3 The Contractor shall submit to the Project Manager for approval an updated Programme at intervals no longer than the period stated in the **Contract Data Sheet**. If the Contractor does not submit an updated Programme within this period, the Project Manager may withhold the amount stated in the **Contract Data Sheet** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
- 30.4 The Project Manager's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Project Manager again at any time. A revised Programme shall show the effect of Variations and Compensation Events
- 31. Extension of the Intended Completion Date**
- 31.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 31.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.
- 32. Acceleration**
- 32.1 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Project Manager will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date will be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.
- 32.2 If the Contractor's priced proposals for acceleration are accepted by the Procuring Entity, they shall be incorporated in the Contract Price and treated as a Variation.
- 33. Delays**
- 33.1 The Project Manager may instruct the Contractor to delay the start

**Ordered by
the Project
Manager**

or progress of any activity within the Works.

**34. Management
Meetings**

- 34.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 34.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

**35. Early
Warning**

- 35.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 35.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

C. Quality Control

**36. Identifying
Defects**

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

37. Tests

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

**38. Correction of
Defects**

- 38.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the **Contract Data Sheet**. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 38.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by

the Project Manager's notice.

38.3 If the Contractor has not corrected a defect within the time specified in the Procuring Entity's notice, a penalty for lack of performance will be paid by the Contractor. The amount to be paid will be calculated as a percentage of the cost of having the defect correct, assessed as described in Clause 39.

39. Uncorrected Defects

39.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

D. Cost Control

40. Bill of Quantities

40.1 The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.

40.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor shall be paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

41. Changes in the Quantities

41.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change.

41.2 The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Procuring Entity.

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

42. Variations

42.1 All Variations shall be included in the updated Programmes produced by the Contractor.

43. Payments for Variations

43.1 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

43.2 If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work is above the limit stated in Sub-Clause 41.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in

the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.

43.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

43.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

43.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

44. Cash Flow Forecasts

44.1 When the Programme is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

45. Payment Certificates

45.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

45.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor within twenty eight 28 days of receipt of the certificate from the contractor.

45.3 The value of work executed shall be determined by the Project Manager.

45.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.

45.5 The value of work executed shall include the valuation of Variations and Compensation Events.

45.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

45.7 The Project Manager shall not be bound to certify any payment, if the net amount, after all retentions and deductions would be less than minimum amount of Interim Payment Certificate stated in the **Contract Data Sheet**.

46. Payments

46.1 Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within 28 days of the date of each certificate. If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment Interest shall be calculated from

the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made as indicated in the **Contract Data Sheet**.

- 46.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 46.3 Unless otherwise stated, all payments and deductions will be paid or charged in the proportions of currencies comprising the Contract Price.
- 46.4 Items of the Works for which no rate or price has been entered in will not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

**47. Compensation
Events**

- 47.1 The following shall be Compensation Events:
- (a) The Procuring Entity does not give access to a part of the Site by the Site Possession Date stated in the **Contract Data Sheet**.
 - (b) The Procuring Entity modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
 - (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
 - (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
 - (e) The Project Manager unreasonably does not approve a subcontract to be let.
 - (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to Tenderers (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
 - (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons.
 - (h) Other contractors, public authorities, utilities, or the Procuring Entity does not work within the dates and other constraints stated in the Contract, and they cause delay or

extra cost to the Contractor.

- (i) The advance payment is delayed.
- (j) The effects on the Contractor of any of the Procuring Entity's Risks.
- (k) The Project Manager unreasonably delays issuing a Certificate of Completion.
- (l) Other Compensation Events described in the Contract or determined by the Project Manager shall apply.

47.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

47.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.

47.4 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

48. Taxes

48.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 28 days before the submission of Tenders for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of Clause 50.

49. Currencies

49.1 Where payments are made in currencies other than the Kenya Shillings, the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor's Tender.

50. Price Adjustment

50.1 The amounts payable to the Contractor, in various currencies pursuant to Sub-Clause 45.1, shall be adjusted in respect of the rise or fall in the cost of labour, Contractor's Equipment, Plant, materials, and other inputs to the Works, by applying to such amounts the formulae prescribed in this clause based on the prevailing consumer price index obtained from the Central Bureau of Statistics or the monthly inflation rate issued by the

Central Bank of Kenya.

50.2 To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise or fall of costs.

50.3 The adjustment to be applied to amount payable to the Contractor as certified in Payment Certificates shall be determined 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 as follows;

$$P_n = a + b \frac{L_n - L_o}{L_o} + c \frac{M_n - M_o}{M_o} + d \frac{E_n - E_o}{E_o} + etc.$$

where;

P_n is a price adjustment factor to be applied to the amount in each specific currency for the payment of the work carried out in the subject month, where such variations and daywork are not otherwise subject to adjustment;

a is a constant, specified in the **Appendix to Tender**, representing the nonadjustable portion in contractual payments;

b, c, d, etc., are weightings or coefficients representing the estimated proportion of each cost element (labour, materials, equipment usage, etc.) in the Works or sections thereof, net of Provisional Sums, as specified in the **Appendix to Tender**; the sum of a, b, c, d, etc., shall be one;

L_n, M_n, E_n, etc., are the current cost indices or reference prices of the cost elements in the specific currency of origin for month “**n**,” determined pursuant to Sub-Clause 50.5, applicable to each cost element; and

L_o, M_o, E_o, etc., are the base cost indices or reference prices corresponding to the above cost elements at the date specified in Sub-Clause 50.5

The value of net work done, certified by the Project Manager, in any monthly Interim or Final Certificate as payable by the Procuring Entity to the Contractor before deduction of any retention money shall be increased or decreased by an amount of ‘**F**’.

$$F = P_n x P_c$$

where;

The effective value **P_c** of work done which is to be subjected to increase or decrease shall be the difference between:

- (i) the amount which, in the opinion of the Project Manager, is due to the Contractor under Clause 45 (before deduction of retention money and before deducting sums previously paid on account) less:
 - any amount for payment or repayment of any advance payment;
 - any amount for materials on site (if any);
 - any amounts for nominated sub-contractors (if any)
 - any amounts for any other items based on actual cost or current prices; or
 - any sums for increase or decreases in the Contract Price paid under this Sub-Clauseand
- (ii) the amount calculated in accordance with (i) above of this Sub-clause and included in the last preceding statement.

50.4 The sources of indices shall be those listed in the **Appendix to Tender**, as approved by the Engineer. Indices shall be appropriate for their purpose and shall relate to the Contractor's proposed source of supply of inputs on the basis of which his Contract Price and expected foreign currency requirements shall have been computed. As the proposed basis for price adjustment, the Contractor shall have submitted with his Tender the tabulation of Weightings and Source of Indices in the **Appendix to Tender**, which shall be subject to approval by the Engineer.

50.5 The base cost indices or prices shall be those prevailing on the day 28 days prior to the latest date for submission of Tenders. Current indices or prices shall be those prevailing on the day 28 days prior to the last day of the period to which a particular Interim Payment Certificate is related. If at any time the current indices are not available, provisional indices as determined by the Engineer will be used, subject to subsequent correction of the amounts paid to the Contractor when the current indices become available.

50.6 If the Contractor fails to complete the Works within the time for completion prescribed under Clause 58 adjustment of prices thereafter until the date of completion of the Works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices, whichever is more favourable to the Procuring Entity, provided that if an extension of time is granted pursuant to Clause 28, the above provision shall apply only to adjustments made after the expiry of such extension of time.

50.7 The weightings for each of the factors of cost given in the **Appendix to Tender** shall be adjusted if, in the opinion of the Engineer, they have been rendered unreasonable, unbalanced, or inapplicable as a result of varied or additional work already executed or instructed under Clause 43 or for any other reason.

51. Retention

51.1 The Procuring Entity shall retain from each payment due to the

Contractor the proportion stated in the **Contract Data Sheet** until Completion of the whole of the Works.

51.2 On completion of the whole of the Works, half the total amount retained shall be repaid to the Contractor and the other half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected.

51.3 On completion of the whole Works, the Contractor may substitute retention money with an “on demand” Bank guarantee.

52. Liquidated Damages

52.1 The Contractor shall pay liquidated damages to the Procuring Entity at the rate per day stated in the **Contract Data Sheet** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the **Contract Data Sheet**. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor’s liabilities.

52.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in Sub-Clause 46.1.

52.3 If the Contractor has not corrected a defects within the time specified in the Procuring Entity’s notice, the Procuring Entity will assess the cost of having the defect corrected, the Contractor will pay this amount, and a penalty for lack of performance calculated as described in Clause 38.

53. Bonus

53.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day stated in the **Contract Data Sheet** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

54. Advance Payment

54.1 The Procuring Entity shall make advance payment to the Contractor of the amounts stated in the **Contract Data Sheet** by the date stated in the **Contract Data Sheet**, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Procuring Entity in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment.

54.2 The Contractor is to use the advance payment only to pay for

Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

54.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

55. Performance Securities

55.1 The Performance Security shall be provided to the Procuring Entity no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Procuring Entity, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

56. Dayworks

56.1 If applicable, the Dayworks rates in the Contractor's Tender shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

56.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.

56.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

57. Cost of Repairs

57.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

58. Completion Certificate

58.1 The Contractor shall request the Project Manager to issue a certificate of Completion of the Works, and the Project Manager will do so upon deciding that the work is completed.

59. Taking Over

59.1 The Procuring Entity shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

60. Final Account

60.1 The Contractor shall supply the Project Manager with a detailed

account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.

61. Operating and Maintenance Manuals

- 61.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the **Contract Data Sheet**.
- 61.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the **Contract Data Sheet**, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in the **Contract Data Sheet** from payments due to the Contractor.

62. Termination

- 62.1 The Procuring Entity or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 62.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:
- (a) The Contractor stops work for 28 days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Project Manager;
 - (b) The Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 28 days;
 - (c) The Procuring Entity or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (d) A payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within 84 days of the date of the Project Manager's certificate;
 - (e) The Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
 - (f) The Contractor does not maintain a Security, which is required; and
 - (g) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the **Contract Data Sheet**.

- (h) If the Contractor, in the judgment of the Procuring Entity has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this paragraph:

“corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution and includes inter alia, bribery and extortion or coercion which involves threats of injury to person ,property or reputation, and.

“fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring Entity, and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Procuring Entity of the benefits of free and open competition.

- 62.3 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under Sub-Clause 62.2 above, the Project Manager shall decide whether the breach is fundamental or not.
- 62.4 Notwithstanding the above, the Procuring Entity may terminate the Contract for convenience.
- 62.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

63. Payment upon Termination

- 63.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the **Contract Data Sheet**. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.
- 63.2 If the Contract is terminated for the Procuring Entity’s convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor’s personnel employed solely on the Works, and the Contractor’s costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

64. Property

- 64.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Procuring Entity if the Contract is terminated because of the Contractor’s

default.

- 65. Release from Performance** 65.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.
- 66. Suspension of Financing** 66.1 In the event that the source of financing is suspended to the Procuring Entity, from which part of the payments to the Contractor are being made:
- (a) The Procuring Entity is obligated to notify the Contractor of such suspension within 7 days of having received the financing agency's suspension notice.
 - (b) If the Contractor has not received sums due it within the 28 days for payment provided for in Sub-Clause 46.1, the Contractor may immediately issue a 14-day termination notice.

SECTION V: CONTRACT DATA SHEET (CDS)

Contract Data Sheet

Instructions for completing the Contract Data Sheet

CDS Clause	GCC Clause	Description
1	1.1	<p>A. General</p> <p>The Procuring Entity is:</p> <p style="text-align: center;">Chief Executive Officer, Coast Water Services Board, Mikindani Street, Off Nkuruma Road, P.O Box 90417-80100 Telephone (041) 2315230, Fax (041) 20 316471 Email: Info@cwsb.go.ke MOMBASA</p> <p>The Adjudicator is: Names recommended by the Kenya Chapter of the Chartered Institute of Arbitrators, P.O. Box 50163 -0200 Nairobi</p> <p>The Defects Liability Period is 180 days.</p> <p>The Project Manager is Chief Executive Officer, Coast Water Services Board, Mikindani Street, Off Nkuruma Road, P.O Box 90417-80100 Telephone (041) 2315230, Fax (041) 20 316471 Email: Info@cwsb.go.ke MOMBASA</p> <p>The name and identification number of the Contract is: Completion of Bura Water Treatment Plant and associated works Contract No. CWSB/WORKS/BURA/2018</p> <p>The Start Date shall be 14 days after contract signature.</p> <p>The Intended Completion Date for the whole of the Works shall be 8 months after contract start date.</p> <p>The following documents also form part of the Contract:</p> <ol style="list-style-type: none"> 1. Programme of works 2. Site handing/taking over certificate 3. Contractor's approved methodologies

SECTION V: CONTRACT DATA SHEET (CDS)

		The Site is located at Bura Irrigation Scheme in Bura Sub County of Tana River County																
2.	2.2	Indicate whether there is sectional completion: No																
3.	2.3(9)	List other documents that form part of the contract if any: NONE																
4.	3.1	The language of the Contract documents is ENGLISH The law that applies to the Contract is the Kenyan Law .																
5.	9.1	Include the Schedule of Other Contractors, if any. 1. Electrical Subcontractor 2. Switch Gear/ Control panels manufacturer																
6.	10.1	<p>Key Personnel.</p> <table border="1"> <thead> <tr> <th>Position</th> <th>Qualification</th> <th>Total Work Similar Experience (years)</th> <th>In Similar Works Experience (years)</th> </tr> </thead> <tbody> <tr> <td>Project Manager</td> <td>Bsc. Civil Engineer</td> <td>7</td> <td>4</td> </tr> <tr> <td>Site Agent</td> <td>Graduate Civil Engineer</td> <td>5</td> <td>2</td> </tr> <tr> <td>Electro-Mechanical Expert</td> <td>Higher National Diploma in Electrical/Mechanical Engineering</td> <td>5</td> <td>2</td> </tr> </tbody> </table>	Position	Qualification	Total Work Similar Experience (years)	In Similar Works Experience (years)	Project Manager	Bsc. Civil Engineer	7	4	Site Agent	Graduate Civil Engineer	5	2	Electro-Mechanical Expert	Higher National Diploma in Electrical/Mechanical Engineering	5	2
Position	Qualification	Total Work Similar Experience (years)	In Similar Works Experience (years)															
Project Manager	Bsc. Civil Engineer	7	4															
Site Agent	Graduate Civil Engineer	5	2															
Electro-Mechanical Expert	Higher National Diploma in Electrical/Mechanical Engineering	5	2															
7.	14.1	<p>The minimum insurance covers shall be:</p> <p>(a) loss of or damage to the Works, Plant, and Materials Kshs 5,000,000</p> <p>(b) loss of or damage to Equipment Kshs 3,000,000</p> <p>(c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract Kshs 3,000,000</p> <p>(d) personal injury or death:</p> <p>(i) Of contractor's Employees: Kshs 2,000,000 for one incidence, number of incidences unlimited.</p> <p>(ii) Of other people: Kshs 5,000,000 for one incidence, number of incidences unlimited.</p>																
8.	15.1	Site Investigation Reports available to the Tenderers are: The Bidder shall conduct own site inspections and investigations																
9.	22.4	The other measures include: a. Minimising the number of migrant workers employed on the project and household in the site camp																

SECTION V: CONTRACT DATA SHEET (CDS)

		<p>b. Providing access to voluntary counselling and testing (VCT)</p> <p>c. Providing psychological support and health care including prevention and treatment of opportunistic infections for workers infected and affected, as well as their families</p> <p>d. Providing condoms (male and female) to workers</p>
10.	24.1 & 47.1	The Site Possession Date shall be To be inserted after contract negotiation
11.	28.2	<p>Hourly rate of Fees payable to the Adjudicator is: Kshs 20,000</p> <p>Types of reimbursable expenses to be paid to the Adjudicator include: the reimbursable expenses shall include: travelling, accommodation, report writing and communication expenses.</p> <p>(a) Travelling expenses</p> <p>(b) accommodation expenses</p> <p>(c) report production and mailing expenses</p> <p>(d) communication expenses</p>
12.	28.3	Arbitration will take place at Nairobi in accordance with the current rules and regulations published of the Chartered Institute of Arbitrators (Kenya Chapter)
13.	29.1	Appointing Authority for the Adjudicator: Chartered Institute of Arbitrators (Kenya Chapter)
B. Time Control		
14.	30.1	The Contractor shall Submit a Programme for the Works within Fourteen (14) days of delivery of the Letter of Acceptance.
15.	30.3	The period between Programme updates is (Thirty) 30 days.
16.	30.3	The amount to be withheld by the Project Manager in the case the contractor does not submit an updated programme is: Kshs One Hundred Thousand (100,000).
C. Quality Control		
17.	38.1	The Defects Liability Period is (180days).
D. Cost Control		
18.	45.7	Minimum Amount of Interim Payment Certificate will be Kenya Shillings Five Hundred Thousand (KShs 500,000)
19.	46.1	The interest rate shall be 2% above prevailing interest rate for commercial borrowing from the contractors bank
20.	47.1(a)	The Site Possession Date shall be fourteen (14) days after contract signature

SECTION V: CONTRACT DATA SHEET (CDS)

21.	50	The contract “ IS NOT ”/ subject to price adjustment in accordance with Clause 50 of the General Conditions of Contract.
22.	51.1	The amount of retention is 10% of value of works of Interim Payment Certificate’.
		Limit of retention will be 10% of contract price.
23.	52.1	The rate of liquidated damages for the whole of the works is 0.1% per day of the contract price.
	52.1 62.2 (g)	The maximum amount of liquidated damages is 10%
24.	53.1	The bonus for early completion is NIL
25.	54.1	The amount of advance payment shall be 15 per cent of the contract sum payable by not later than 30 days after the date of certification by the project manager.
		Advance Payment shall be recovered in 10 equal monthly instalments.
26.	55.1	The Performance Security shall be 10 percentage of the contract price.
		E. Finishing the Contract
27.	61.1	As built drawings shall be supplied by the contractor within 21 days after taking over of completed project. Operating manual shall be supplied by the contractor by 10 days to taking over of completed project
28.	61.2	The amount to be withheld by the Project Manager in the case the contractor does not submit as built drawings is: Kshs. Five Hundred thousand Only (500,000). The amount to be withheld by the Project Manager in the case the contractor does not submit operating manual is: Kshs. Five Hundred Thousand only (500,000).
29.	63.1	The percentage to apply to the value of the work not completed, representing the Procuring Entity's additional cost for completing the Works, is 30%

SECTION VI: TECHNICAL SPECIFICATIONS

Specifications

GENERAL

All materials, equipment and testing apparatus etc. to be furnished and Works to be executed by the Contractor in this Contract shall conform to the requirements of the latest Kenya Standards, International Standards Organization (ISO) Standards, DIN, British Standards or other approved applicable Standard in Kenya, unless otherwise specifically stated.

Equipment to be purchased shall be from well recognized manufacturers whose products are standardised and controlled by any recognised Standards Organisation.

All dimensions and measurement units shall be in S.I. units.

The Contractor may propose to the Engineer an alternative Standard other than specified, in which case he shall submit six (6) copies of the English translation of the proposed Standard and all other information for the materials, equipment and testing, together with written proof from a recognised Standards Organisation that the proposed Standard is equivalent in all significant respects to the Standard specified.

The equipment to be employed by the Contractor shall have sufficient performance capacity and durability as to secure the completion of the Works within the construction period stipulated under the Contract. All materials and equipment shall be subject to inspections or tests by the Engineer at any time and in any state of completion both off-site and on-site as he deems necessary. **The Contractor shall furnish promptly, without additional charge, all facilities, labour and materials reasonably needed for performing such inspections and tests as may be required by the Engineer.**

The Contractor shall make diligent efforts to procure the specified materials, but when the materials specified are unavailable, for reasons beyond the control of the Contractor, substitutes may be used with prior written approval of the Engineer.

F. OFFICE FOR CONTRACTOR

The Contractor shall have an office on the site to be approved by the Engineer and which shall be open and attended to at all hours during which work is in progress.

Notwithstanding anything contained in Clause 6.1 of the General Conditions of Contract, any notice to be given to or served upon the Contractor shall be deemed and taken to be efficiently given or served by the delivery thereof at such office on the site.

G. PROTECTION OF WORKS

The Contractor shall carefully protect from injury by weather all work and materials which may be affected thereby.

H. DAMAGE TO LAND

Except where specified for the proper execution of the Works, the Contractor shall not interfere with any fence, hedge, tree, land or crops within, upon or forming the boundary of the site or elsewhere. In the event of such interference, the Contractor shall make good to the satisfaction of the owner and the Engineer and shall pay to the owner such damages as the Engineer may determine.

I. RIVERS AND DRAINS

The Contractor shall at all times maintain the free flow of rivers and drains and prevent excavated material from the Works from being deposited in them.

J. SERVICES

Before commencing Works which include excavation or ground levelling by manual or mechanical excavation the Contractor shall at his own expenses ascertain in writing from Telkom Kenya, Kenya Power & Lighting Co. Ltd. and all other Public Bodies, Companies and persons who may be affected, the position and depth of their respective ducts, cables, mains, pipes, or other appurtenances. He shall thereupon search for and locate such services.

The Contractor shall at his own expense arrange to have effectually propped, protected, underpinned, altered, diverted, restored and made as may be necessary, all water courses, pipes, cables or ducts, poles or wires or their appurtenances disturbed or damaged during the progress of the Works, or in consequence thereof.

Except that such services as require to be removed or altered by virtue of the layout of the permanent work and not the manner in which the work is carried out, shall be so removed or altered at the direction and at the expense of the Employer.

The Contractor shall be liable for the cost of repairs to any services damaged as a result of carrying out the Works and execution of these Works.

K. PRIVATELY OWNED OR PUBLIC SERVICES

If any privately owned or public services passing through the site will be affected by the Works, the Contractor shall provide at his own expense a satisfactory alternative service in full working order to the satisfaction of the owner of the services and the Engineer, before the cutting of the existing service. Any damage to private or public services shall be made good by the Contractor at his cost.

In case the remedial work is not executed promptly by the Contractor, the Engineer may make alternative arrangements for the execution of the work and debit the costs to the Contractor.

L. WATER SUPPLY

The Contractor shall provide for all purposes of the work, an adequate supply of water from a suitable source or sources approved by the Engineer. He must pay the water charges, if any, and make arrangements for supply, transport and distribution.

M. ADDITIONAL LAND

The Contractor shall select and arrange at his own expenses for any temporary occupation of land outside the site which he requires for the efficient execution of the Works. The Contractor must comply fully with all By-laws and Regulations currently in force in the area.

N. USE OF HEAVY PLANT

In the event of the Contractor desiring to use heavy machinery or plant, he shall first satisfy the Engineer that they will be of such size and used in such a manner as not to cause any disturbance or damage in particular to water, electricity, Post Office or other mains, cables and connections or to sewers, culverts etc. or interfere with the line or position of any overhead wires and cables of any sort, telegraph poles, power poles etc.

The Contractor will be held liable for any such damage or disturbance and shall pay the full costs of any reinstatement, relaying, repairing or refixing as may be required, as agreed between the Engineer and the owner affected.

O. PROVISION OF INSTRUMENTS AND LABOUR

The Contractor shall provide at his own expenses all instruments, materials, tools and other things which the Project Manager considers necessary for his proper supervision of the Works and shall maintain the same in good order. He shall also provide materials, an experienced Surveyor and labour for attendance on the Engineer and his representatives in carrying out operations connected with the supervision of the Works. All charges arising out of such services shall be deemed to be included in his rates in the Bill of Quantities.

P. ACCESS TO SITES

The Contractor shall construct and maintain all temporary accesses required for the execution of the Works. Access roads shall be constructed and maintained up to the site office and Resident / Assistant Resident Engineer's houses. The cost of all these Works shall be deemed to be covered by rates and prices quoted by the Contractor.

Q. POLLUTION

The Contractor shall ensure that during the course of his operations no pollution of the atmosphere, rivers, reservoir catchment areas or groundwater is allowed to take place.

R. TREE PROTECTION

Trees within the permanent and temporary easement are the property of owners. Specific trees will be identified by the Engineer, prior to construction, and the Contractor shall neither remove nor cut their roots unless otherwise directed by the Engineer. If the roots of such trees appear within the trench areas, the Contractor shall handle the roots with maximum care so that no portion of the roots will be damaged. During the excavation of the trench, the exposed roots may be removed to a position that will not damage the roots and will not interfere with the pipelaying. During the construction, the roots shall be thoroughly protected by appropriate cover and wetted as directed. After the pipes are laid, the moved roots shall be placed back to the original locations and backfilled carefully by selected soft soil which can support vegetation.

S. WATCHING, FENCING AND LIGHTING

The Contractor shall arrange to employ watchmen to guard the Works both during the day and night from the commencement of the Works until the substantial completion of the Works.

Any excavation or other obstruction likely to cause injury or damage to any person or domestic animals must be fenced off as directed by the Engineer.

T. TIPS

The Contractor shall be responsible for provision of all tips, at his own expense, for disposal of all spoil or other rubbish collected during the construction of the Works. Any surplus excavated material not required shall also be carted away to these tips. The site of the tips must be approved by the Engineer.

U. TROPICALISATION

In choosing materials and their finishes, due regard shall be given to the tropical conditions of the site to which they will be subjected. The Contractor shall submit details of his practices which have proven satisfactory and which he recommends for application on the parts of the Works which may be affected by the tropical conditions.

V. PROGRESS MEETINGS

Throughout the project period, progress meetings will be held to discuss the progress of the work, schedule for the ensuing month, methods of construction, procurement, transportation, labours, etc. These meetings can be called at any time intervals at the request of the Contractor or as directed by the Project Manager.

W. INSPECTION BY ENGINEER DURING DEFECTS LIABILITY PERIOD

The Engineer will give the Contractor due notice of his intention to carry out inspection during the Defects Liability Period and the Contractor shall upon receipt of such notice arrange for a responsible representative to be present at the times and dates named by the Engineer. This representative shall render all necessary assistance and take notice of all matters and things to which his attention is directed by the Engineer.

X. SUBMISSION OF SAMPLES

Before incorporating in the finished work any materials or articles which he supplies under the terms of the Contract, the Contractor shall submit to the Engineer's Representative for his approval a sample of each respective material or article, and such samples shall be delivered to and kept at his office for reference. All the respective kinds of materials 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 Engineer's Representative may decide the method by which each sample to be taken from the bulk material shall be obtained.

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

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 delay occasioned by his neglect to order sufficiently well in advance or to effect payment of any costs he may incur as a result thereof.

With regard to any item in the Bill of Quantities which is the subject of a P.C. Sum, the Contractor shall notify the Engineer of his requirements as early as possible leaving ample time for the Engineer to make any necessary arrangements so that no delay occurs in the progress of the work.

Z. TESTS OF MATERIALS AND MANUFACTURED ARTICLES BEFORE USE

Any or all of the materials and manufactured articles supplied by the Contractor for use on any of the Works throughout this Contract shall be subject in advance to tests as may be specified in the relevant Standard Specification as may from time to time be deemed necessary by the Engineer. Samples of all such materials and manufactured articles, together with all the necessary labour, materials, plant and apparatus for sampling and for carrying out of tests on the site on all such materials and manufactured articles shall be supplied by the Contractor at his own expenses. The cost of special tests ordered by the Engineer to be carried out by an independent person at a place other than the site or place of manufacture or fabrication shall be borne by the Contractor.

AA. REJECTED MATERIALS

Should any material or manufactured articles be brought on to the site of the Works which are in the judgement of the Engineer 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 be branded if, in the opinion of the Engineer, this is necessary and shall forthwith be removed from the site of the Works, all at the Contractor's expense and in each case as the Engineer shall direct.

BB. QUALITY OF MATERIALS AND WORKMANSHIP

The materials and workmanship shall be of the best of their respective kinds and shall be to the approval of the Engineer. In the reading of this Specification the words "to the approval of the Engineer" shall be deemed to be included in the description of all materials incorporated in the Works, whether manufactured or natural and in the description of all operations for the due execution of the Works.

CC. CONSTRUCTION PROGRAMME

The Contractor shall submit to the Engineer for approval, a revision of the Construction Programme attached in four (4) copies and after approval to the Employer in two (2) copies in the following manner:

- (1) Within seven (7) days after receiving the Letter of Acceptance, the Contractor shall submit to the Engineer for approval, a detailed Programme based on the key date stated hereinafter or other dates which are given in the Letter of Acceptance in the form of a Critical Path Method (hereinafter referred to as CPM Network) showing the order of procedure in which he proposes to carry out the Works including design, manufacture, delivery to the site, transport, storage, survey, construction, commissioning and maintenance. This Programme shall indicate clearly all activities and its duration along with the earliest and the latest event, times and the first and last dates of the submission of the Drawings and each date of shop inspection by the Engineer for the section or portion of the Works.

The Programme so prepared shall be rearranged in the form of a Time Bar-chart Schedule of which size shall be 841mm x 594mm (A-1 size). This Time Bar-chart Schedule shall be submitted to the Engineer together with the CPM Network.

- (2) The CPM Network shall be in accordance with commonly accepted practices and shall show graphically the chain of activities / sub-activities and their sequential relationship with each other from the start of construction to the completion of the Contract. The Time Bar-chart Schedule shown in weeks shall list all main activities and its applicable sub-activities.
- (3) In preparing the CPM Network and the Time Bar-chart Schedule the Contractor shall make due allowances for possible delays. Under no circumstances shall the CPM Network or the Time Bar-chart Schedule show a completion in excess of the "Time for Completion" stated in the Form of Tender.

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- (4) The Programme once approved by the Engineer shall thereafter be referred to as the Contractual Programme. The Engineer's approval of such Programme shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

CLEARING SITE

DD. CLEARING SITE

The Contractor shall demolish, break up and remove buildings, walls, gates, fences, advertisements and other structures and obstructions, grub up and remove trees, hedges, bushes and shrubs and clear the site of the works at such time and to the extent required by the Engineer but not otherwise, subject to the provisions of Clause 27 of the Conditions of Contract: the materials so obtained shall so far as suitable be reserved and stacked for further use; all rubbish and materials for use shall be destroyed or removed from the site, as directed by the Engineer.

Where top soil has to be excavated this shall be removed and stacked on site. After completion of construction, it shall be spread over the disturbed ground, any surplus being disposed of as directed by the Engineer.

Underground structures and chambers where required to be demolished, shall be demolished to depths shown on drawings or as directed. They shall be properly cleaned out and backfilled and compacted with suitable material to the direction and approval of the Engineer.

EE. VEGETATION

No allowance will be made for the cutting and removal of crops, grass, weeds and similar vegetation. The cost of all such work will be held to be included in the rates entered in the Bill of Quantities.

FF. BUSHES AND SMALL TREES

All bushes and small trees, the main stem of which is less than 500mm girth at 1 metre above ground level shall be uprooted (unless otherwise directed by the Engineer) and burnt or otherwise disposed off as directed by the Engineer.

GG. GRUBBING-UP ROOTS

Stumps and tree roots shall, unless otherwise directed, be grubbed up, blasted, burnt or removed and disposed of in approved dumps to be provided by the Contractor. Where directed by the Engineer, the holes resulting from grubbing up shall be filled with approved materials, which shall be deposited and compacted in layers not exceeding 225mm loose depth, to the same dry density as that of the adjoining soil. For the purpose of measurement, tree roots shall be classified according to the mean diameter of the stump measured across the cut.

EXCAVATION

HH. DEFINITION AND CLASSIFICATION OF EXCAVATED MATERIALS

Excavation in the Bills of Quantities shall be excavation in any material which in the opinion of the Engineer can be excavated by use of pick axes and hand levers. Water logged material shall be included in this class. Murram in any form shall also be included.

II. COMPACTION OF FILL

All materials used in fill shall be compacted to specification by plant approved by the Engineer for that purpose. Maximum compacted thickness of such layers shall not be more than 200mm.

Work on the compaction of plastic materials for fill shall proceed as soon as practicable after excavation and shall be carried out only when the moisture content is not greater than 2 per cent above the plastic limit for that material. Where the moisture content of plastic material as excavated is higher than this value the material shall be run to spoil and an equal volume of material suitable for filling shall be replaced, unless the Contractor prefers, at his own expense, to wait until the material has dried sufficiently for acceptance again as suitable material.

JJ. STONE REVETMENTS (STONE PITCHING)

Where shown on the drawings, the slopes of embankments, rivers, streams, watercourses and other surfaces shall be protected against water or other action by hand-set stone facing set on end. The larger stones shall be roughly dressed on the bed and face, and roughly square to the full depth of the joints. No rounded boulder shall be used, or stones less than 225mm in depth of 0.05 cubic metre in volume. The stones shall be laid to break bond, and shall be well bedded on to a 75mm layer of gravel or fine rubble rammed to a uniform surface and the whole work finished to the satisfaction of the Engineer. Where required, a trench shall be excavated at the bottom of the slope to such a depth as will ensure a safe foundation for the revetment.

KK. TRENCHES OF GREATER WIDTH AND DEPTH THAN NECESSARY

The Contractor shall not be entitled to payment in respect of excavation to any greater extent, whether horizontally or vertically, than is necessary to receive any structure for which the excavation is intended, except where a separate item is provided for additional excavation for working space, timbering, or other temporary work. Excavation to a greater depth or width than directed shall be made good with suitable materials to the satisfaction of the Engineer and at the Contractor's cost.

LL. SUPPORTS FOR TRENCHES

The sides of trenches shall where necessary be adequately supported to the satisfaction of the Engineer by timber or other approved means.

MM. PROVISION OF SPOIL HEAPS

The Contractor shall provide spoil heaps at his own expense for the disposal of surplus material and all rubbish collected when clearing the site and during the construction of the works. The sites for these shall be approved by the Engineer.

NN. WATER IN EXCAVATIONS

All excavations shall be kept free from water, from whatever source, at all times during construction of works until in the opinion of the Engineer, any concrete or other works therein are sufficiently set. The Contractor's rates are deemed to cover compliance with this requirement.

The Contractor shall construct any sumps or temporary drains that the Engineer may deem necessary and shall be responsible for the removal and disposal of all water entering the excavations from whatever source and shall deal with and dispose of such water in a manner approved by the Engineer so as to ensure that excavations are kept dry.

The Contractor shall provide all plant, labour and materials required for such work and all costs incurred shall be deemed to be included in his rates for excavation.

CONCRETE

DEFINITIONS

Structural concrete is any class of concrete which is used in reinforced, prestressed or unreinforced concrete construction, which is subject to stress.

Non-structural concrete is composed of materials complying with the Specification but for which no strength requirements are specified and which is used only for filling voids, blinding foundations and similar purposes where it is not subjected to significant stress.

A formed surface is a face which has been cast against formwork.

An unformed surface is a horizontal or nearly horizontal surface produced by screeding or trowelling to the level and finish required.

A pour refers to the operation of placing concrete into any mould, bay or formwork, etc. and also to the volume which has to be filled. Pours in vertical succession are referred to as lifts.

OO. THE DESIGN OF CONCRETE MIXES

The classes of structural concrete to be used in the works shall be those shown on the Drawings and designated in Table 4.1, in which the class designation includes two figures. The first figure is the nominal strength at 28 days expressed in N/mm^2 and the second figure is the maximum nominal size of aggregate in the mix expressed in millimetres.

Table 4.1 - CONCRETE CLASSES AND STRENGTHS

Class of Concrete	Nominal Strength N/mm ²	Maximum Nominal Size of Aggregate mm	Maximum Water / Cement Ratio		Trial Mixes Target Mean Strength (Clause 401 c) N/mm ²	Early Works Test Cubes (Clause 401 d)	
			A	B		Any one Cube N/mm ²	Average of any Group of 4 Cubes N/mm ²
10/75	10	75	0.60	0.55	13.5	8.5	13.3
15/75	15	75	0.60	0.50	21.5	12.8	20.0
15/40	15	40	0.60	0.50	21.5	12.8	20.0
15/20	15	20	0.57	0.50	21.5	12.8	20.0
20/40	20	40	0.55	0.48	31.5	17.0	27.5
20/20	20	20	0.53	0.48	31.5	17.0	27.5
20/10	20	10	0.50	0.48	31.5	17.0	27.5
25/40	25	40	0.52	0.46	36.5	21.3	32.5
25/20	25	20	0.50	0.46	36.5	21.3	32.5
25/10	25	10	0.48	0.46	36.5	21.3	32.5
30/40	30	40	0.50	0.45	41.5	25.5	37.5
30/20	30	20	0.48	0.45	41.5	25.5	37.5
30/10	30	10	0.47	0.45	41.5	25.5	37.5
40/20	40	20	0.46	0.43	51.5	34.0	47.5
40/10	40	10	0.45	0.43	51.5	34.0	47.5

PP. HAND-MIXED CONCRETE

Concrete for structural purposes shall not be mixed by hand. Where non-structural concrete is required, hand mixing may be carried out subject to the agreement of the Engineer.

The mixing shall be done on a hard impermeable surface. The materials shall be turned over not less than three times dry, water shall then be sprayed on and the materials again turned over not less than three times in a wet condition and worked together until a mixture of uniform consistency is obtained.

For hand mixed concrete the specified quantities of cement shall be increased by 10% and not more than 0.5 cubic metre shall be mixed at one time. During windy weather efficient precautions shall be taken to prevent cement from being blown away during the process of gauging and mixing.

QQ. TRANSPORT OF CONCRETE

The concrete shall be transported to the Works by means which shall prevent adulteration, segregation or loss of ingredients, and which shall ensure that the concrete is of the required workability and consistency at the point and time of placing.

The time elapsed between mixing and placing a batch of concrete shall be as short as practicable and in any case not longer than will permit completion of placing and compaction before the onset of initial set. If the placing of any batch of concrete is delayed beyond this period, the concrete shall not be placed in the Works.

RR. PLACING OF CONCRETE

a) Consent for placing

Concrete shall not be placed in any part of the Works until the Engineer's consent has been given in writing, and the Contractor shall give the Engineer at least 1 full working day's notice of his intention to place concrete.

If concrete placing is not commenced within 24 hours of the Engineer's consent the Contractor shall again request consent as specified above.

b) Preparation of surface to receive concrete

Excavated surfaces on which concrete is to be deposited shall be prepared as set out in Section 3 of this Specification.

Existing concrete surfaces shall be prepared as set out in Clause 414. Before deposition of further concrete they shall be clean, hard and sound and shall be wet but without any free-standing water.

Any flow of water into an excavation shall be diverted through proper side drains to a sump, or be removed by other suitable methods which will prevent washing away the freshly deposited concrete or any of its constituents. Any underdrains constructed for this purpose shall be completely grouted up when they are no longer required by a method agreed by the Engineer.

Unless otherwise instructed by the Engineer surfaces against which concrete is to be placed shall receive a prior coating of mortar mixed in the proportions similar to those of the fines portion in the concrete to be placed. The mortar shall be kept ahead of the concrete. The mortar shall be well worked into all parts of the excavated surface and shall not be less than 5mm thick.

If any fissures have been cleaned out as described in Section 3 of this Specification they shall be filled with mortar or with concrete as instructed by the Engineer.

The amount of mortar placed at any one time shall be limited so that it does not dry out or set before being covered with concrete.

c) Chutes

In general, transportation of concrete by the use of chutes will not be permitted unless approved by the Engineer. The chute shall have a section with round corners and shall have a proper fixed slope so as to allow the concrete to flow satisfactorily and without segregation. The lower end of chute shall be provided with a drop chute not less than 0.6m in height to avoid segregation of falling concrete. The height of drop shall not exceed 1.5m. Chutes shall be protected from direct sunlight, wind and rain.

e) Placing procedures

The concrete shall be deposited as nearly as possible in its final position. It shall be placed so as to avoid segregation of the concrete and displacement of the reinforcement, other embedded items, or formwork. It shall be brought up in layers approximately parallel to the construction joint planes and not exceeding 500mm in compacted thickness unless otherwise permitted or directed by the Engineer, but the layers shall not be thinner than four times the maximum nominal size of aggregate.

Layers shall be placed so that they do not form feather edges nor shall they be placed on a previous layer which has taken its initial set. In order to comply with this requirement, a layer may be started before completion of the preceding layer.

All the concrete in a single bay or pour shall be placed in a continuous operation. It shall be carefully worked round all obstructions, irregularities in the foundations and the like so that all parts are completely full of compacted concrete with no segregation or honeycombing. It shall also be carefully worked round and between water stops, reinforcement, embedded steelwork and similar items which protrude above the surface of the completed pour.

All work shall be completed on each batch of concrete before its initial set commences and thereafter the concrete shall not be disturbed before it has set hard. No concrete that has partially hardened during transit shall be used in the Works and the transport of concrete from the mixer to the point of placing shall be such that this requirement can be complied with.

Concrete shall not be placed during rain which is sufficiently heavy or prolonged as to wash mortar from coarse aggregate on the exposed faces of fresh concrete. Means shall be provided to remove any water accumulating on the surface of the placed concrete. Concrete shall not be deposited into such accumulation of water.

In drying weather, covers shall be provided for all fresh concrete surfaces which are not being worked on. Water shall not be added to concrete for any reason.

When concrete is discharged above its place of final deposition, segregation shall be prevented by the use of chutes, downpipes, trucking, baffles or other appropriate devices, as approved by the Engineer.

f) Interruptions to placing

If concrete placing is interrupted for any reason and the duration of the interruption cannot be forecast or is likely to be prolonged, the Contractor shall immediately take the necessary action to form a construction joint so as to eliminate as far as possible feather edges and sloping top surfaces and shall thoroughly compact the concrete already placed in accordance with Clause 406. All work on the concrete shall be completed while it is still plastic and it

shall not thereafter be disturbed until it is hard enough to resist damage. Plant and materials to comply with this requirement shall be readily available at all times during concrete placing.

Before concreting is resumed after such an interruption the Contractor shall cut out and remove all damaged or uncompacted concrete, feather edges or any other undesirable features and shall leave a clean sound surface against which the fresh concrete may be placed.

If it becomes possible to resume concrete placing without contravening the Specification and the Engineer consents to a resumption, the new concrete shall be thoroughly worked in and compacted against the existing concrete so as to eliminate any cold joints.

g) Dimensions of pours

Unless otherwise agreed by the Engineer, pours shall not be more than two metres high and shall as far as possible have a uniform thickness over the plan area of the pour. Concrete shall be placed to the full planned height of all pours except in the circumstances described in sub-clause 405(d).

The Contractor shall plan the dimensions and sequence of pours in such a way that cracking of the concrete does not take place due to thermal or shrinkage stresses.

h) Placing sequence

The Contractor shall arrange that as far as possible the intervals between placing successive lifts of concrete in one section of the Works are of equal duration. This duration shall normally be not less than three or more than seven days under temperate weather conditions unless otherwise agreed by the Engineer.

Where required by the Engineer to limit the opening of construction joints due to shrinkage, concrete shall not be placed against adjacent concrete which is less than 21 days old.

When the drawings call for contraction gaps in concrete, these shall be of the widths and in the locations shown on the drawings and they shall not be filled until the full time interval shown on the drawings has elapsed.

SS. COMPACTION OF CONCRETE

The concrete shall be fully compacted throughout the full extent of the placed layer. It shall be thoroughly worked against the formwork and around any reinforcement and other embedded items, without displacing them. Particular care shall be taken at arises and other confined spaces. Successive layers of the same pour shall be thoroughly worked together.

Concrete shall be compacted with the assistance of mechanical immersion vibrators, unless the Engineer agrees to another method.

Immersion vibrators shall operate at a frequency of between 7,000 and 10,000 cycles per minute. The Contractor shall ensure that vibrators are operated at pressures and voltages not less than those recommended by the manufacturer in order that the compactive effort is not reduced.

A sufficient number of vibrators shall be operated to enable the entire quantity of concrete being placed to be vibrated for the necessary period and, in addition, standby vibrators shall be available for instant use at each place where concrete is being placed.

Where the concrete contains aggregate with a nominal size of 75mm or more, vibrators with a diameter of 100mm or more shall be used.

Vibration shall be continued at each point until the concrete ceases to contract, a thin layer of mortar has appeared on the surface and air bubbles have ceased to appear. Vibrators shall not be used to move concrete laterally and shall be withdrawn slowly to prevent the formation of voids.

Vibration shall not be applied by way of reinforcement nor shall vibrators be allowed to touch reinforcement or other embedded items. The vibrators shall be inserted vertically into the concrete to penetrate the layer underneath at regular spacing. The spacing shall not exceed the distance from the vibrator over which vibration is visibly effective.

TT. CURING OF CONCRETE

a) General

Concrete shall be protected during the first stage of hardening from loss of moisture and from the development of temperature differentials within the concrete sufficient to cause cracking. The methods used for curing shall not cause damage of any kind to the concrete.

Curing shall be continued for as long as may be necessary to achieve the above objectives but in any case for at least seven days or until the concrete is covered by later construction whichever is the shorter period.

The above objectives are dealt with in sub-clause 407(b) and (c) but nothing shall prevent both objectives being achieved by a single method where circumstances permit.

The curing process shall commence as soon as the concrete is hard enough to resist damage from the process, and in the case of large areas or continuous pours, shall commence on the completed section of the pour before the rest of the pour is finished.

Details of the Contractor's proposals for curing concrete shall be submitted to the Engineer before the placing of concrete commences in the Works.

Formed surfaces may be cured by retaining the formwork in place for the required curing period.

If the use of the foregoing methods is inappropriate, surfaces which will not have further concrete bonded to them and which are not to receive an application of a finish may be cured by the application of a curing compound having an efficiency index of at least 90 percent. Curing compounds shall contain a fugitive dye to enable the extent of the spread to be seen easily.

Curing compound is used on surfaces exposed to the atmosphere shall contain sufficient finely divided flake aluminium in suspension to produce a complete coverage of the surface with a metallic finish when applied at the rate recommended by the manufacturer.

Curing compounds shall become stable and impervious to the evaporation of water from the concrete surface within 60 minutes of application. The material shall not react chemically with the concrete surfaces for at least the first four days of the curing period.

If instructed by the Engineer, the Contractor shall, in addition to the curing provisions set out above provide a suitable form of shading to prevent the direct rays of the sun reaching the concrete surfaces for at least the first four days of the curing period.

b) Loss of moisture

Exposed concrete surfaces shall be closely covered with impermeable sheeting, properly secured to prevent its removal by wind and the development of air spaces beneath it. Joints in the sheeting shall be lapped by at least 300mm.

If for some reason it is not possible to use impermeable sheeting, the Contractor shall keep the exposed surfaces continuously wet by means of a water spray or by covering with a water absorbent material which is kept wet, unless this method conflicts with sub-clause 407(c).

Water used for curing shall be of the same quality as that used for concrete mixing as stated in sub-clause 702(g).

c) Limitation of temperature differential

The Contractor shall limit the development of temperature differentials in concrete after placing by any means appropriate to the circumstances including the following:

- i) limiting concrete temperatures at placing as set out in sub-clause 409(b);
- ii) use of low heat cement, subject to the agreement of the Engineer;
- iii) insulation of exposed concrete surface by insulating blankets. Such blankets shall have an insulation value at least equivalent to 50mm of dry mineral wool;
- iv) leaving formwork in place during the curing period. Steel forms shall be suitably insulated on the outside;
- v) preventing rapid dissipation of heat from surfaces by shielding from wind;
- vi) avoiding the use of water sprays when such use would cause rapid cooling of the surface.

UU. PROTECTION OF FRESH CONCRETE

Freshly placed concrete shall be protected from rainfall and from water running over the surface until it is sufficiently hard to resist damage from these causes.

No traffic shall be allowed on any concrete surface until such time as it is hard enough to resist damage by such traffic.

Concrete placed in the Works shall not be subjected to any loading until it has attained at least its nominal strength as defined in Clause 401.

If the Contractor desires to impose loads on newly-placed concrete, he shall make at least three test cubes and cure them in the same conditions as the concrete they represent. These cubes shall be tested singly at suitable intervals in order to estimate the time at which the nominal strength is reached.

VV. CONCRETING IN HOT WEATHER

a) General

The Contractor shall prevent damage to concrete arising from exposure to extreme temperatures, and shall maintain in good working order all plant and equipment required for this purpose.

In the event that conditions become such that even with the use of the equipment the requirements cannot be met, concrete placing shall immediately cease until such time as the requirements can again be met.

b) Concrete placing in hot weather

During hot weather the Contractor shall take all measures necessary to ensure that the temperature of concrete at the time of placing in the Works does not exceed 30 degrees centigrade and that the concrete does not lose any moisture during transporting and placing.

Such measures may include but are not necessarily limited to the following:-

- i) Shielding aggregates from direct sunshine.
- ii) Use of a mist water spray on aggregates
- iii) Sun shields on mixing plants and transporting equipment.
- iv) Cooling the mixing water. If ice is used for this purpose it should preferably be in flake form. Lump ice shall not be allowed to enter the tank supplying the mixer drum.
- v) Covering skips closely with polythene sheet so that the latter is in contact with the concrete.

Areas in which concrete is to be placed shall be shielded from direct sunshine and rock or concrete surfaces shall be thoroughly wetted to reduce absorption of water from the concrete placed on or against them.

After concrete in any part of an area has been placed, the selected curing process shall be commenced as soon as possible. If any interval occurs between completion of placing and start of curing, the concrete shall be closely covered during the interval with polythene sheet to prevent loss of moisture.

WW. FINISHES ON UNFORMED SURFACES

Horizontal or nearly horizontal surfaces which are not cast against formwork shall be finished to the class shown on the drawings and defined hereunder.

UF 1 Finish

All surfaces on which no higher class of finish is called for on the drawings or instructed by the Engineer shall be given a UF 1 finish.

The concrete shall be levelled and screeded to produce a uniform plain or ridged surface, surplus concrete being struck off by a straight edge immediately after compaction.

UF 2 Finish

This is a floated finish for roof or floor slabs and other surfaces where a hard trowelled surface is not required.

The surface shall first be treated as a Class UF 1 finish and after the concrete has hardened sufficiently, it shall be floated by hand or machine sufficiently only to produce a uniform surface free from screed marks.

UF 3 Finish

This is a hard trowelled surface for use where weather resistance or appearance is important, or which is subject to high velocity water flow.

The surface shall be floated as for a UF 2 finish but to the tolerance stated below. When the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, it shall be steel trowelled under firm pressure to produce a dense, smooth uniform surface free from trowel marks.

Table 4.4 - SURFACE TOLERANCES

Class of Finish	Tolerance in mm. See notes		
	A	B	C
UF 1	N/A	10	+ 20 or - 10
UF 2	Nil	10	+ 20 or - 10
UF 3	Nil	5	+ 12.5 or -7.5

Notes:

1. Col. A is the maximum allowable value of any sudden change of level in the surface.
2. Col. B is the maximum allowable value of any gradual irregularity of the surface, as indicated by the gap between the surface and a three metre long straight edge or correctly shaped template placed on the surface.
3. Col. C is the maximum allowable value of the difference in level or position between a three metre long straight edge or correctly shaped template placed on the surface and the specified level or position of that surface.

Where dimensional tolerances are given on the drawings or in this Special Specification they shall take precedence over those given in Table 4.4.

XX. MORTAR

This clause covers mortar for use ahead of concrete placing, and other uses not covered elsewhere in the Specification.

Mortar shall be composed of fine aggregate complying with sub-clause 702(c) and ordinary Portland cement complying with SRN 103. The mix proportions shall be as stated on the drawings or elsewhere in this Specification or if not stated shall be one part of cement to two parts of fine aggregate by weight.

Small quantities of mortar may be hand mixed but for amounts over 0.5 cubic metre a mechanical mixer shall be used.

The water content of the mortar shall be as low as possible consistent with the use for which it is required but in any case the water/cement ratio shall not be more than 0.5.

Mortar which is specified as 'dry pack' shall be mixed with sufficient water for the mix to become cohesive but not plastic when squeezed in the hand. Dry pack mortar shall be rammed into the cavity it is required to fill, using a hand rammer with sufficient force to ensure full compaction.

YY. REMEDIAL WORK TO DEFECTIVE SURFACES

If on stripping any formwork the concrete surface is found to be defective in any way, the Contractor shall make no attempt to remedy such defects prior to the Engineer's inspection and the receipt of any instructions which the Engineer may give.

Defective surfaces shall not be made good by plastering.

Areas of honey combing (of a mild nature) which the Engineer agrees may be repaired shall be cut back to sound concrete or to 75mm whichever is the greater distance. In the case of reinforced concrete the area shall be cut back to at least 25mm clear distance behind the reinforcement or to 75mm, whichever is the greater distance. The cavity shall have sides at right angles to the face of the concrete. After cleaning out with water and compressed air, a thin layer of cement grout shall be brushed on to the concrete surface in the cavity and it shall then be filled immediately with concrete of the same class as the main body but with aggregate larger than 20mm nominal size removed. A

form shall be used against the cavity, provided with a lip to enable concrete to be placed. The form shall be filled to a point above the top edge of the cavity.

After seven days the lip of concrete shall be broken off and the surface ground smooth.

Surface irregularities which are outside the limits of tolerance set out in Clause 410 shall be ground down in the manner and to the extent instructed by the Engineer.

Severe honeycombing and defects other than those mentioned above shall be dealt with as instructed by the Engineer.

FORMWORK

ZZ. FORMWORK FOR CONCRETE

Definitions

Formwork means the surface against which concrete is placed to form a face, together with all the immediate supports to retain it in position while concrete is placed.

False work means the structural elements supporting both the formwork and the concrete until the concrete becomes self supporting.

A formed face is one which has been cast against formwork.

An exposed face is one which will remain visible when construction has been completed.

AAA. CONSTRUCTION OF FORMWORK AND FALSEWORK

Before construction begins, the Contractor shall submit to the Engineer, drawings showing details of the proposed formwork and false work.

Formwork and false work shall be so constructed that they will support the loads imposed on them by the fresh concrete together with additional stresses imposed by vibrating equipment and by construction traffic, so that after the concrete has hardened the formed faces shall be in the positions shown on the drawings within the tolerances set out in Clause 506.

Ground supports shall be properly founded on footings designed to prevent settlement.

Joints in formwork for exposed faces shall, unless otherwise specified, be evenly spaced and horizontal or vertical and shall be continuous or form a regular pattern.

All joints in formwork including formwork for construction joints shall be tight against the escape of cement, water and fines. Where reinforcement projects through formwork, the form shall fit closely round the bars.

Formwork shall be so designed that it may be easily removed from the work without damage to the faces of the concrete. It shall also incorporate provisions for making minor adjustments in position if required, to ensure the correct location of concrete faces. Due allowance shall be made in the position of all formwork for movement and settlement under the weight of fresh concrete.

Where overhangs in formwork occur, means shall be provided to permit the escape of air and to ensure that the space is filled completely with fully compacted concrete.

Formwork shall be provided for concrete surfaces at slopes of 30 degrees to the horizontal or steeper. Surfaces at slopes less than 20 degrees may be formed by screeding. Surfaces at slopes between 20 degrees and 30 degrees shall generally be formed unless the Contractor can demonstrate to the satisfaction of the Engineer that such slopes can be screeded with the use of special screed boards to hold the concrete in place during vibration.

Horizontal or inclined formwork to the upper surface of concrete shall be adequately secured against uplift due to the pressure of fresh concrete. Formwork to voids within the body of the concrete shall also be tied down or otherwise secured against floating.

The internal and external angles on concrete surfaces shall be formed with fillets and chamfers of the sizes shown on the drawings unless otherwise instructed by the Engineer.

Supports for formwork for non-water retaining structures may be bolted to previously placed concrete

provided the type of bolt used is acceptable to the Engineer. If metal ties through the concrete are used in conjunction with bolts, the metal left in shall not be closer than 50mm to the face of the concrete.

Supports for formwork for water retaining structures may be bolted to previously placed concrete provided the type of bolts and positions of fixing are acceptable to the Engineer. After concreting the Contractor shall remove all support bolts and seal all holes with well rammed cement/sand mortar containing approved waterproofing cement additive. Metal ties which would be left in the concrete shall not be permitted.

Formwork shall not be re-used after it has suffered damage which in the opinion of the Engineer is sufficient to impair the finished surfaces of the concrete.

Where circumstances prevent easy access within the form for cleaning and inspection, temporary openings for this purpose shall be provided through the formwork.

Shear keys shall be provided in all construction joints of the size and shape indicated on the drawings.

Where precast concrete elements are specified for use as permanent formwork, or proposed by the Contractor and agreed by the Engineer, they shall comply with the requirements of the Specification. Such elements shall be set true to line and level within the tolerances prescribed for the appropriate class of finish in Clause 506 and fixed so that they cannot move when concrete is placed against them.

BBB. PREPARATION OF FORMWORK

Before any reinforcement is placed into position within formwork, the latter shall be thoroughly cleaned and then dressed with a release agent. The agent shall be either a suitable oil incorporating a wetting agent, an emulsion of water suspended in oil or a low viscosity oil containing chemical agents. The Contractor shall not use an emulsion of oil suspended in water nor any release agent which causes staining or discoloration of the concrete, air holes on the concrete surface, or retards the set of the concrete.

In order to avoid colour difference on adjacent concrete surfaces, only one type of release agent shall be used in any one section of the works.

In cases where it is necessary to fix reinforcement before placing formwork, all surface preparation of formwork shall be carried out before it is placed into position. The Contractor shall not allow reinforcement or prestressing tendons to be contaminated with formwork release agent.

Before placing concrete all dirt, construction debris and other foreign matter shall be removed completely from within the placing area.

Before concrete placing commences, all wedges and other adjusting devices shall be secured against movement during concrete placing and the Contractor shall maintain a watch on the formwork during placing to ensure that no movement occurs.

CCC. REMOVAL OF FORMWORK

Formwork shall be carefully removed without shock or disturbance to the concrete. No formwork shall be removed until the concrete has gained sufficient strength to withstand safely any stresses to which it may thereby be subjected.

The minimum periods which shall elapse between completion of placing concrete and removal of forms are given in Table 5.1 and apply to ambient temperatures higher than 10 degrees centigrade. At lower temperatures or if cement other than ordinary Portland are involved, the Engineer may instruct that longer periods be used.

Alternatively, formwork may be removed when the concrete has attained the strength set out in Table 5.1, provided that the attained strength is determined by making test cubes and curing them under the same conditions as the concrete to which they refer.

Compliance with these requirements shall not relieve the Contractor of his obligation to delay removal of formwork until the removal can be completed without damage to the concrete.

Table 5.1 - MINIMUM PERIODS FOR FORMWORK REMOVAL

Position of Formwork	Min. period for temp over 10 degrees Centigrade	Strength to be attained
Vertical or near vertical faces of mass concrete	24 hours	0.2 C
Vertical or near vertical faces of reinforced walls, beams and columns	48 hours	0.3 C
Underside of arches, beams and slabs (formwork only)	4 days	0.5 C
Supports to underside of arches, beams and slabs	14 days	C
Arched linings in tunnels and underground works	24 hours	4 N/mm ²

Note: C is the nominal strength for the class of concrete used.

If the Contractor wishes to strip formwork from the underside of arches, beams and slabs before the expiry of the period for supports set out above, it shall be designed so that it can be removed without disturbing the supports. The Contractor shall not remove supports temporarily for the purpose of stripping formwork and subsequently replace them.

As soon as the formwork has been removed, bolt holes in concrete faces other than construction joints which are not required for subsequent operations shall be completely filled with mortar sufficiently dry to prevent any slumping at the face. The mortar shall be mixed in the same proportions as the fine aggregate and cement in the surrounding concrete and with the same materials and shall be finished flush with the face of the concrete.

DDD. SURFACE FINISHES ON FORMED SURFACES

Classes of finish

The surface finish to be achieved on formed concrete surfaces shall be as shown on the drawings and defined hereunder:-

a) Class F1 finish

This finish is for surfaces against which backfill or further concrete will be placed. Formwork may be sawn boards, sheet metal or any other suitable material which will prevent the loss of fine material from the concrete being placed.

b) Class F2 finish

This finish is for surfaces which are permanently exposed to view but where the highest standard of finish is not required. Forms to provide a Class F2 finish shall be faced with wrought thickened tongued and grooved boards with square edges arranged in a uniform pattern and close jointed or with suitable sheet material. The thickness of boards or sheets shall be such that there shall be no visible deflection under the pressure exerted by the concrete placed against them. Joints between boards or panels shall be horizontal and vertical unless otherwise directed. This finish shall be such as to require no general filling of surface pitting, but fins, surface discoloration and other minor defects shall be remedied by methods agreed by the Engineer.

c) Class F3 finish

This finish is for surfaces which will be in contact with water flowing at high velocity, and for surfaces prominently exposed to view where good appearance is of special importance. To achieve this finish, which shall be free of board marks, the formwork shall be faced with plywood complying with B.S. 1088 or equivalent material in large sheets. The sheets shall be arranged in an approved pattern. Wherever possible, joints between sheets shall be arranged to coincide with architectural features or changes in direction of the surface.

All joints between panels shall be vertical and horizontal unless otherwise directed. Suitable joints shall be provided between sheets to maintain accurate alignment in the plane of the sheets. Unfaced wrought boarding or standard steel panels will not be permitted for Class F3 finish. The Contractor shall ensure that the surface is protected from rust marks, spillages and stains of all kinds.

d) Curved surfaces

For curved surfaces where F2 or F3 finishes are called for, the formwork face shall be built up of splines cut to make a tight surface which shall then be dressed to produce the required finish.

Alternatively, single curvature surfaces may be faced with plastic or plywood linings attached to the backing with adhesive or with escutcheon pins driven flush. Linings shall not bulge, wrinkle or otherwise deform when subjected to temperature and moisture changes.

EEE. TOLERANCES

All parts of formed concrete surfaces shall be in the positions shown on the drawings within the tolerances set out in Table 5.2.

In cases where the drawings call for tolerances other than those given in Table 5.2 the tolerances shown on the drawings shall take precedence.

Where precast units have been set to a specified tolerance, further adjustments shall be made as necessary to produce a satisfactory straight or curved line. When the Engineer has approved the alignment, the Contractor shall fix the units so that there is no possibility of further movement.

Table 5.2 - TOLERANCES

Class of finish	Tolerances in mm (See Note)		
	A	B	C
F1	10	10	+ 25 to - 10
F2	5	10	+ or - 15
F3	2	5	+ or - 10

Note: The tolerances A, B and C given in the table are defined as follows:

1. Column A is an abrupt irregularity in the surface due to misaligned formwork or defects in the face of the formwork.
2. Column B is a gradual deviation from a plane surface as indicated by a straight edge 3m long. In the case of curved surfaces the straight edge shall be replaced by a correctly shaped template.
3. Column C is the amount by which the whole or part of a concrete face is displaced from the correct position shown on the drawings.

MASONRY

FFF. GENERAL

All masonry work shall be constructed from building stone as specified in Clause 804.

For walls, facing and other exposed works the stone shall unless otherwise specified, be medium chisel-dressed.

GGG. WORKMANSHIP

The Contractor shall provide and use proper setting out rods for all work.

Stones shall be well soaked before use and the tops of walls shall be kept wet as the work proceeds. The stones shall be properly bonded so that no vertical joint in a course is within 115mm of a joint in the previous course. Alternate courses of walling at angles and intersections shall be carried through the full thickness of the adjoining walls. All perpend, reveals and other angles of the walling shall be built strictly true and square.

The stones shall be bedded, jointed and pointed in mortar 1 to 3 in accordance with Clause 707 with beds and joints 9mm thick flushed up and grouted solid as the work proceeds.

All masonry work shall be cured in accordance with the relevant requirements of Clause 406.

HHH. CAST STONWORK

Cast stone shall be as specified in Clause 711. Facing stones shall be brought up in courses to a height not exceeding 1 metre at a time, the concrete backing being then brought up and well incorporated into and round the backs of the stones and the projecting metal ties to ensure a complete bond. The stones shall be bedded and jointed as shown on the drawings.

All materials, moulds, mixing, casting and surface treatment, setting, jointing and pointing, and all centering, scaffolding and labour required to complete the cast stonework specified or as shown on the drawings, shall be included in the rates for such work.

MATERIALS

III. GENERAL

The approval in writing or otherwise by the Engineer of any materials shall not in any way whatsoever relieve the Contractor from any liability or obligation under the Contract and no claim by the Contractor on account of the failure, insufficiency or unsuitability of any such materials will be entertained.

- a) All items shall be suitable for water works purposes and for use with cold water installation and operation being in a tropical climate.
- b) All items hereinafter specified shall be to such other Standard or Specification which in the opinion of the Engineer provides for a quality of material and workmanship not inferior to the Standard Reference Number (SRN) quoted. The Standard or Specification must be submitted to the Engineer for approval before commencement of work.
- c) All ferrous pipes and fittings shall be coated with a protective paint suitable for use in and transport through a tropical climate.
- d) The Contractor shall supply to the Employer a certificate stating that each item supplied has been subjected to the tests hereinafter laid down and conforms in all respects to the said Specification.
- e) The Contractor shall provide adequate protection to all piping, flanged items and valves so as to guard effectively against damage in transit and storage and ingress of foreign matter inside the valves.
- f) All pipework and fittings shall be subjected to a works hydrostatic test pressure which shall be not less than twice the maximum operating pressure.
- g) The Contractor should exercise diligence to provide the best material.
- h) Where applicable the manufacturer's Specification should accompany all offers. The name of the manufacturer must in every case be stated.
- j) Where necessary the Contractor shall provide rubber gaskets to comply with SRN 208 and all other bolts, nuts, washers, etc. to undertake jointing at fittings etc.
- k) Any articles required under this Contract which are found to be faulty due to a crack, flaw or any other reason or is not in accordance with the Specification stipulated will not be accepted nor will the Employer be liable for any charges in respect of such an article. Where any such rejected article can, in the opinion of the Engineer, be rendered usable, the Contractor may deal with it accordingly and include it in the Contract at a price to be mutually agreed. Straight pipes which have been cut will be accepted at the discretion of the Engineer, provided the length is not less than 4 metres or two thirds of the standard length whichever is the lesser and will be priced pro-rata.
- l) Wherever possible, samples of pipes and fittings shall be submitted for approval of the Engineer prior to the Contractor obtaining the total requirements.

JJJ. GALVANISED PIPES AND SPECIALS

All piping shall conform to SRN 823 and SRN 903 for "Medium" Piping. The pipes shall be screwed and socketted, coupled or flanged.

All specials shall be of such dimensions as will mate with the piping supplied. Screwdown stopvalves shall conform to SRN 826. Barrel nipples shall conform to SRN 823 and all other specials shall conform to SRN 824.

All pipes supplied shall be certified by the manufacturer to have been tested in accordance with the relevant Standard Specification.

KKK. GATE VALVES

Gate valves shall comply with the requirements of SRN 501.

The gate valves shall be suitable for use in pipelines and for the operating pressure to a head of 160 metres or 250 metres of water (NP 16) or NP 25.

The gate valves shall be double flanged. The dimensions and drilling of flanges shall be in accordance with SRN 207. Flanges shall be machined flat. Flanges shall be NP 16 / NP 25 complying with SRN 207.

Spindles of the gate valves shall be provided with cast iron caps conforming to the requirements as specified under "Valve Caps" in SRN 501 or handwheels if so specified.

The spindles of the gate valves shall be of the non-rising type and screwed so as to close the valves when rotated in a clockwise direction. The direction of closing shall be clearly cast on the valve cap or handwheel.

The gate valves shall be subject to "Closed End Tests" in accordance with the procedure set out in SRN 501.

The gate valves shall be suitable for opening and closing against an unbalanced head by manual operation.

LLL. PAINTS

All priming, undercoating and finishing paints shall be in accordance with SRN 877 or SRN 878 as appropriate.

The painting of all building works shall comprise a special paint recommended for external work while all other paints, plastic emulsion coating etc. are to be of an approved manufacturer. All paints, distempers etc. shall be delivered on site intact in the original drums or tins, and shall be mixed and applied in accordance with the manufacturer's printed directions. The only addition which will be allowed to be made will be liquid thinners, driers etc. supplied by the makers for the purpose.

All surfaces must be thoroughly cleaned down prior to painting and decorating work and no external painting shall be carried out in rainy weather. All paint must be thoroughly well worked on and excess of paint in any coat must be avoided.

All colours will be selected by the Engineer from the standard range of colours.

MMM. PRECAST CONCRETE UNITS

Precast concrete covers to be precast units for use in the works, whether instructed under the Contract or proposed by the Contractor.

a) Formwork for Precast Units

Moulds shall be so constructed that they do not suffer distortion or dimensional changes during use and are tight against loss of cement grout or fines from the concrete.

Moulds shall be set up on firm foundations so that no settlement occurs under the weight of the fresh concrete.

Moulds shall be constructed so that units may be removed from them without sustaining any damage.

Release agents used for demoulding shall not stain the concrete or affect its properties in any way.

b) Reinforcement for Precast Units

Reinforcement in precast units shall comply with the requirement of Clauses 736 and 419-420. When preformed cages are used the cages shall be made up on jigs to ensure dimensional accuracy and shall be carefully supported within the mould in such a way that they cannot move when concrete is placed. Reinforcement complying with SRN 126 may be tack welded where bars cross to provide rigidity in the cage but reinforcement complying with SRN 127 shall not be welded.

Cover to main reinforcement shall be as shown on the drawings, or if not shown shall be not less than 25mm or the diameter of the bar, whichever is the greater. Cover on distribution steel shall not be less than 15mm or the diameter of the bar whichever is the greater.

Bars shall be spaced so that the minimum clear distance between them is the maximum nominal aggregate size plus five millimetres but in any case not less than the diameter of the bars.

Bars may be placed in pairs provided that there are no laps in the paired lengths.

c) Casting of Units

Concrete for precast units shall comply with Clauses 724 and 401-410 using the class of concrete specified on the drawings.

If lightweight aggregates are specified, they shall comply with SRN 147.

The area in which units are cast shall be adequately protected from the weather so that the process is not affected by rain, sun or drying winds.

d) Curing Precast Units

Requirements for curing shall be generally as set out in Clause 407.

The Contractor shall ensure that units do not suffer any loss of moisture or sudden changes of temperature for at least four days after casting. If a water spray is used for curing, the water shall be at a temperature within 5 degrees centigrade of the temperature of the unit being cured.

If Contractor proposes curing at elevated temperatures, the method shall be subject to the agreement of the Engineer and shall include means whereby units are heated and subsequently cooled evenly without sudden changes of temperature.

e) Dimensional Tolerances of Precast Units

Units shall be accurately formed to the dimensions shown on the drawings unless closer tolerances are called for by the Engineer.

f) Surface Finish of Precast Units

The formed faces of precast units shall be finished to Class F3 as set out in Clause 505(C) unless another class of finish is specified on the drawings.

Free faces shall be finished to Class UF2 unless another class of finish is specified on the drawings.

In cases where a special finish is required a trial panel shall be constructed by the Contractor which after approval by the Engineer shall be kept available for inspection at the place of casting and production units shall thereafter match the approved pattern.

Those parts of the unit which are to be joined to other units or to in-situ concrete shall be brushed with a stiff brush before the concrete has fully hardened. Alternatively, if the concrete has been allowed to harden, the surfaces shall be roughened by sand blasting or by the use of a needle gun.

g) Handling and Storage of Precast Units

Precast units shall be handled in a manner which will not cause damage of any kind and shall be stored on a hard impermeable base.

Prestressed units and large precast normally reinforced units shall be handled and stored so that no stresses shall be induced in excess of those which they will incur in their final positions in the Works unless they have been designed to resist such stresses.

Units shall be provided with adequate lifting holes or loops, placed in the locations shown on the drawings or agreed by the Engineer and they shall be lifted only by such holes or loops. Where it is not possible to provide holes or loops, suitable sling positions shall be indicated in paint on the units.

Units shall be marked indelibly with the reference number and date of casting and shall be stacked on suitable packers which will not damage the concrete or stain the surfaces. Not more than two packers shall be placed under each unit and these shall be located either at the positions of the permanent support points or in positions such that the induced stresses in the unit will be a minimum.

h) Testing Precast Units

Precast units shall be capable of safely sustaining the loads which they have been designed to carry. The Contractor shall subject units selected by the Engineer to load tests simulating the working conditions. Details of such tests shall be agreed between the Engineer and the Contractor.

In the case of units subject to bending loads the test piece shall be supported at full span and a loading equivalent to 1.25 times the sum of the live and dead loads which were assumed in the design shall be maintained for one hour without the appearance of any signs of distress. The recovery one hour after the removal of load shall be not less than 75 per cent of the full load deflection.

If the unit fails to meet the above requirements, further tests shall be carried out on two more units. If either of these fail the whole batch of units will be rejected.

If the Engineer so requires, a test to destruction shall also be carried out which on units subject to bending shall be as follows:-

The units shall be supported at full span and a load applied in increments instructed by the Engineer up to 95 per cent of the designed ultimate load. This load shall be held for 15

minutes without failure of the unit. The deflection at the end of this period shall be not more than 1/40th of the span. The load shall then be further increased until failure occurs.

If the unit fails to sustain the required load for the prescribed period or if the deflection exceeds the specified amount, the Engineer may order two further tests, and if either of these fail, the batch of units which they represent may be rejected.

NNN. SUBMISSION OF SAMPLES

As soon as possible after the contract has been awarded, the Contractor shall submit to the Engineer a list of the suppliers from whom he proposes to purchase the materials necessary for the execution of the Works. Each supplier must be willing to admit the Engineer or his representatives, to his premises during ordinary working hours for the purpose of obtaining samples of the materials in question. Alternatively, if desired by the Engineer, the Contractor shall deliver the samples of the materials to the Engineer's office without charge.

The information regarding the names of the suppliers may be submitted at different times, as may be convenient, but no source of supply shall be changed without the Engineer's prior approval once a supplier, source or material has been approved.

Samples of materials approved will be retained at the Engineer's office until the completion of the contract. Samples may be tested to destruction.

All materials delivered to site must be at least equal in all respects to approved samples, otherwise they shall be rejected. No special payment will be made for compliance with clauses specifying tests etc. to ensure quality control etc. unless specifically itemised in Bills of Quantities.

OOO. MATERIALS FOR CONCRETE

a) General

The Contractor shall submit to the Engineer full details of all materials which he proposes to use for making concrete. No concrete shall be placed in the Works until the Engineer has approved the materials of which it is composed. Approved materials shall not thereafter be altered or substituted by other materials without the consent of the Engineer.

b) Cement

Cement shall comply with the following Kenya Standards:-

- SRN 103 for Ordinary Portland cement.
- SRN 103 for Rapid Hardening Portland cement plus all special conditions to its use stipulated by the manufacturer.
- SRN 104 for Sulphate Resisting or High Alumina cement.

Cement shall be free flowing and free of lumps. It shall be supplied in the manufacturer's sealed unbroken bags or in bulk. Bagged cement shall be transported in vehicles with effective means of ensuring that it is protected from the weather.

Bulk cement shall be transported in vehicles or in containers specially built and equipped for the purpose.

Cement in bags shall be stored in a suitable weatherproof structure of which the interior shall be dry and well ventilated at all times. The floor shall be raised above the surrounding ground level and shall be so constructed that no moisture rises through it.

Each delivery of cement in bags shall be stacked together in one place. The bags shall be closely stacked so as to reduce air circulation but shall not be stacked against an outside wall. If pallets are used, they shall be constructed so that bags are not damaged during handling and

stacking. No stack of cement bags shall exceed 3 metres in height. Different types of cement in bags shall be clearly distinguished by visible markings and shall be stored in separate stacks.

Cement from broken bags shall not be used in the Works.

Cement in bags shall be used in the order in which it is delivered.

Bulk cement shall be stored in weatherproof silos which shall bear a clear indication of the type of cement contained in them. Different types of cement shall not be mixed in the same silo.

The Contractor shall provide sufficient storage capacity on site to ensure that his anticipated programme or work is not interrupted due to lack of cement.

Cement which has become hardened or lumpy or fails to comply with the Specification in any way shall be removed from the site.

All cement for any one structure shall be from the same source.

Cement which is stored on site for longer than one month shall be rejected.

c) Fine Aggregate

Fine aggregate shall be clean, hard and durable and shall be natural sand, crushed gravel sand or crushed rock sand complying with SRN 108. All the material shall pass through a 5mm standard sieve and the grading shall be in accordance with Zones 1, 2 or 3 of SRN 109. In order to achieve an acceptable grading, it may be necessary to blend materials from more than one source. Fine aggregate for mortar only shall comply with SRN 135.

The fine aggregate shall not contain iron pyrites or iron oxides. It shall not contain mica, shale, coal or other laminar, soft or porous materials or organic matter unless the Contractor can show by comparative tests, on finished concrete as set out in SRN 117, that the presence of such materials does not adversely affect the properties of the concrete.

d) Coarse aggregate

Coarse aggregate shall be clean, hard and durable crushed rock, crushed gravel or natural gravel complying with the requirements of SRN 110. The material shall not contain any iron pyrites, iron oxides, flaky or laminated material, hollow shells, coal or other soft or porous material, or organic matter unless the Contractor can show by comparative tests on finished concrete as set out in SRN 117 that the presence of such materials does not adversely affect the properties of the concrete. The pieces shall be angular, rounded or irregular as defined in SRN 107.

Coarse aggregate shall be supplied in the nominal sizes called for in the Contract and shall be graded in accordance with SRN 111 for each nominal size.

f) Delivery and storage of aggregates

Aggregates shall be delivered to site in clean and suitable vehicles. Different types or sizes of aggregate shall not be delivered in one vehicle.

Each type or size of aggregate shall be stored in a separate bin or compartment having a base such that contamination of the aggregate is prevented. Dividing walls between bins shall be substantial and continuous so that no mixing of types or sizes occurs.

The storage of aggregates shall be arranged so that as far as possible rapid drying out in hot weather is prevented in order to avoid sudden fluctuations in water content. Storage of fine aggregates shall be arranged so that they can drain sufficiently before use in order to prevent fluctuations in water content of the concrete.

g) Water for concrete and mortar

Sea water or brackish water containing more than 1,000 ppm chloride ion or 2,000 ppm sulphate ion shall not be used for mixing or curing concrete.

Water shall be clean and free from harmful matter and shall comply with the requirements of SRN 114.

The Contractor shall carry out tests in accordance with SRN 114 to establish compliance with the Specification.

PPP. BUILDING STONE

All building stone shall be capable of withstanding when wet a crushing stress of 1.4 kg./sq.mm. The source of stone shall be approved by the Engineer and stone supplied therefrom shall be free from Magadi, overburden, mudstone, cracks, sandholes, veins, laminations or other imperfections.

The stone shall be chisel dressed into true rectangular blocks, with each surface even and at right angles to all adjoining surfaces, to the size specified. For exposed stonework the maximum permissible variation of any of the specified dimensions shall be 6mm provided that cut stone, supplied as 'rock face' stone may be hammer dressed on one face only, or on one face and one end, if in other respects it conforms with this specification. Stones shorter than 375mm will not be accepted.

Unless the Engineer allows otherwise the Contractor shall at his own expense provide and dress four 100mm cubes of stone for testing.

The stone shall be sound when tested in accordance with SRN 870 except that:-

- i) The treatment shall be repeated for 10 cycles only; and
- ii) The second criterion of failure shall be amended to allow for a loss of weight of not more than 20% of its original weight.

QQQ. MURRAM

Murram shall be from an approved source quarried so as to exclude vegetable matter, loam, top soil or clay. The California Bearing Ratio of the murram, as determined for a sample compacted to maximum density (as defined under SRN 601) and allowed to soak in water for four days, shall not be less than 30%. This C.B.R. is a guide to quality only and the compaction in the work will be judged by density.

RRR. CEMENT MORTAR

Cement mortar shall consist of proportions by volume as specified of Portland Cement and natural sand or crushed natural stone or a combination of both as specified in SRN 135 and SRN 136 : Building Sands from Natural Sources. The constituent materials shall be accurately gauged and mixed in an approved manner.

Cement mortar shall be made in small quantities only as and when required, and any mortar which has begun to set or which has been mixed for a period of more than one hour shall be rejected.

SSS. CONCRETE BLOCKS

Solid and hollow concrete blocks for walling shall comply with SRN 904 in every respect.

All solid and hollow concrete blocks used in the walling must be capable of withstanding a crushing pressure of not less than 0.35 kg per square millimeter after 28 days. The blocks shall be cast in Metric sizes.

TESTING OF MATERIALS AND WORKMANSHIP

TTT. APPARATUS REQUIRED FOR TESTING ON SITE

Apparatus for testing shall be, if directed by the Engineer, made available on site of the works, for as long a period as required by the Engineer, and regarded as constructional plant. The Contractor to allow for this provision in his rates. The following may be required:-

- a) A set of sieves complying with British Standard 410: Test Sieves, or the following nominal sizes:-

Fine mesh wire cloth 200, 100, 72, 52, 36, 25, 18, 14, 10 and 7.

Medium mesh wire cloth 3mm.

Perforated plate 5mm, 6mm, 9mm, 12mm, 20mm, 38mm, 50mm, 65mm and 75mm.
- b) A suitable balance, a pycnometer and a stove or other approved apparatus for determining the moisture content of the aggregate. The methods of test shall be as described in Part Four of British Standard 812: Sampling and Testing of Mineral Aggregates, Sands and Fillers.
- c) A 200 ml. graduated cylinder in accordance with British Standard 604: Graduate Measuring Cylinders, for the use in the field settling test for clay and fine silt in aggregates.
- d) Two 0.34 kg. graduated clear glass medicine bottles for use in the test of organic impurities in sand.
- e) Apparatus required for testing soils in accordance with British Standard 1377: Methods of Test for Soil Classification and Compaction, and British Standard 1924 : Methods of Test for Stabilised Soils.
- f) Apparatus for testing concrete in accordance with British Standard 1881: Methods of Testing Concrete, Parts 1 to 7.
- g) A straight edge 3 meters long and measuring wedge or other approved apparatus for testing the accuracy of surfaces.
- h) Additional testing equipment as stated in the Bill of Quantities or as required by the Engineer.

UUU. LOAD TESTING OF PIPES

The Engineer may instruct the Contractor to make a Loading Test (Three-Edge Bearing or Sand Bearing) on pipes to be used to construct the sewer. Payment for Load Tests will be entirely in accordance with the General Conditions of Contract.

MISCELLANEOUS

VVV. GALVANISED WORK

Iron and steel, where galvanised, shall comply with B.S. 729, entirely coated with zinc after fabrication by complete immersion in a zinc bath in one operation and all excess carefully removed. The finished surface shall be clean and uniform.

WWW. PAINT AND PAINTING

All paint, including primers, undercoats and finishings, polish, emulsion etc., to be used shall be obtained ready for use from the manufacturer approved by the Engineer.

The Contractor shall order direct from the manufacturer and only fresh paint will be allowed to be used.

All paints shall be of the qualities, i.e. exterior, interior etc., types and colours scheduled. All coats of paint system shall be obtained from the same manufacturer, shall be ordered for use together and as far as practicable, shall be ordered on one order in sufficient quantity for the whole of the work, particularly in the case of the finishing colour. Where more than one of the three systems (gloss, semi-gloss or flat) is in use, these paints shall be used in strict accordance with their accompanying printed instructions.

The Contractor shall use only paints delivered to the site in original sealed containers, not exceeding five liter capacity, stamped and bearing the manufacturer's name of mark, the specification number, method of application (e.g. brushing) colour, quantity, batch number and date of manufacture, and expiry.

Contractor's stocks shall not be accepted unless expressly approved by the Engineer's Representative.

The paint, which will be subject to sampling and testing, shall be used exactly as received, after adequate stirring, without the addition of thinners, driers, or adulterating materials of any kind.

All tints and shades (including colours of undercoats) shall be selected and approved by the Engineer's Representative and the Contractor shall allow in his prices for executing the painting work in colour schemes, to be prepared from a wide range of colours.

All paints described as oil paint shall be alkyd paint.

No painting on exterior work shall be carried out in wet weather or upon surfaces which are not thoroughly dry. Painting shall not proceed in dusty conditions. Each coat of paint shall be thoroughly dry and shall be rubbed down with glass paper before a subsequent coat is applied. Adequate care must be taken to protect surfaces of paintwork, still wet.

Lead based priming paints for steelwork shall conform to B.S. 2521 and 2523.

SECTION VII: DRAWINGS

(See separate booklet)

Insert here a list of Drawings. The actual Drawings, including site plans, should be attached to this section or annexed in a separate folder.

SECTION VIII: BILL OF QUANTITIES

NOTES FOR PREPARING BILLS OF QUANTITIES

1.0 The objectives of the Bills of Quantities are;

- (a) To provide sufficient information on the quantities of Works to be performed to enable tenders to be prepared efficiently and accurately; and
- (b) when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works are itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost.

2.0 The Bills of Quantities are divided generally into the following sections:

(a) **Preliminaries.**

The preliminaries indicate the inclusiveness of the unit prices, and state the methods of measurement which have been adopted in the preparation of the Bill of Quantities and which are to be used for the measurement of any part of the Works.

The number of preliminary items to be priced by the tenderer is limited to tangible items such as site office and other temporary works, otherwise items such as security for the Works which are primarily part of the Contractor's obligations should be included in the Contractor's rates.

(b) **Work Items**

(i) The items in the Bills of Quantities should be grouped into sections to distinguish between those parts of the Works which by nature, location, access, timing, or any other special characteristics may give rise to different methods of construction, or phasing of the Works, or considerations of cost. General items common to all parts of the Works may be grouped as a separate section in the Bill of Quantities.

(ii) Quantities are computed net from the Drawings, and no allowance has been made for bulking, shrinkage or waste. Quantities have been rounded up or down where appropriate.

(iii) The following units of measurement and abbreviations are recommended for use.

Unit	Abbreviation
Cubic Meter	<i>m³</i>
Hectare	<i>Ha</i>
Hour	<i>Hr</i>
Kilogram	<i>Kg</i>
Lump Sum	<i>L.S.</i>
Meter	<i>M</i>
Metric Ton (1,000 Kg)	<i>Ton</i>
Millimeter	<i>Mm</i>
Month	<i>Mth</i>
Number	<i>No</i>
Square Meter	<i>m²</i>
Square Millimeter	<i>mm²</i>
Week	<i>Wk</i>

(c) Day work Schedule

A Day work Schedule has been included to take care of situations where the probability of unforeseen work, outside the items **included** in the Bill of Quantities, is relatively high.

(c) As- Built Drawings and operating and maintenance manuals

The Contractor is required to prepare As- built drawings and Operating and Maintenance manuals in the general conditions of contract clause 61.1 in section V of this bidding document. Clauses 135 and 137 of the technical specifications appearing in chapter 1 (General) require that the contractor prepares Operating and Maintenance manuals and As-built drawings. As-built drawings shall be prepared as work proceeds. The number of copies to be submitted with the original is also specified.

The rates provided by the Tenderers shall be deemed to include the preparation of Operating and Maintenance manuals and As-built drawings and no separate bill item has been included.

COAST WATER SERVICES BOARD					
COMPLETION OF BURA WATER TREATMENT PLANT AND ASSOCIATED WORKS					
CONTRACT NO.CWSB/WORKS/BURA/2018					
BILLS OF QUANTITIES					
Bill No	Item Description	Unit	Qty	Rate-Kshs	Amount-Kshs
	Bura Domestic Water Supply Project has various components already constructed such as intake works, Vertical flow Sedimentation and Filtration Units, Clear Water Tanks, Elevated concrete and Steel storage tanks, Water Kiosks, and Distribution network. Most of these components are not fully operational and as such some works are required to make the entire Project operational. It is therefore intended that all the remaining works are implemented for the project to be fully commissioned. The bidder is advised to visit all the sites and familiarize himself with all the site conditions to enable preparation of a realistic bid				
A	PRELIMINARY & GENERAL ITEMS				
A1	Allow for provision of Performance Guarantee for the works	Item	1		
A2	Provision of insurances for the works and third parties	Item	1		
A3	Contractors Camp establishment, maintenance and demobilization, not to exceed 1% of the total bid price	LS	1		
A4	Allow for testing of all structures prior to commissioning	Item	1		
A5	Allow a sum of 2,200,000 for Supervision by the Client's staff	Item	1	2,200,000	2,200,000

A6	Provide and maintain water and electricity for the Contract duration	Month	12		
A7	Provide 2No. Sign board and maintain for the entire Contract period	No	2		
A8	Allow percentage adjustment on Items A4 and A6	%	20%		
A9	Allow percentage adjustment on Items A4 and A6	%	20		
A10	Purchase and deliver equipment and furniture to the existing new Office block for use by SCWO/TAWASCO	Sum	1		
A11	Provide water connection and telephone services for the existing new Office block	Sum	1		
A12	Allow a sum of Kshs. 200,000 for sample tests by third parties and factory inspection by the Client's staff	Sum	1		
A13	Provide and deliver to the Employer: computer equipment, GPS and digital camera c/w software etc.	Sum	1		
A14	Allow a sum of kshs. 300,000 for O&M and water quality training	Sum	1	300,000	300,000
A15	Supply and Delivery of Motorbikes 175cc Trial type/ Rough roads for Inspectors to revert to TAWASCO/SCWO	No	1		
A16	Compensation for entry upon land and road crossings	Sum	1		
A17	Allow Percentage adjustment to Items A4 to A17	%			
Total for Preliminary & General Items Carried to Grand Summary					

B	RAW WATER STORAGE TANKS AND TRANSMISSION				
B1	Raw Water Storage Tanks				
B1.1	Carefully remove the old fittings and replace with the available new ones				
B1.1.2	150mm diameter sluice valve	nr	2		
B1.1.3	250mm diameter sluice valve	nr	2		
B1.1.4	300mm diameter sluice valve	nr	1		
B1.1.5	150mm diameter flange adaptors	nr	2		
B1.1.6	250mm diameter flange adaptors	nr	2		
B1.1.7	300mm diameter flange adaptors	nr	3		
B1.1.8	Clean the raw water reservoirs	Sum	2		
B1.1.9	Fabricate and install the outlet telescopic bell mouth screw type spindle mechanism	nr	2		
B2	Raw Water Inlet				
B2.1	Allow a sum for painting the steel stair case (5.8mx1.2m), the guard rails and the ladder (all existing within the inlet chamber) using 3 coats of Bermuda blue and epoxy paints	Sum	1		
B2.2	Allow for rehabilitation works on the Raw Water Inlet chamber (3.6m x 2m x 4m).The works to include sealing of cracks, repair of plaster, scrubbing and cleaning of internal walls and applying 3 coats of epoxy paint onto the internal walls of the chamber.	Sum	1		
B2.3	Allow a sum for replacement of the inlet metal rectangular weir 1.1m long of 6mm thickness	LS	1		

B2.4	Replace manhole cover frame and Apply 3 coats of aluminium paint onto the GMS Man hole Cover sheet measuring 630mmx630mm for the Raw Water Inlet Chamber.	Nr	1		
B2.5	Allow for rehabilitation of 2nr. Side Man hole chambers measuring 2000mx2000mm and 140mmx140mm. The rehabilitation to include the stairs	nr	2		
Total for Raw Water Tanks and transmission Works Carried to Grand Summary					

C	REHABILITATION OF TREATMENT WORKS				
C1	Chemical Dozers and Solution Tanks				
C1.1	Supply and installations of the gravity chemical dozers and solution tanks. The rate should include pipework, valves and other necessary accessories for approval by the Engineer.				
C1.1.1	1000L PVC solution tanks	nr	3		
C1.1.2	Gravity Dozers (Soda Ash, Aluminium Sulphate and Chlorine) with a flow range of 0 - 500l/hr.	nr	3		
C1.2	Supply pipes and fitting, lay and join in trench depth n.e. 600mm or fixing on concrete wall as directed by Engineer				
C1.2.1	50 x 25mm diameter GI Tee	nr	1		
C1.2.2	50mm diameter GI single threaded Nipple	nr	2		
C1.2.3	50mm diameter couplings	nr	2		
C1.2.3	25mm diameter GI barrel Nipple	nr	2		
C1.2.4	25mm diameter brass gate valve as Pegler or equivalent approved	nr	1		
C1.2.5	32mm diameter PPR male adaptor socket	nr	12		
C1.2.6	32mm diameter PPR union	nr	6		
C1.2.7	25mm diameter PPR union	nr	5		
C1.2.8	32mm diameter PPR PN20 pipes	m	50		
C1.2.9	25mm diameter PPR PN20 pipes	m	80		
C1.2.10	32mm plastic ball valve	nr	3		
C1.2.11	25mm plastic ball valve	nr	3		
C1.2.12	32mm diameter PPR sockets	nr	20		
C1.2.13	25mm diameter PPR sockets	nr	30		
C1.2.14	32mm diameter PPR elbows	nr	10		
C1.2.15	25mm diameter PPR elbows	nr	20		
C1.2.16	32mm diameter PPR tees	nr	3		
C1.2.17	25mm diameter PPR tees	nr	3		

C1.2.18	32mm diameter PPR tees	nr	3		
C1.2.19	32mm diameter GI saddle clips incl. equivalent mounting screws.	nr	10		
C1.2.20	25mm diameter GI saddle clips incl. equivalent mounting screws.	nr	10		
C2	Chemical Dosing Platform				
C2.1	The chemical dosing platform has been constructed (5.1m long x3.6m wide) but finishing works are required before the platform can be used to house the chemical dosing equipment				
C2.2	Supply and fix Guard rails around the dosing platform, using GI pipes class B of DN 50mm and 3 coats of Bermuda blue paint. Height of the Guard rail to be approximately 1m. The guard rail spacing should be 1.5m apart and shall have two rows of rails.	Item	1		
C2.3	Allow for proper finishes to the floor including water drain channel as per the specifications of the Engineer	Sum	1		
C2.4	Provide and install a drainage Upvc heavy gauge pipeline, 150mm DN c/w all the fittings securely clipped on to the wall and buried underground to the washout 15m long	m	15		
C3	Vertical Flow Sedimentation Tanks				
C3.1	Fabricate sludge concentrator and diffuser inclusive of 50mm diameter flexible rubber de- sludge hose and nylon fixing rope as shown in the drawing	nr	6		
C3.2	Supply and replacement of Sluice Valves				
C3.2.1	50mm diameter sluice valve	nr	1		
C3.2.2	100mm diameter sluice valve	nr	1		

C3.3	Cleaning of Settled Water troughs				
C4.3.1	Clean and paint with bituminous paint the settled water troughs existing I Beam support	nr	6		
C3.4	Replacement of available Flanged adaptors				
C3.4.1	300mm flange adaptors	nr	3		
C3.4.2	400mm flange adaptors	nr	3		
C3.5	Cleaning of Sedimentation Tanks				
C3.5.1	Clean both internal and external walls of the tank and paint the external walls with cement wash by brushing. Allow for dewatering the tanks the water	Sum	6		
C3.6	Replacement of Chequer Plate				
C3.6.1	Supply and Replace a chequer plate 3300 x 1000 x 3 mm	nr	1		
C7.7	Rehabilitation of wash out chambers				
C3.7.1	Allow a sum for rehabilitating wash out chambers (1.1mx1.1m). The chambers are 1m high	nr	6		
C3.8	Replacement of wash water pipes				
C3.8.1	Supply and replace the old wash out GI pipes, DN 150mm, 4 m long	nr	2		
C3.9	Allow a sum of kshs.350,000 for any rehabilitation works and additional underground valves and fittings at the Vertical Sedimentation Tanks Units	Sum	1.00	350,000.00	350,000.00
C3.10	Allow percentage adjustment on Items C3.9	%	20		

C4	Gravity Sand Filters				
C4.1	Supply and replacement as follows:				
C4.1.1	100mm diameter sluice valve	nr	6		
C4.1.2	100mm diameter flap valve	nr	6		
C4.1.3	Fabricate and replace 200mm diameter C/W rising spindle and 800mm R/S headstock	nr	6		
C4.1.4	Fabricate and replace 400mm diameter C/W non-rising spindle 75mm S.S sleeve and 800mm R/S headstock	nr	6		
C4.2	Outlet Sluice Valves				
C4.2.1	Supply and replace 200mm sluice valve for the outlet	nr	6		
C4.2.1	Allow for replacement of old GS pipes, sizes ranging from DN 250-200mm c/w Flanged GI pieces and Tees as directed by the engineer on site	Ls	1		
C4.3	Filter Media				
C4.3.1	Supply and replace the filter media of nominal size 0.7- 1.5mm uniformity Coefficient and to be approved by the Engineer.	m ³	60		
C4.4	Backwash Collection Channel				
C4.4.1	Clean and paint the backwash collection channels with paint indicated on the drawing	Sum	1		
C4.5	<u>Backwash water Tower</u>				
C4.5.1	Supply and replace 300mm diameter butterfly valve	nr	2		
C4.5.2	Allow for replacement of a leaking pipeline section, about 6m long, DN 300mm Galvanised steel	item	1		

C5	Water Treatment Plant Units				
C5.1	Painting of guard rails				
C5.1.1	Clean and paint all handrails as specified in the specification for miscellaneous metal	Sum	1		
C5.1.2	Clean and cement wash by brushing all exposed concrete surfaces apart from those mentioned in other elements above	Sum	1		
C5.1.3	Clean and paint all ladders in all structures where installed as specified in the specification	Sum	1		
C5.2	Paving Slab				
C5.2.1	Supply 500 x 500 x 50 mm concrete paving slab as per specifications	nr	1000		
C5.2.2	Carefully remove existing paving slabs; prepare the subgrade with compaction, place gravel/sand layer and compact; place back the paving slabs taking care that no breakage occurs incl. cement/sand mortar joints	m ²	800		
C5.3	Drainage System				
C5.3.1	Clean the drainage system at the water treatment plant including minor repairs to enable free flow of storm water and cleaning waters at the plant	Sum	1		
C5.3.2	Allow a sum of kshs.350,000 for any rehabilitation works and additional underground valves and fittings at the Filtration Units	Sum	1	350,000	350,000.00
C5.3.3	Allow a percentage adjustment on item C5.7.2	%	20		

C6	Laboratory				
C6.1	Provide a wash basin in the laboratory as per the specification and allow for a 10m pipe drain and a soak pit	Item	1		
C6.2	Allow a sum of kshs. 200,000 for purchase of laboratory furniture	sum	1	200,000	200,000.00
C6.2	Laboratory Equipment.				
C6.2.1	Conductivity Meters Hand	nr	2	8,500	17,000.00
C6.2.2	Conductivity Meters Bench	nr	1	14,300	14,300.00
C6.2.3	Turbidity meters Hand	nr	2	7,900	15,800.00
C6.2.4	Turbidity meters Bench	nr	1	13,400	13,400.00
C6.2.5	Lovibond Comparator (Kit) with Discs & cells	nr	2	18,700	37,400.00
C6.2.6	Fluoride Meters Hand	nr	2	9,100	18,200.00
C6.2.7	Fluoride Meters Bench	nr	1	17,200	17,200.00
C6.2.8	Flocculation apparatus	nr	2	22,000	44,000.00
C6.2.9	Portable pH/mV/ (Temperature meter)	nr	2	8,750	17,500.00
C6.2.10	Pipette filler	nr	10	4,800	48,000.00
C6.2.11	Water Bath	nr	2	5,000	10,000.00
C6.2.12	Magnetic stirrer/heater & Magnets	nr	2	7,500	15,000.00
C6.2.13	Analytical Weighing Balance	nr	1	32,000	32,000.00
C6.2.14	Assorted Laboratory glass ware and accessories	sum	1	50,000	50,000.00
C6.2.15	Assorted reagents / Chemicals	sum	1		
C7	Back wash Tank-600m³ (Elevated concrete Tower)				
C7.1	Supply and replace 2nr. Standard steel doors as per the specifications	nr	2		

D	REHABILITATION OF PIPEWORK STORE				
D1	Asbestos Removal				
D1.1	Remove carefully the Asbestos sheet for reuse	m ²	200		
D1.2	Supply and replace the Asbestos roofing sheets cover with 28 gauge IT4 sheets	m ²	200		
D1.3	Supply and replace the facia and verge boards for the 300mm x 25mm	m	100		
D2	Asbestos Disposal				
D2.1	Statement of the Works	sum	1		
D2.2	Clean up the are to ensure all asbestos materials have been removed				
D2.3	Obtain all legal and statutory documentation as and relates to the correct and effective disposal process of the asbestos.				
D2.4	Disposal of the removed asbestos sheets as per the NEMA approved process and issuance of the relevant documents to the client as prove of completion and compliance.				
D2.5	Carrying out the EIA and obtain the relevant licenses pertaining to the client from NEMA before commencement of work				
D3	Cart away and Disposal				
D3.1	Cart away and disposal of the removed sheets to the approved site as per NEMA requirements	m3	650		
	Total for the Rehabilitation of Treatment Works Carried to Grand Summary				

E	REHABILITATION OF DISTRIBUTION TANKS			
E1	400 m³ Reinforced Concrete Elevated Tank			
E1.1	Carefully remove the concrete paving slabs (500 x 500 x 50 mm), and stake them next to the site or as directed by the Engineer for re-use.	m ²	400	
E1.2	Supply approved fine sand bedding material, place and thoroughly compact on the paved area around the tank to achieve a slope of 1:50.	m ³	30	
E1.3	Supply and place approved 1000 gauge polythene sheet on prepare area around the tank	m ²	400	
E1.4	Transport to site and lay the concrete paving slab on the at least 75 mm consolidated bed of sand, in cement mortar 1:4 and as per contract specification No. 4008.	m ²	400	
E1.5	Provide and install Chain link gauge 12 fence on concrete posts in class 20 concrete as per the drawings to the satisfaction of Engineer	m	80	
E1.6	Provide and install metal field gates, with: 1.2 m as per the drawings	No	1	
E2	5 No. 200 m³ Elevated Steel Tanks			
E2.1	Carefully remove the existing concrete paving slabs (500 x 500 x 50 mm), and stake them next to the site or as directed by the Engineer for re-use.	m ²	2000	

E2.2	Supply approved fine sand bedding material, place and thoroughly compact on the paved area around the tank to achieve a slope of 1:50.	m ³	150		
E2.3	Supply and place approved 1000 gauge polythene sheet on ground and prepare area around the tank	m ²	2000		
E2.4	Transport to site concrete paving slabs (500 x 500 x 50 mm) similar to the existing as per contract specification No. 4008.	m ²	1200		
E2.5	Lay the concrete paving slab on the at least 75 mm consolidated bed of sand, in cement mortar 1:4 and as per contract specification No. 4008.	m ²	2000		
E3	Fencing				
E3.6	Provide and install Chain link gauge 12 fence on concrete posts in class 20 concrete as per the drawings to the satisfaction of the Engineer	m	400		
E3.7	Provide and install metal field gates, with: 1.2 m as per the	No	5		
E4	Repair of Tanks				
E4.1	Supply and Install missing 50 x 50 x 6 mm, 5 m long angle iron cross tank bracing similar to the existing	nr	12		
E4.2	Supply and fix missing 25 x 16 mm diameter galvanised bolts and nut at the tank tower	nr	200		
E4.3	Supply and replace with equivalent worn out and leaking pressed steel plates (1220 x 1220 x 5 mm) including GI bolts and joint sealant	nr	16		

E4.4	Supply and install floater, galvanized wire and dial at the water level indicator	nr	6		
E5	Pipework				
E5.1	Adaptors, Detachable Collars, Couplings and Saddles				
E5.1.1	Flanged adaptor, NP 16				
E5.1.2	75 mm diameter	nr	16		
E5.1.3	100 mm diameter	nr	26		
E5.1.4	150 mm diameter	nr	16		
E5.1.5	Double flanged pipe pieces, L = 500 mm	nr	3		
E5.1.6	80 mm diameter	nr	2		
E5.1.7	100 mm dia. Length	nr	2		
E5.1.8	150 mm diameter				
E5.2	Valves, Penstocks and Meters				
	Gate valves to SSRN 226 c/w T- keys				
	Resilient seal series 14	nr	5		
E5.2.1	80 mm diameter	nr	6		
E5.2.2	100 mm diameter	nr	2		
E5.2.3	150 mm diameter				
E5.3	Float Valves				
E5.3.1	80 mm diameter	nr	2		
E5.3.2	100 mm diameter	nr	3		
E5.3.3	150 mm diameter	nr	3		
E5.4	Zonal Bulk Meters. Flanged Woltman Type.				
E5.4.1	80 mm diameter	nr	3		
E5.4.2	100 mm diameter	nr	2		
E5.5	Manholes and other chambers in accordance with standard drawings				
E5.5.1	Masonry or Dense Blockwork Bulk Meter chamber	nr	6		
E5.5.2	Masonry or Dense Blockwork Valve chamber	nr	6		
Total for the Rehabilitation of Distribution Tanks Carried to Grand Summary					3,601,690.00

F	REHABILITATION OF TRANSMISSION AND DISTRIBUTION PIPE LINE				
F1	General Clearance				
F1.1	Dense bush and thicket	ha	0.5		
	Locally disposed. (<i>Provisional</i>)				
F2	Removal of trees and stumps				
F2.1	Trees of girth: 500 mm - 1 m.,	nr	5		
	locally disposed. (<i>Provisional</i>)				
F2.2	Stumps of diameter: 500 mm - 1m.,	nr	5		
	locally disposed. (<i>Provisional</i>)				
F2.3	Clearance of pipeline				
	Nominal bore: 100 - 300 mm.,	m	100		
F3	<u>Pipe fittings supply</u>				
F3.1	<i>Supply and Pipe Laying/Replacement</i>				
	Supply and Transport to site. Transport from site store, lay and joint pipes in trench, include for excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation and backfilling.				
	Note: - 1). Trench width and minimum cover to pipes is as per the Specification. The cost shall include for strutting, shuttering, stabilizing the earth faces of trenches and keeping the trenches free of water from whatever source by pumping or other means and cost of use of selected soil from the excavated material for compaction in bed and surround to backfilling of trenches, all as specified.				
	-				

	2). Pipes and fitting requirements, sizes, quantities, etc. to be determined in liason with the Engineer				
	<u>Water Mains (Socket & Spigot), PN 16</u>				
F3.1.1	Supply of Welded steel/DI, 150mm diameter				
		m	150		
F3.1.2	Supply of uPVC pipes				
	PVC-U S & S to SSRN 300 - PN 10				
F3.1.2-1	160 mm diameter	m	900		
F3.1.2-2	225 mm diameter	m	600		
F3.1.2-3	280 mm diameter	m	300		
F3.1.3	<u>Flexible, wide range/stepped couplings</u>				
	<u>NP 10 to suit to GI/PVC and steel Pipes</u>				
F3.1.3-1	150 mm diameter	nr	12		
F3.1.3-2	200 mm diameter	nr	16		
F3.1.3-3	250 mm diameter	nr	10		
F3.1.4	<u>Flanged adaptor</u>				
F3.1.4-1	150 mm diameter	nr	10		
F3.1.4-2	200 mm diameter	nr	8		
F3.1.4-3	250 mm diameter	nr	4		
F3.1.5	<u>Flanged adaptor, flexible to suit uPVC pipes, NP 10</u>				
F3.1.5-1	150 mm diameter	nr	15		
F3.1.5-2	200 mm diameter	nr	10		
F3.1.5-3	250 mm diameter	nr	5		
F3.2	<u>Gate valves to SSRN 226 c/w T- keys</u>				
	<u>Resilient seal series 14</u>				
F3.2.1	150 mm diameter	nr	10		
F3.2.2	200 mm diameter & 2 T-Keys 800 mm long	nr	4		
F3.2.3	<u>Zonal Bulk Meters. Flanged Woltman Type.</u>				
	200 mm diameter	nr	4		
F3.2.4	<u>Ferrous pipes and fittings</u>				
	Pipe n.b: exc. 100 but not exc 200 mm	m	100		
	trenches depth: n.e. 1 m.				

F3.2.5	<u>PVC pipes and fittings</u>				
	Pipe n.b: exc. 100 but not exc 200 mm	m	750		
	trenches depth: n.e. 1 m.				
F3.2.6	Pipe n.b: exc. 200 but not exc 300 mm	m	120		
F3.2.7	<u>Flexible, wide range/stepped coupling</u>				
	Nb: exc.100 but ne. 200 mm	nr	15		
	In trenches, depth: ne. 1 m				
F3.2.8	Nb: exc.200 but ne. 300 mm	nr	4		
	In trenches, depth: ne. 1 m				
F3.2.9	<u>Flanged adaptor</u>				
	Nb: exc.100 but ne. 200 mm	nr	12		
	In trenches, depth: ne. 1 m				
F3.2.10	Flanged adaptor, flexible to suit uPVC pipes, NP 10				
	Nb: exc.100 but ne. 200 mm	nr	20		
	In trenches, depth: ne. 1 m				
F3.2.11	Nb: exc.200 but ne. 300 mm	nr	3		
	In trenches, depth: ne. 1 m				
F3.2.12	<u>Gate valves</u>				
	Nb: exc.100 but ne. 200 mm	nr	8		
	In trenches, depth: ne. 1 m				
F3.2.13	Nb: exc.200 but ne. 300 mm	nr	2		
	In trenches, depth: ne. 1 m				
F3.3	Air Valves, CATT Type				
	Complete with isolating valve				
F3.3.1	Nb: ne. 100 mm double acting air, surge suppressing air valve c/w isolating integral valve. NP 10.	nr	3		
	Not in trenches.				
F3.4	Zonal Bulk Meters				
F3.4.1	<u>Flanged Meters</u>				
	Nb: ne. 100 mm	nr	2		
	Not in trenches.				
F3.4.2	Nb: 100 - 200 mm	nr	1		
	Manholes and other chambers in				

	accordance with				
F3.5	standard drawings				
F3.5.1	Masonry or Dense Blockwork Bulk Meter and valve chambers pipe	nr	7		
	nom. bore not exc. 200 mm depth not exc. 1.0 m.				
F3.5.2	Masonry or Dense Blockwork Bulk Meter and	nr	5		
	chamber pipe nom. bore exc. 200 but not exc.				
	300 mm depth not exc. 1.0 m.				
F3.6	Concrete Manhole covers				
F3.6-1	Precast Concrete: Area : 0.5 - 1m ²				
	Install GMS covers	nr	10		
F3.7	Crossings				
F3.7.1	River, stream or canal, width 1 - 3m	nr	1		
	Pipe nom. Bore n.e 250 mm				
	as per drawing No. DWSP/GID/9.1 <i>(Provisional)</i>				
F3.7.2	River, stream or canal, width 3 - 10m	nr	1		
	Pipe nom. Bore n.e 250 mm as per drawing				
	No. CWSB/WaSSIP-AF/BW/RC/01 <i>(Provisional)</i>				
F3.8	Reinstatement				
F3.8.1	Breaking up, temporary and permanent	m	30		
	reinstatement of dirt roads, pipe nom.				
	bore not exc. 250 mm. <i>(Provisional)</i>				
F3.8.1	Breaking up, temporary and permanent reinstatement of cultivated	m	200		
	lands/ gardens pipe nom. Bore not exc. 250mm. <i>(Provisional)</i>				
F3.9	Other Pipework Ancillaries				
F3.9.1	Marker Posts for Sluice valves in accordance with std drawings.	nr	10		

F3.9.2	Marker Posts for Air Valves in accordance with standard drawings.	nr	4		
F3.9.3	Marker Posts for Washouts in accordance with standard drawings.	nr	3		
F3.9.4	Marker Posts for Pipelines in accordance with standard drawings.	nr	80		
F3.10	Pipes sewers & fittings - Install and replace				
F3.10.1	<u>Ferrous pipes and fittings</u>				
	Pipe n.b: ne. 100 mm	m	100		
	trenches depth: n.e. 1 m.				
F3.10.1	<u>PVC pipes and fittings</u>				
	Pipe n.b: ne. 100 mm	m	400		
	trenches depth: n.e. 1 m.				
F3.11	Allow for testing of the existing pipelines using water to identify leakages and missing sections. The pipelines are of various sizes ranging from 300mm - 32mm diameters	M3	300		
F3.12	Testing				
	Test pressure exc.12 bar but not exc. 25 bar,	m	2,500		
	pipe n.b. not exc 100 mm.				
F3.11	Sterilization and Flushing				
	Pipe n.b. n.e. 100 mm.	m	2,000		
F3.11.1	<u>Main Plain ended, Branch flanged</u>				
	Nb: n.e. 100 mm	nr	2		
	In trenches, depth n.e. 1 m				
F3.11.2	<u>Flanged adaptor</u>				
	Nb: ne. 100 mm	nr	17		
	In trenches, depth: ne. 1 m				
F3.11.2	<u>Flanged adaptor, flexible to suit uPVC pipes, NP 10</u>				
	Nb: ne. 100 mm	nr	11		
	In trenches, depth: ne. 1 m				
F3.11.2	<u>End Cap</u>				

	Nb: ne. 100 mm	nr	1		
	In trenches, depth: ne. 1 m				
F3.12	Valves, Penstocks, Hydrants, Meters				
F3.12.1	<u>Gate valves</u>				
	Nb: ne. 100 mm	nr	5		
	In trenches, depth: ne. 1 m				
F3.12.1	<u>Flanged Meters</u>				
	Nb: ne. 100 mm	nr	3		
	Not in trenches.				
F3.12	Manholes and other chambers in accordance with standard drawings				
F3.12.1	Masonry or Dense Blockwork Bulk Meter and valve chambers pipe nom. bore not exc. 100 mm depth not exc. 1.0 m.	nr	30		
F3.12.2	Concrete Manhole Covers				
	Precast Concrete: Area : 0.5 - 1m ²				
	Install GMS covers	nr	25		
F3.13	Crossings				
F3.13	River, stream or canal, width 1 - 3m	nr	2		
	Pipe nom. Bore n.e 250 mm as per drawing				
	No. CWSB/WaSSIP-AF/BW/RC/01 (<i>Provisional</i>)				
F3.13	River, stream or canal, width 3 - 10m	nr	1		
	Pipe nom. Bore n.e 250 mm as per drawing (Provisional)				
F3.14	Other Pipework Ancillaries				
F3.14.1	Marker Posts for Sluice valves in accordance with standard drawings.	nr	25		
F3.14.2	Marker Posts for Air Valves in accordance with standard drawings.	nr	2		
F3.14.3	Marker Posts for Washouts in accordance with standard drawings.	nr	3		
F3.14.4	Marker Posts for Pipelines	nr	100		
F3.15	Concrete stools and thrust blocks, Concrete class 20				

F3.15.1	TO Junctions				
F3.15.1-1	Volume: not exc. 0.1 m ³ , nom. bore: not exc. 100 mm.	nr	9		
F3.15.2	Mass concrete grade C20				
	20 mm aggregates:				
F3.15.2-1	Valve stools				
	Volume not exceeding 0.1m ³ , for valve n.b. not exc. 100 mm.	nr	25		
F3.16	New Pipelines and Pipe Fittings				
	Supply Upvc pipes PN 10, excavate, lay and backfill and pressure test				
F3.16.1	DN 300mm	m	200		
F3.16.2	DN 250mm	m	300		
F3.16.3	DN 200mm	m	250		
F3.16.4	DN 100mm	m	300		
	Supply GS pipes, excavate, lay, backfill and pressure test (Provisional)				
F3.16.5	DN 300mm	m	30		
F3.16.6	DN 250mm	m	50		
F3.16.7	DN 200mm	m	70		
F3.16.8	DN 100mm	m	100		
	Allow for supply and fixing of VJ Couplings	Ls	1		
F3.16.9	DN 300mm	Nr	20		
F3.16.10	DN 250mm	Nr	25		
F3.16.11	DN 200mm	Nr	20		
F3.16.12	DN 100mm	Nr	10		
	Allow for supply and fixing of Flanged adaptors				
F3.16.13	DN 300mm	Nr	20		
F3.16.14	DN 250mm	Nr	25		
F3.16.15	DN 200mm	Nr	20		
F3.16.16	DN 100mm	Nr	10		
	Allow for supply and fixing of equal GI tees				

	Total for the Transmission and Distribution Pipelines Carried to Grand Summary				
F	ELECTRICAL WORKS				
F1	Allow a provisional Sum of Kshs 4,000,000 for all electrical Works at the Treatment Plant. All electrical works are to be undertaken by a qualified and licensed electrical expert approved by the Client	PS	1	4,000,000	4,000,000
	Total for the Installation of Electrical Works Carried to Grand Summary				

	<u>GRAND SUMMARY</u>				
A	PRELIMINARY & GENERAL ITEMS				
B	RAW WATER STORAGE TANKS, TRANSMISSION AND INLET WORKS				
C	REHABILITATION OF TREATMENT WORKS				
D	REHABILITATION OF DISTRIBUTION TANKS				
E	DISTRIBUTION AND TRANSMISSION LINES				
F	ELECTRICAL WORKS				
	SUB TOTAL				
	ADD 15% CONTINGENCIES				
	SUB TOTAL				
	ADD 16% VAT				
GRAND TOTAL FOR COMPLETION OF BURA WATER TREATMENT PLANT & ASSOCIATED WORKS CARRIED TO FORM OF BID					

SECTION IX: TENDER FORMS

A. Form of Tender

[date]

To: [name and address of Procuring Entity]

We offer to execute the [name and identification number of contract] in accordance with the Conditions of Contract accompanying this Tender for the Contract Price of [amount in numbers], [amount in words] [name of currency].

The Contract shall be paid in the following currencies:

Currency	Percentage payable in currency	Rate of exchange: one foreign equals [insert local]	Inputs for which foreign currency is required
(a)			
(b)			

The advance payment required is:-

Amount	Currency
(a)	
(b)	

We accept the appointment of [name proposed in Tender Data Sheet] as the adjudicator.

or

We do not accept the appointment of [name proposed in Tender Data Sheet] as the Adjudicator, and propose instead that [name] be appointed as Adjudicator, whose daily fees and biographical data are attached.

We are not participating, as Tenders, in more than one Tender in this Tendering process other than alternative Tenders in accordance with the Tendering documents.

Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the contract has not been declared ineligible by the Kenya Government under Kenya's laws or any other official regulations.

This Tender and your written acceptance of it shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any Tender you receive.

We hereby confirm that this Tender complies with the Tender validity and Tender Security required by the Tendering documents and specified in the Tender Data Sheet.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Tenderer: _____

Address: _____

Appendix to Tender

Schedule of Adjustment Data

[In Tables A, B, and C, below, the Tenderer shall (a) indicate its amount of local currency payment, (b) indicate its proposed source and base values of indices for the different foreign currency elements of cost, (c) derive its proposed weightings for local and foreign currency payment, and (d) list the exchange rates used in the currency conversion. In the case of very large and/or complex works contracts, it may be necessary to specify several families of price adjustment formulae corresponding to the different works involved.]

Table A. Local Currency

Index code	Index description	Source of index	Base value and date	Tenderer's related currency amount	Range of weighting Proposed by the Procuring Entity	Tenderer's proposed weighting
	Nonadjustable	—	—	—	a: _____* b: ----- to -----* c: ----- to -----* d: ----- to -----* e: ----- to -----* etc.	a: _____* b: _____ c: _____ d: _____ e: _____ etc.
Total						1.00

Table B. Foreign Currency

State type: [If the Tenderer wishes to quote in more than one foreign currency, this table should be repeated for each foreign currency.]

Index code	Index description	Source of index	Base value and date	Tenderer's related source currency in type/ amount	Equivalent in Foreign Currency 1	Range of weighting Proposed by the Procuring Entity	Tenderer's proposed weighting
	Nonadjustable	—	—	—		a: _____ * b: ----- to -----* c: ----- to -----* d: ----- to -----* e: ----- to -----* etc.	a: _____ b: _____ c: _____ d: _____ e: _____ etc.
Total							1.00

Table C. Summary of Payment Currencies

For[insert name of Section of the Works]

[Separate tables may be required if the various sections of the Works (or of the Bill of Quantities) will have substantially different foreign and local currency requirements. The Procuring Entity should insert the names of each Section of the Works.]

Name of payment currency	A Amount of currency	B Rate of exchange (local currency per unit of foreign)	C Local currency equivalent C = A x B	D Percentage of Net Tender Price (NBP) $\frac{100 \times C}{NBP}$
Local currency		1.00		
Foreign currency #1				
Foreign currency #2				
Foreign currency #				
Net Tender Price				100.00
Provisional sums expressed in local currency	*	*	*	
TENDER PRICE				

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Tenderer: _____

Address: _____

B. Tender-Securing Declaration (Mandatory)

Date: *[insert date (as day, month and year)]*

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

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

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

We, the undersigned, declare that:

We understand that, according to your conditions, Tenders must be supported by a Tender-Securing Declaration.

We accept that we will automatically be suspended from being eligible for Tendering in any contract with the Procuring Entity 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 Tender conditions, because we;

- a) Have withdrawn our Tender during the period of Tender validity specified in the Form of Tender; or
- b) Having been notified of the acceptance of our Tender by the Procuring Entity during the period of Tender 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 ITT.

We understand this Tender Securing Declaration shall expire if we are not the successful Tenderer, upon the earlier of;

- 1) Our receipt of your notification to us of the name of the successful Tenderer; or
- 2) Thirty days after the expiration of our Tender.

Signed: *[insert signature of person whose name and capacity are shown]* In the capacity of *[insert legal capacity of person signing the Tender Securing Declaration]*

Name: *[insert complete name of person signing the Tender Securing Declaration]*

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

Dated on _____ day of _____, _____ *[insert date of signing]*

Corporate Seal (where appropriate)

C. Confidential Business Questionnaire

- 1 **Individual Tenderer or Individual Members of joint Ventures**
- 1.1 Constitution or legal status of Tenderer: *[attach copy]*
- Place of registration: *[insert]*
- Principal place of business: *[insert]*
- Power of attorney of signatory of Tender: *[attach]*
- Registration certificate *[attach]* current Business License *[attach]*
- 1.2 Total annual volume of construction work performed in two years, in Kenyan shillings as specified in the Tender Data Sheet; *[insert]*
- 1.3 Work performed as prime Contractor on works of a similar nature and volume over the last two years or as specified in the Tender Data Sheet in Kenyan Shillings. Also list details of work under way or committed, including expected completion dates.

Project name and country	Name of client and contact person	Contractors Participation	Type of work performed and year of completion	Value of contract
(a)				
(b)				

- 1.4 Major items of Contractor's Equipment proposed for carrying out the works. List all information requested below. Refer also to sub-Clause 12.3 of the Instructions to Tenderers.

Item of equipment	Description, make, and age (years)	Condition (new, good, Poor) and number available	Owned, leased (from whom?) or to be purchased (from whom?)
(a)			
(b)			
(c)			
(d)			

- 1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to sub-Clause 12.3 of the Instructions to Tenderers and Sub- Clause 10.1 of the General Conditions of Contract.

Position	Name	Years of Experience (general)	Years of experience in proposed position
(a)			
(b)			

1.6 Proposed sub-contractor and firms involved. Refer to Clause 7 of General Conditions of Contract.

Sections of the Works	Value of subcontract	Subcontractor (name and address)	Experience in similar work
(a)			
(b)			

1.7 Financial reports for the number of years specified in the Tender Data Sheet.

1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents.

1.9 Name, address, and telephone, e-mail address, and facsimile numbers of banks that may provide references if contracted by the Procuring Entity.

1.10 Information on current litigation in which the Tenderer is involved.

Other party(ies)	Cause of dispute	Amount involved
(a)		
(b)		

- 1.11 Statement of compliance with the requirements of sub-Clause 3.2 of the Instructions to Tenderers.
- 1.12 Proposed Program (work method and schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the Tendering documents.
2. **Joint Ventures**
- 2.1 The information listed in 1.1 – 1.11 above shall be provided for each partner of the joint venture.
- 2.2 The information in 1.12 above shall be provided for the joint venture.
- 2.3 Attach the power of attorney of the signatory (ies) of the Tender authorizing signature of the Tender on behalf of the joint venture.
- 2.4 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that:
- (a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;
 - (b) one of the partners will be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; and
 - (c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.
3. **Additional Requirements**
- 3.1 Tenderers should provide any additional information required in the **Tender Data Sheet** or to fulfil the requirements of sub-Clauses 12.1 of the Instructions to Tenderers, if applicable.

D. Integrity Declaration

UNDERTAKING BY TENDERER ON ANTI – BRIBERY POLICY / CODE OF CONDUCT AND COMPLIANCE PROGRAMME

1. Each Tenderer must submit a statement, as part of the Tender documents, in either of the two given formats which must be signed personally by the Chief Executive Officer or other appropriate senior corporate officer of the Tendering company and, where relevant, of its subsidiary in the Kenya. If a Tender is submitted by a subsidiary, a statement to this effect will also be required of the parent company, signed by its Chief Executive Officer or other appropriate senior corporate officer.
2. Tenderers will also be required to submit similar No-bribery commitments from their subcontractors and consortium partners; the Tenderer may cover the subcontractors and consortium partners in its own statement, provided the Tenderer assumes full responsibility.
3.
 - a) Payment to agents and other third parties shall be limited to appropriate compensation for legitimate services.
 - b) Each Tenderer will make full disclosure in the Tender documentation of the beneficiaries and amounts of all payments made, or intended to be made, to agents or other third parties (including political parties or electoral candidates) relating to the Tender and, if successful, the implementation of the contract.
 - c) The successful Tenderer will also make full disclosure [quarterly or semi-annually] of all payments to agents and other third parties during the execution of the contract.
 - d) Within six months of the completion of the performance of the contract, the successful Tenderer will formally certify that no bribes or other illicit commissions have been paid. The final accounting shall include brief details of the goods and services provided that they are sufficient to establish the legitimacy of the payments made.
 - e) Statements required according to subparagraphs (b) and (d) of this paragraph will have to be certified by the company's Chief Executive Officer, or other appropriate senior corporate officer.
4. Tenders which do not conform to these requirements shall not be considered.
5. If the successful Tenderer fails to comply with its No-bribery commitment, significant sanctions will apply. The sanctions may include all or any of the following:
 - a) Cancellation of the contract;
 - b) Liability for damages to the public authority and/or the unsuccessful competitors in the Tendering possibly in the form of a lump sum representing a pre-set percentage of the contract value (liquidated).
6. Tenderers shall make available, as part of their Tender, copies of their anti-Bribery Policy/Code of Conduct, if any, and of their-general or project - specific - Compliance Program.

-
7. The Government of Kenya has made special arrangements for adequate oversight of the procurement process and the execution of the contract, and has invited civil society and other competent Government Departments to participate in the oversight. Those charged with the oversight responsibility will have full access to all documentation submitted by Tenderers for this contract, and to which in turn all Tenderers and other parties involved or affected by the project shall have full access (provided, however, that no proprietary information concerning a Tenderer may be disclosed to another Tenderer or to the public).

ANTI-CORRUPTION DECLARATION COMMITMENT/ PLEDGE

(Sections 39, 40, 41, 42, 43 & of the PPD Act, 2005)

I/We/Messrs.....

of Street, Building, P O Box.....

.....

Contact/Phone/E mail.....

declare that Public Procurement is based on a free and fair competitive Tendering process which should not be open to abuse.

I/We

declare that I/We will not offer or facilitate, directly or indirectly, any inducement or reward to any public officer, their relations or business associates, in connection with

Tender/Tender No

for or in the subsequent performance of the contract if I/We am/are successful.

Authorized Signature.....

Name and Title of Signatory.....

E. Letter of Acceptance

[Letter head paper of the Procuring Entity]

[date]

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated [date] for execution of the [name of the Contract and identification number, as given in the Contract Data Sheet] for the Contract Price of the equivalent of [amount in numbers and works] [name of currency], as corrected and modified in accordance with the Instructions to Tenderers is hereby accepted by us.

We confirm that [insert name proposed by the procuring entity] to be the Adjudicator.

We accept that [name proposed by Tenderer] be appointed as Adjudicator.

Or

We do not accept that [name proposed by Tenderer] be appointed as adjudicator, and by sending a copy of this letter of acceptance to [insert the name of the Appointing Authority], we are hereby requesting [name], the Appointing Authority, to appoint the adjudicator in accordance with Clause 44.1 of the Instructions to Tenderers.

You are hereby instructed to proceed with the execution of the said works in accordance with the Contract documents.

Please return the contract dully signed.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Agency: _____

Attachment: Form of Contract

F. Form of Contract Agreement

This Agreement, made the [day] day of [month], [year] between [name and address of Procuring Entity] (hereinafter called “the Procuring Entity”) and [name and address of Contractor] (hereinafter called “the Contractor”) of the other part.

Whereas the Procuring Entity is desirous that the Contractor execute [name and identification number of contract] (hereinafter called “the Works”) with the objectives of [insert functional objectives of the works] and the Procuring Entity has accepted the Tender by the Contractor for the execution and completion of such works and the remedying of any defects therein in the sum of [contract price in words and figures] (hereinafter called “Contract Price”).

NOW THIS AGREEMENT WITNESSES AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement;
2. In consideration of the payments to be made by the Procuring Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Procuring Entity to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract;
3. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____

Was hereunto affixed in the presence of: _____

Signed, Sealed, and Delivered by the said _____

In the presence of: _____

Tendering Signature of Procuring Entity _____

Binding Signature of Contractor _____

SECTION X: FORMS OF SECURITY

**A. Tender Security (Bank or Insurance Guarantee)
(Optional)**

*[If required, the **Bank or Insurance Company/Tenderer** shall fill in this Guarantee form in accordance with the instructions indicated in brackets.]*

[insert bank's or insurance company's name, and address of issuing branch or office]

Beneficiary: *[insert name and address of Procuring Entity]*

Date: *[insert date]*

TENDER GUARANTEE No.: *[insert number]*

We have been informed that *[insert name of the Tenderer; if a joint venture, list complete legal names of partners]* (hereinafter called "the Tenderer") has submitted to you its Tender dated *[insert date]* (hereinafter called "the Tender") for the execution of *[insert name of Contract]* under Invitation for Tenders No. *[insert IFT number]* ("the IFT").

Furthermore, we understand that, according to your conditions, Tenders must be supported by a Tender Guarantee.

At the request of the Tenderer, we *[insert name of bank or insurance company]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount in figures expressed in the currency of the Purchaser's Country or the equivalent amount in an international freely convertible currency] ([insert amount in words])* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Tenderer is in breach of its obligation(s) under the Tender conditions, because the Tenderer;

- a) Has withdrawn its Tender during the period of Tender validity specified by the Tenderer in the Form of Tender; or
- b) Does not accept the correction of errors in accordance with the Instructions to Tenderers (hereinafter "the ITT") of the IFT; or
- c) Having been notified of the acceptance of its Tender by the Procuring Entity during the period of Tender validity;
 - (i). Fails or refuses to execute the Contract Form, if required, or
 - (ii). Fails or refuses to furnish the Performance Security, in accordance with the ITT.

This Guarantee shall expire;

- a) If the Tenderer is the successful Tenderer, upon our receipt of copies of the Contract signed by the Tenderer and of the Performance Security issued to you by the Tenderer; or
- b) If the Tenderer is not the successful Tenderer, upon the earlier of;

(i) Our receipt of a copy of your notification to the Tenderer that the Tenderer was unsuccessful, or

(ii) Thirty days after the expiration of the Tenderer's Tender.

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

[Signature of authorized representative(s)]

B. Performance Bank or Insurance Guarantee [Unconditional]

[The **Bank or Insurance Company/successful tenderer** providing the Guarantee shall fill in this form in accordance with the instructions indicated in brackets, if the Procuring Entity requires this type of security.]

[Insert bank's or insurance company's name, and address of issuing branch or office]

Beneficiary: *[insert name and address of Procuring Entity]*

Date: *[insert date]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert name of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. *[Insert reference number of the Contract]* dated with you, for the execution of *[insert name of Contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Contractor, we *[insert name of Bank or Insurance Company]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words]*), such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change, addition or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any change, addition, or modification.

This guarantee shall expire not later than thirty days from the date of issuance of the Taking-Over Certificate.

[Signature of an authorized representative(s) of the Bank or Insurance Company]

C. Bank or Insurance Guarantee for Advance Payment

[Bank's or Insurance Company's Name and Address of Issuing Branch or Office]

Beneficiary: _____ *[Name and Address of Procuring Entity]*

Date: _____

ADVANCE PAYMENT GUARANTEE No.: _____

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We have been informed that *[name of Contractor]* (hereinafter called "the Contractor") has entered into Contract No. *[reference number of the contract]* dated _____ with you, for the execution of *[name of contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum *[amount in figures]* (____) *[amount in words]* is to be made against an advance payment guarantee.

At the request of the Contractor, we *[name of Bank or Insurance Company]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[amount in figures]* (_____) *[amount in words]* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than the costs of mobilization in respect of the Works.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between _____ *[name of Procuring Entity]* and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

No drawing may be made by you under this guarantee until we have received notice in writing from you that an advance payment of the amount listed above has been paid to the Contractor pursuant to the Contract.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor 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 a copy of the interim payment certificate indicating that eighty (80) percent of the Contract Price has been certified for payment, or on the ___ day of _____, 2____, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

Yours truly,

Signature and seal: _____

Name of Bank or Insurance Company: _____

Address: _____

Date: _____

**SECTION XI: APPLICATION TO PUBLIC PROCUREMENT
ADMINISTRATIVE REVIEW BOARD**

FORM RB 1
REPUBLIC OF KENYA
PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO.....OF.....20.....

BETWEENAPPLICANT
ANDRESPONDENT (*Procuring Entity*)

Request for review of the decision of the..... (*Name of the Procuring Entity*) of
.....dated the...day of20.....in the matter of Tender No.....of
.....20...

REQUEST FOR REVIEW

I/We.....,the above named Applicant(s), of address: Physical
address.....Fax 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.
- etc.

By this memorandum, the Applicant requests the Board for an order/orders that: -

- 1.
 - 2.
- etc

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
The Public Procurement Oversight Authority
10th Floor,
National Bank of Kenya Building, Harambee Avenue
P.O. Box 58535-00200, Nairobi.
Telephone:+254-(0)20-324 4000.
Email: info@ppoa.go.ke
Website: www.ppoa.go.ke

ANNEX 1 – EVALUATION CRITERIA

PRELIMINARY EXAMINATION OF COMPLETENESS OF BID DOCUMENTS

A. MANDATORY REQUIREMENTS

- (a) copies of certificates of registration, and principal place of business;
- (b) Ensure your firm is e- citizen linked
- (c) Valid Tax Compliance Certificate
- (d) Copies of PIN Certificate
- (e) Copies of VAT Certificate
- (f) Valid Copies of CR 12
- (g) Copies valid AGPO Certificate
- (h) Dully completed , Signed & Stamped Tender Securing declaration
- (i) Dully filled, signed and stamped price schedules & Bill of quantities.
- (j) Bid Validity shall be 90 days
- (k) Power of attorney shall be required
- (l) Dully completed , Signed & Stamped Form of Tender
- (m) Dully completed , Signed & Stamped Business questionnaire
- (n) Copies of certificate of registration NCA 8 and above on water works
- (o) Document must be paginated
- (p) total monetary value of construction work performed for each of the last Three (3) years;
- (q) experience in works of a similar nature and size for each of the last Three (3) years, and clients who may be contacted for further information on these contracts;
- (r) major items of construction equipment owned or leased
- (s) qualifications and experience of key site management and technical personnel proposed for the Contract;
- (t) reports on the financial standing of the Tenderer, such as profit and loss statements and auditor's reports for the last two years;
- (u) Authority to seek references from the Tenderer's bankers.
- (v) Submit Anti-Corruption Declaration Commitment/ Pledge

B. QUALIFICATION CRITERIA

- a) Access to Liquid assets
- b) Minimum average annual construction turnover
- c) General construction experience
- d) Minimum contracts of similar experience
- e) Adequacy of technical proposal
- f) Key Personnel
- g) Equipment