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Kenya

PROPOSED FOOT BRIDGE AND ASSOCIATED WORKS

**TENDER SPECIFICATIONS AND BILLS OF QUANTITIES
MAIN CONTRACT WORKS
TENDER NO. MMUST/EST/--/2020-2021**

CLIENT:

THE VICE CHANCELLOR,
MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY,
P. O BOX 190 – 50 100,
KAKAMEGA

PROJECT MANAGER

SENIOR ESTATES OFFICER,
MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY,
P. O BOX 190 – 50 100,
KAKAMEGA

CLOSING DATE: FRIDAY 12TH MARCH, 2021

AT 10.00 AM

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INVITATION TO TENDER

Date: 16th February, 2021

Tender No: MMUST/005/EST/2020-2021

TENDER NAME: PROPOSED FOOT BRIDGE & ASSOCIATED WORKS

1.1 Masinde Muliro University of Science and Technology (MMUST) invites sealed tenders from eligible candidates for the Proposed Foot Bridge & Associated Works

1.2 A detailed tender notice and a complete set of tender documents may be obtained by interested tenderers from the University website: www.mmust.ac.ke or Public Procurement Information Portal (PIIP): www.tenders.go.ke **free of charge**. In line with COVID -19 restrictions bidders are encouraged to download tender documents

1.3 Bidders who download the tender documents from the website must forward their particulars immediately via email **procurementofficer@mmust.ac.ke** this is for records and any further tender clarification and addendum where necessary. The particulars should include: Name of Firm, Postal address, Telephone Number, Email Address, Tender Number and Tender Name.

1.4 All pages including any attachments should be **PAGINATED**.

1.5 Any additional information, addendums or clarifications in respect to this tender will be available in our MMUST website www.mmust.ac.ke. All bidders are advised to regularly check the website during the bidding period.

- 1.6 Prices quoted should be net inclusive of all taxes and delivery costs, must be expressed in Kenya shillings and shall remain valid for period of (90) days from the closing date of the tender.
- 1.7 All Tenders must be accompanied by a Tender Security of **Kshs. 200,000/-** in form of a bankers cheque, a bank guarantee from a reputable bank or an insurance bond issued by an insurance firm approved by the PPRA located in Kenya.
- 1.8 Completed tender documents are to be enclosed in plain sealed envelopes, marked with the tender number and Tender name and be deposited in the tender box provided outside administration Block Building Masinde Muliro University of Science and Technology or be addressed and posted to
- The Vice Chancellor,
Masinde Muliro University of Science and Technology
P.O Box 190-50100,
Kakamega**
- On or before **Friday 12th March, 2021 at 10:00 am.**
- 1.10 Tenders will be opened immediately thereafter in the presence of the tenderers representatives who choose to attend.
- 1.11 MMUST reserves the right to accept or reject any tender and may annul the tendering process and reject all tenders at any time prior to contract award without thereby incurring any liability to the affected tenderer or tenderers.
- 1.12 Late Tenders, incomplete Tenders, Tenders not received, Tenders not opened at the Tender opening ceremony shall not be accepted.
- 1.13 A **Pre-Tender Site visit** shall be held on **1st March, 2021 at 10:00am**

ACCOUNTING OFFICER
MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEFINITIONS

The following terms and expressions used in the contract document shall have the following meanings:

- The Employer: THE VICE CHANCELLOR,
 MASINDE MULIRO UNIVERSITY
 OF SCIENCE AND TECHNOLOGY,
 P.O. BOX 190- 50100)
 KAKAMEGA
- Project Manager: SENIOR ESTATES OFFICER,
 MASINDE MULIRO UNIVERSITY OF
 SCIENCE AND TECHNOLOGY,
 P. O BOX 190 – 50 100,
 KAKAMEGA
- Engineer: SENIOR ESTATES OFFICER,
 MASINDE MULIRO UNIVERSITY OF
 SCIENCE AND TECHNOLOGY,
 P. O BOX 190 – 50 100,
 KAKAMEGA
- Quantity Surveyor: To be appointed by the Client.
- Employer's representative: This shall mean the Project Manager.

SPECIAL NOTES

1. These notes shall form part of the Instructions to Tenderers and Conditions of Contract.
2. The tenderer is required to check the number of pages in this document and should he find any missing, or in duplicate, or indistinct he should inform the Procurement Officer, MMUST
3. Should the tenderer be in any doubt about the precise meaning of any item or figure, for any reason whatsoever, he must inform the Procurement Officer, MMUST in order that the correct meaning may be decided before the date of submission of tender.
4. No liability will be admitted nor claim allowed, in respect of errors in the tender due to mistakes in the specification, which should have been rectified in the manner, described above.
5. All tenderers must make a declaration that they have not and will not make any payment to any person which can be perceived as an inducement to enable them to win this tender.
6. Any tenderer whose firm uses the titles “Engineer” and “Engineers” must produce evidence of registration of at least one of the directors by the Kenya Engineers Board to avoid disqualification.
7. The University does not bind itself to award **IN WHOLE OR PARTS** to the lowest or any tenderer.

FORM OF TENDER

To: The Vice Chancellor ,
Masinde Muliro University
of Science and Technology,
P.O. Box 190 - 50100,
Kakamega.

Dear Sir,

THE PROPOSED FOOT BRIDGE AND ASSOCIATED WORKS, Kakamega Town.

In accordance with the Instructions to Tenderers, Conditions of Contract, Specifications and Bills of Quantities for the execution of the above named Works, We, the undersigned offer to construct, install and complete the said Works and remedy any defects therein for the sum of:

Kshs _____

_____ *[Amount in figures]*

Kenya Shillings _____

_____ *[Amount in words]*

We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Employer's notice to commence, and to complete the whole of the Works comprised in the Contract within a period of **Twenty Six (26) Weeks**.

We agree to abide by this tender for **a period of 120 days from the date of tender opening** and shall remain binding upon us and may be accepted at any time before that date.

Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.

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

Dated this day of20.....

Signaturein the capacity of

duly authorized to sign tenders for and on behalf of:

..... *[Name of Tenderer]*

of..... *[Address of Tenderer]*

PIN No. **Stamp**

VAT CERTIFICATE No.

Witness: Name

Address

Signature

FORM OF TENDER SECURITY

WHEREAS (hereinafter called “the Tenderer”) has
submitted his tender dated For **The PROPOSED FOOT BRIDGE
AND ASSOCIATED WORKS, Kakamega Town**

KNOW ALL PEOPLE by these presents that WE
Having our registered office at
(hereinafter called “the Bank”), are bound unto
(hereinafter called “the Employer”) in the sum of Kshs
for which payment well and truly to be made to the said Employer, the Bank binds itself, its
successors and assigns by these presents sealed with the Common Seal of the said Bank this
.....Day of20

THE CONDITIONS of this obligation are:

If after tender opening the Tenderer withdraws his tender during the period of tender validity specified in
the instructions to Tenderers

Or

If the Tenderer, having been notified of the acceptance of his tender by the Employer during the period of
tender validity:

fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if
required, or

fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand,
without the Employer having to substantiate his demand, provided that in his demand the Employer will
note that the amount claimed by his is due to him, owing to the occurrence of one or both of the two
conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including Thirty (30) days after the period of tender
validity, and any demand in respect thereof should reach the Bank not later than the said date.

.....
(Date)

.....
(Signature of the Bank)

.....
(Witness)

.....
(Seal)

SECTION A:

INSTRUCTIONS TO TENDERERS.

INSTRUCTIONS TO TENDERERS

Note: The tenderer must comply with the following conditions and instructions and failure to do so may result in rejection of the tender.

GENERAL

1. Definitions.

- (a) **“Tenderer”** means any person or persons partnership firm or company submitting a sum or sums in the Bills of Quantities in accordance with the Instructions to Tenderers, Conditions of Contract Parts I and II, Specifications, Drawings and Bills of Quantities for the work contemplated, acting directly or through a legally appointed representative.
- (b) **“Approved tenderer”** means the tenderer who is approved by the Employer.
- (c) Any noun or adjective derived from the word **“tender”** shall be read and construed to mean the corresponding form of the noun or adjective **“bid”**. Any conjugation of the verb “tender” shall be read and construed to mean the corresponding form of the verb “bid.”
- (d) **“Employer”** means The Vice Chancellor, Masinde Muliro University of Science and Technology.

2. Eligibility and Qualification Requirements.

- 2.1 This invitation to tender is open to all tenderers who are registered with the **National Construction Authority (NCA) in class NCA5 and above**
- 2.2 To be eligible for award of Contract, the tenderer shall provide evidence satisfactory to the Employer of their eligibility under Sub clause 2.1 above and of their capability and adequacy of resources to effectively carry out the subject Contract. To this end, the tenderer shall be required to update the following information already submitted during prequalification:-
 - (a) Details of experience and past performance of the tenderer on the works of a similar nature within the past five years and details of current work on hand and other contractual commitments.

- (b) The qualifications and experience of key personnel proposed for administration and execution of the contract, both on and off site.
- (c) Major items of construction plant and equipment proposed for use in carrying out the Contract. Only reliable plant in good working order and suitable for the work required of it shall be shown on this schedule. The tenderer will also indicate on this schedule when each item will be available on the Works. Included also should be a schedule of plant, equipment and material to be imported for the purpose of the Contract, giving details of make, type, origin and CIF value as appropriate.
- (d) Details of subcontractors to whom it is proposed to sublet any portion of the Contract and for whom authority from the project manager will be requested for such subletting in accordance with clause 4 of the Conditions of Contract.
 - i. Electrical installation works
 - ii. Mechanical/water reticulation and drainage works

The said subcontractors must show proof of registration with NCA in the relevant category/class

- (e) **A draft Program of Works in the form of a bar chart and Schedule of Payment which shall form part of the Contract if the tender is accepted. Any change in the Program or Schedule shall be subjected to the approval of the Project Manager.**
- (f) Details of any current litigation or arbitration proceedings in which the Tenderer is involved as one of the parties.

2.3 Joint Ventures

Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements:-

- (a) The tender, and in case of a successful tender, the Form of Agreement, shall be signed so as to be legally binding on all partners.
- (b) One of the partners shall be nominated as being in charge; and this
- (c) 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 the 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 relevant statement to this effect shall be included in the authorization mentioned under (b) above as well as in the Form of Tender and the Form of Agreement (in case of a successful tender).
- (f) A copy of the agreement entered into by the joint venture partners shall be submitted with the tender.

3. Cost of Tendering.

The Tenderer shall bear all costs associated with the preparation and submission of his tender and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

4. **Site Visit.**

- 4.1** The Tenderer is advised to visit and examine the Site and its surroundings and obtain for himself on his own responsibility, all information that may be necessary for preparing the tender and entering into a contract. The costs of visiting the Site shall be the tenderer's own responsibility. **(A Pre-Tender meeting & Site visit shall be held on 1st March, 2021 at 10:00am)**
- 4.2 The Tenderer and any of his personnel or agents will be granted permission by the Employer to enter upon premises and lands for the purpose of such inspection, but only upon the express condition that the Tenderer, his personnel or agents, will release and indemnify the Employer from and against all liability in respect of, and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which but for the exercise of such permission, would not have arisen.
- 4.3** The Employer shall organize a site visit at a date to be notified. A representative of the Employer will be available to meet the intending tenderers at the Site. **(A Pre-Tender meeting & Site visit shall be held on 1st March, 2021 at 10:00am)**

Tenderers must provide their own transport. The representative will not be available at any other time for site inspection visits. Each Tenderer shall complete the Certificate of Tenderer's Visit to the Site, whether he in fact visits the Site at the time of the organized site visit or by himself at some other time.

TENDER DOCUMENTS

5. Tender Documents

5.1 The Tender documents comprise the documents listed here below and should be read together with any Addenda issued in accordance with Clause 7 of these instructions to tenderers.

- a. Form of Invitation for Tenders
- b. Instructions to Tenderers
- c. Form of Tender
- d. Appendix to Form of Tender
- e. Form of Tender Surety
- f. Statement of Foreign Currency Requirements
- g. Form of Performance Security
- h. Form of Agreement
- i. Form of Advance payment Bank Guarantee
- j. Schedules of Supplementary Information
- k. General Conditions of Contract – Part I
- l. Conditions of Particular Application – Part II
- m. Specifications
- n. Bills of Quantities
- o. Drawings

5.2 The tenderer is expected to examine carefully all instructions, conditions, forms, terms, specifications and drawings in the tender documents. Failure to comply with the requirements for tender submission will be at the tenderer's own risk. Pursuant to clause 22 of Instructions to Tenderers, tenders which are not substantially responsive to the requirements of the tender documents will be rejected.

5.3 All recipients of the documents for the proposed Contract for the purpose of submitting a tender (whether they submit a tender or not) shall treat the details of the documents as "private and confidential".

6. Clarification of Tender Documents.

6.1 A prospective tenderer requiring any clarification of the tender documents may notify the Procurement Officer in writing or by email at the Employer's mailing address indicated in the Invitation to Tender. The Procurement Officer will respond in writing to any request for clarification which he receives earlier than seven (7) days prior to the deadline for the submission of tenders. Written copies of the Procurement Officer's response (including the query but without identifying the source of the inquiry) will be sent to all prospective tenderers who have purchased the tender documents.

7. Amendment of Tender Documents.

7.1 At any time prior to the deadline for submission of tenders the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective tenderer, modify the tender documents by issuing Addenda.

- 7.2 Any Addendum will be notified in writing or by email to all prospective tenderers who have purchased the tender documents and will be binding upon them.
- 7.3 If during the period of tendering, any circular letters (tender notices) shall be issued to tenderers by, or on behalf of, the Employer setting forth the interpretation to be placed on a part of the tender documents or to make any change in them, such circular letters will form part of the tender documents and it will be assumed that the tenderer has taken account of them in preparing his tender. The tenderer must promptly acknowledge any circular letters he may receive.
- 7.4 In order to allow prospective tenderers reasonable time in which to take the Addendum into account in preparing their tenders, the Employer may, at his discretion, extend the deadline for the submission of tenders.

PREPARATION OF TENDER

8. Language of Tender.

8.1 The tender and all correspondence and documents relating to the tender exchanged between the Tenderer and the Employer shall be written in the English language. Supporting documents and printed literature furnished by the Tenderer with the tender may be in another language provided they are accompanied by an appropriate translation of pertinent passages in the above stated language. For the purpose of interpretation of the tender, the English language shall prevail.

9. Documents Comprising the Tender.

9.1 The tender to be prepared by the Tenderer shall comprise: the Form of Tender and Appendix thereto, a Tender Surety, the Priced Bills of Quantities and Schedules, the information on eligibility and qualification, and any other materials required to be completed and submitted in accordance with the Instructions to Tenderers embodied in these tender documents. The Forms, Bills of Quantities and Schedules provided in the tender documents shall be used without exception (subject to extensions of the schedules in the same format and to the provisions of clause 13.2 regarding the alternative forms of Tender Surety].

10. Tender Prices

10.1 All the insertions made by the Tenderer shall be made in INK and the tenderer shall clearly form the figures. The relevant space in the Form of Tender and Bills of Quantities shall be completed accordingly without interlineations or erasures except those necessary to correct errors made by the Tenderer in which case the erasures and interlineations shall be initialled by the person or persons signing the tender.

10.2 A price or rate shall be inserted by the Tenderer for every item in the Bills of Quantities whether the quantities are stated or not. Items against which no rate or price is entered by the Tenderer will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bills of Quantities.

-The prices and unit rates in the Bills of Quantities are to be the full [all-inclusive] value of the work described under the items, including all costs and expenses which may be necessary and all general risks, liabilities and obligations set forth or implied in the documents on which the tender is based. All duties and taxes and other levies payable by the Contractor under the Contract or for any other cause as of the date 28 days prior to the deadline for the submission of tenders, shall be included in the rates and prices and the total tender prices submitted by the Tenderer.

Each price or unit rate inserted in the Bills of Quantities should be a realistic estimate for completing the activity or activities described under that particular item and the Tenderer is advised

against inserting a price or rate against any item contrary to this instruction.

Every rate entered in the Bills of Quantities, whether or not such rate be associated with a quantity, shall form part of the Contract. The Employer shall have the right to call for any item of work contained in the Bills of Quantities, and such items of work to be paid for at the rate entered by the Tenderer and it is the intention of the Employer to take full advantage of unbalanced low rates.

- 10.3 Unless otherwise specified the Tenderer must enter the amounts representing 10% of the sub-total of the summary of the Bills of Quantities for Contingencies and Variation of Prices [V.O.P.] payments in the summary sheet and add them to the sub-total to arrive at the tender amount.
- 10.4 The Tenderer shall furnish with his tender written confirmation from his suppliers or manufacturers of unit rates for the supply of items listed in the Conditions of Contract clause 47 where appropriate.
- 10.5 The rates and prices quoted by the Tenderer are subject to adjustment during the performance of the Contract only in accordance with the provisions of the Conditions of Contract. The Tenderer shall complete the schedule of basic rates and shall submit with his tender such other supporting information as required under clause 47 of the Conditions of Contract Part II.

11. Currencies of Tender and Payment.

- 11.1 Tenders shall be priced in Kenya Shillings and the tender sum shall be in Kenya Shillings.
- 11.2 Tenderers are required to indicate in the Statement of Foreign Currency Requirements, which forms part of the tender, the foreign currency required by them. Such currency should generally be the currency of the country of the Tenderer's main office. However, if a substantial portion of the Tenderer's expenditure under the Contract is expected to be in countries other than his country of origin, then he may state a corresponding portion of the contract price in the currency of those other countries. However, the foreign currency element is to be limited to two (2) different currencies and a maximum of 30% (thirty percent) of the Contract Price.
- 11.3 The rate of rates of exchange used for pricing the tender shall be selling rate or rates of the Central Bank ruling on the date thirty (30) days before the final date for the submission of tenders.
- 11.4 Tenderers must enclose with their tenders, a brief justification of the foreign currency requirements stated in their tenders.

12. Tender Validity.

- 12.1 The tender shall remain valid and open for acceptance for a period of one hundred and twenty (120) days from the specified date of tender opening or from the extended date of tender opening (in accordance with clause 7.4 here above) whichever is the later.
- 12.2 In exceptional circumstances prior to expiry of the original tender validity period, the Employer may request the Tenderer for a

specified extension of the period of validity. The request and the responses thereto shall be made in writing or by cable, email or facsimile. A Tenderer may refuse the request without forfeiting his Tender Surety. A Tenderer agreeing to the request will not be required nor permitted to modify his tender, but will be required to extend the validity of his Tender Surety correspondingly.

13. Tender Surety.

- 13.1 The Tenderer shall furnish as part of his tender, a Tender Surety in the amount stated in the Appendix to Instructions to Tenderers.
- 13.2 The unconditional Tender Surety shall be in Kenya Shillings and be in form of a certified cheque, a bank draft, an irrevocable letter of credit or a guarantee from a reputable Bank or insurance company registered by Insurance Regulatory Authority, located in the Republic of Kenya and approved by the Employer.

The format of the Surety shall be in accordance with the sample form of Tender Surety included in these tender documents; other formats may be permitted subject to the prior approval of the Employer. The Tender Surety shall be valid for twenty eight (28) days beyond the tender validity period.

- 13.3 Any tender not accompanied by an acceptable Tender Surety will be rejected by the Employer as non-responsive.
- 13.4 The Tender Sureties of unsuccessful tenderers will be returned as promptly as possible, but not later than twenty eight (28) days after concluding the Contract execution and after a Performance Security has been furnished by the successful Tenderer. The Tender Surety of the successful Tenderer will be returned upon the Tenderer executing the Contract and furnishing the required Performance Security.
- 13.5 The Tender Surety may be forfeited:
 - (a) if a Tenderer withdraws his tender during the period of tender validity: or
 - (b) in the case of a successful Tenderer, if he fails
 - (i) to sign the Agreement, or
 - (ii) to furnish the necessary Performance Security.
 - (c) if a Tenderer does not accept the correction of his tender price pursuant to clause 23.

14. No Alternative Offers.

- 14.1 The Tenderer shall submit an offer, which complies fully with the requirements of the tender documents.
Only one tender may be submitted by each Tenderer either by himself or as partner in a joint venture.

14.2 The Tenderer shall not attach any conditions of his own to his tender. The tender price must be based on the tender documents. The Tenderer is not required to present alternative construction options and he shall use without exception, the Bills of Quantities as provided, with the amendments as notified in tender notices, if any, for the calculation of his tender price.

-Any Tenderer who fails to comply with this clause will be disqualified.

15. Pre-Tender Meeting

15.1 The Tenderer's designated representative is invited to attend a pre-tender meeting, which if convened, will take place at the venue and time stated in the Invitation to Tender. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. **(A Pre-Tender meeting & Site visit shall be held on 1st March, 2021 at 10:00am)**

15.2 The Tenderer is requested as far as possible to submit any questions in writing or by cable, to reach the Employer not later than seven days before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted in accordance with the following:

- (a) Minutes of the meeting, including the text of the questions raised and the responses given together with any responses prepared after the meeting, will be transmitted without delay to all purchasers of the tender documents. Any modification of the tender documents listed in --Clause 9 which may become necessary as a result of the pre-tender meeting shall be made by the Employer exclusively through the issue of a tender notice pursuant to Clause 7 and not through the minutes of the pre-tender meeting.
- (b) Non-attendance at the pre-tender meeting will not be cause for disqualification of a bidder.

16. Format and Signing of Tenders.

16.1 The Tenderer shall prepare his tender as outlined in clause 9 above and mark appropriately one set "ORIGINAL" and the other "COPY".

16.2 The copy of the tender and Bills of Quantities 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. Proof of authorization shall be furnished in the form of the written power of attorney which shall accompany the tender. All pages of the tender where amendments have been made shall be initialled by the person or persons signing the tender.

16.3 The complete tender shall be without alterations, interlineations or erasures, except as necessary to correct errors made by the Tenderer, in which case such corrections shall be initialled by the person or persons signing the tender.

SUBMISSION OF TENDERS

17. Sealing and Marking of Tenders.

- 17.1 The Tenderer shall seal the original and copy of the tender in separated envelopes, duly marking the envelopes as “ORIGINAL” and “COPY”. The envelopes shall then be sealed in an outer envelope.
- 17.2 The inner and outer envelopes shall be addressed to the Employer at the address stated in the Appendix to Instructions to Tenderers and bear the name and identification of the Contract stated in the said Appendix with a warning not to open before the date and time for opening of tenders stated in the said Appendix.
- 17.3 The inner envelopes shall each indicated the name and address of the Tenderer to enable the tender to be returned unopened in case it is declared “late”, while the outer envelope shall bear no mark indicating the identity of the Tenderer.
- 17.4 If the outer envelope is not sealed and marked as instructed above, the Employer will assume no responsibility for the misplacement or premature opening of the tender. A tender opened prematurely for this cause will be rejected by the Employer and returned to the Tenderer.

18 Deadline for Submission of Tenders.

- 18.1 Tenders must be received by the Employer at the address specified in clause 17.2 and on the date and time specified in the Letter of Invitation, subject to the provisions of clause 7.4, 18.2 and 18.3. Tenders delivered by hand must be placed in the “tender box” provided in the office of the Employer.

Proof of posting will not be accepted as proof of delivery and any tender delivered after the above stipulated time, from whatever cause arising will not be considered.
- 18.2 The Employer may, at his discretion, extend the deadline for the submission of tenders through the issue of an Addendum in accordance with clause 7, in which case all rights and obligations of the Employer and the tenderers previously subject to the original deadline shall thereafter be subject to the new deadline as extended.
- 18.3 Any tender received by the Employer after the prescribed deadline for submission of tender will be returned unopened to the Tenderer.

19 Modification and Withdrawal of Tenders.

- 19.1 The Tenderer may modify or withdraw his tender after tender submission, provided that written notice of the modification or withdrawal is received by the Employer prior to prescribed deadline for submission of tenders.
- 19.2 The Tenderer’s modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the

provisions for the submission of tenders, with the inner and outer envelopes additionally mark “MODIFICATION” or “WITHDRAWAL” as appropriate.

- 19.3 No tender may be modified subsequent to the deadline for submission of tenders.
- 19.4 No tender may be withdrawn in the interval between the deadline for submission of tenders and the period of tender validity specified on the tender form. Withdrawal of a tender during this interval will result in the forfeiture of the Tender Surety.
- 19.5 Subsequent to the expiration of the period of tender validity prescribed by the Employer, and the Tenderer having not been notified by the Employer of the award of the Contract or the Tenderer does not intend to conform with the request of the Employer to extend the period of tender validity, the Tenderer may withdraw his tender without risk of forfeiture of the Tender Surety.

TENDER OPENING AND EVALUATION

20 Tender Opening.

- 20.1 The Employer will open the tenders in the presence of the tenderers' representatives who choose to attend at the time and location indicated in the Letter of Invitation to Tender. The tenderers' representatives who are present shall sign a register evidencing their attendance.
- 20.2 Tenders for which an acceptable notice of withdrawal has been submitted, pursuant to clause 19, will not be opened. The Employer will examine the tenders to determine whether they are complete, whether the requisite Tender Sureties have been furnished, whether the documents have been properly signed and whether the tenders are generally in order.
- 20.3 At the tender opening, the Employer will announce the Tenderer's names, total tender price, tender price modifications and tender withdrawals, if any, the presence of the requisite Tender Surety and such other details as the Employer, at his discretion, may consider appropriate. No tender shall be rejected at the tender opening except for late tenders.
- 20.4 The Employer shall prepare minutes of the tender opening including the information disclosed to those present.
- 20.5 Tenders not opened and read out a tender opening shall not be considered further for evaluation, irrespective of the circumstances.

21 Process to be Confidential.

- 21.1 After the public opening of tenders, information relating to the examination, clarification, evaluation and comparisons of tenders and recommendations concerning the award of Contract shall not be disclosed to tenderers or other persons not officially concerned with such process until the award of Contract is announced.
- 21.2 Any effort by a Tenderer to influence the Employer in the process of examination, evaluation and comparison of tenders and decisions concerning award of Contract may result in the rejection of the Tenderer's tender.

22 Clarification of Tenders.

- 22.1 To assist in the examination, evaluation and comparison of tenders, the Employer may ask tenderers individually for clarification of their tenders, including breakdown of unit prices. The request for clarification and the response shall be in writing or by cable, facsimile or email, but no change in the price or substance of the tender shall be sought, offered or permitted except as required to confirm the correction of arithmetical errors discovered by the employer during the evaluation of the tenders in accordance with clause 24.
- 22.2 No Tenderer shall contact the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. If the tenderer wishes to bring additional information to the notice of the Employer, he shall do so in writing.

23 Determination of Responsiveness.

- 23.1 Prior to the detailed evaluation of tenders, the Employer will determine whether each tender is substantially responsive to the requirements of the tender documents.
- 23.2 For the purpose of this clause, a substantially responsive tender is one which conforms to all the terms, conditions and specifications of the tender documents without material deviation or reservation and has a valid bank guarantee. A material deviation or reservation is one which affects in any substantial way the scope, quality, completion timing or administration of the Works to be undertaken by the tenderer under the Contract, or which limits in any substantial way, inconsistent with the tender documents, the Employer's rights or the tenderers obligations under the Contract and the rectification of which would affect unfairly the competitive position of other tenderers who have presented substantially responsive tenders.
- 23.3 Each price or unit rate inserted in the Bills of Quantities shall be a realistic estimate of the cost of completing the works described under the particular item including allowance for overheads, profits and the like. Should a tender be seriously unbalanced in relation to the Employer's estimate of the works to be performed under any item or groups of items, the tender shall be deemed not responsive.
- 23.4 A tender determined to be not substantially responsive will be rejected by the Employer and may not subsequently be made responsive by the Tenderer by correction of the non-conforming deviation or reservation.

24 Correction of Errors.

Tenders determined to be substantially responsive shall be checked by the Employer for any arithmetic errors in the computations and summations. Errors will be corrected by the Employer as follows:

- (a) Where there is a discrepancy between the amount in figures and the amount in words, the amount in words will govern.
- (b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will prevail, unless in the opinion of the Employer, there is an obvious typographical error, in which case adjustment will be made to the entry containing that error.
- (c) The amount stated in the tender will be adjusted in accordance with the above procedure for the correction of errors and, with concurrence of the Tenderer, shall be considered as binding upon the Tenderer. If the Tenderer does not accept the corrected amount, the tender may be rejected and the Tender Security may be forfeited in accordance with clause 13.

25 Conversion to Single Currency.

- 25.1 For compensation of tenders, the tender price shall first be broken down into the respective amounts payable in various currencies by using the selling rate or rates of the Central Bank of Kenya ruling

on the date twenty eight (28) days before the final date for the submission of tenders.

- 25.2 The Employer will convert the amounts in various currencies in which the tender is payable (excluding provisional sums but including Day works where priced competitively) to Kenya Shillings at the selling rates stated in clause 25.1.

26 Evaluation and Comparison of Tenders.

- 26.1 The Employer will evaluate only tenders determined to be substantially responsive to the requirements of the tender documents in accordance with clause 23.
- 26.2 In evaluating tenders, the Employer will determine for each tender the evaluated tender price by adjusting the tender price as follows:
- (a) Making any correction for errors pursuant to clause 24.
 - (b) Excluding Provisional Sums and provision, if any, for Contingencies in the Bills of Quantities, but including Day works where priced competitively.
- 26.3 The Employer reserves the right to accept any variation, deviation or alternative offer. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the tender documents or otherwise result in the accrual of unsolicited benefits to the Employer, shall not be taken into account in tender evaluation.
- 26.4 Price adjustment provisions in the Conditions of Contract applied over the period of execution of the Contract shall not be taken into account in tender evaluation.
- 26.5 If the lowest evaluated tender is seriously unbalanced or front loaded in relation to the Employer's estimate of the items of work to be performed under the Contract, the Employer may require the Tenderer to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the relationship between those prices, proposed construction methods and schedules. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in clause 29 be increased at the expense of the successful Tenderer to a level sufficient to protect the Employer against financial loss in the event of subsequent default of the successful Tenderer under the Contract.
- 26.6 Firms incorporated in Kenya where indigenous Kenyans own 51% or more of the share capital shall be allowed a 10% preferential bias provided that they do not sub-contract work valued at more than 50% of the Contract Price excluding Provisional Sums to a non-indigenous sub-contractor.

AWARD OF CONTRACT

27 Award.

- 27.1 Subject to clause 27.2, the Employer will award the Contract to the Tenderer whose tender is determined to be substantially responsive to the tender documents and who has offered the lowest evaluated tender price subject to possessing the capability and resources to effectively carry out the Contract Works.
- 27.2 The Employer reserves the right to accept or reject any tender, and to annul the tendering process and reject all tenders, at any time prior to award of Contract, without thereby incurring any liability to the affected tenderers or any obligation to inform the affected tenderers of the grounds for the Employer's action.

28 Notification of Award.

- 28.1 Prior to the expiration of the period of tender validity prescribed by the Employer, the Employer will notify the successful Tenderer by cable, telefax or email and confirmed in writing by registered letter that his tender has been accepted. This letter (hereinafter and in all Contract documents called "Letter of Acceptance") shall name the sum (hereinafter and in all Contract documents called "the Contract Price"), which the Employer will pay to the Contractor in consideration of the execution and completion of the Works as prescribed by the Contract.
- 28.2 Notification of award will constitute the formation of the Contract.
- 28.3 Upon the furnishing of a Performance Security by the successful Tenderer, the unsuccessful tenderers will promptly be notified that their tenders have been unsuccessful.
- 28.4 Within twenty-eight [28] days of receipt of the form of Contract Agreement from the Employer, the successful Tenderer shall sign the form and return it to the Employer together with the required Performance Security.

29 Performance Guarantee.

- 29.1 Within twenty eight [28] days of receipt of the notification of award from the Employer, the successful Tenderer shall furnish the Employer with a Performance Security in an amount stated in the Appendix to Instructions to Tenderers.
- 29.2 The Performance Security to be provided by the successful Tenderer shall be an unconditional Bank Guarantee issued at the Tenderer's option by an established and a reputable Bank approved by the Employer and located in the Republic of Kenya and shall be divided into two elements namely, a performance security payable in foreign currencies (based upon the exchange rates determined in accordance with clause 35.4 of the Conditions of Contract) and a performance security payable in Kenya Shillings. The value of the two securities shall be in the same proportions of foreign and local currencies as requested in the form of foreign currency requirements.

29.3 Failure of the successful Tenderer to lodge the required Performance Security shall constitute a breach of Contract and sufficient grounds for the annulment of the award and forfeiture of the Tender Security and any other remedy under the Contract the Employer may award the Contract to the next ranked Tenderer.

30 Advance Payment.

An advance payment, if approved by the Employer, shall be made under the Contract, if requested by the Contractor, in accordance with clause 33.1 of the Conditions of Contract. The Advance Payment Guarantee shall be denominated in the proportion and currencies named in the form of foreign currency requirements. For each currency, a separate guarantee shall be issued. The guarantee shall be issued by a bank located in the Republic of Kenya, or a foreign bank through a correspondent bank located in the Republic of Kenya, in either case subject to the approval of the Employer.

APPENDIX TO INSTRUCTIONS TO TENDERERS

1. CLAUSE 2.1

Change to read, "This invitation to Tender is open to all tenderers in the category specified."

2. OMIT

Clauses 4.3, 5.1 (a), (f), (i), (j), 10.3, 10.4, 11.2, 11.3, 11.4, 15, 24(c), 25, 26.6, 30

3. ADD TO CLAUSE 13.1

All Tenders must be accompanied by a Tender Security of **Kshs. 200,000/-** in form of a bankers cheque, a bank guarantee from a reputable bank or an insurance bond issued by an insurance firm approved by the PPRA located in Kenya.

4. ADD TO 29.1 CLAUSE

Amount of performance security will be **Seven Per Cent (7%) of Tender Sum.**

5. ADD TO CLAUSE 29.2

Performance security shall not be divided in two elements and shall be payable in Kenya Shillings Only.

6. ADD TO CLAUSE 13.2

Tender security to be valid for 30 days beyond Tender Validity period.

7. ADD TO CLAUSE 17.2

Tenders shall be addressed to:

The Vice Chancellor
Masinde Muliro University of
Science and Technology,
P.O. Box 190-50100,
Kakamega.

and dropped in the tender box situated at the entrance to the Administration Block at Masinde Muliro University of Science and Technology Main Campus along Kakamega - Webuye Road on or before Friday 12th March, 2021 at 10.00 am.

Late tenders will not be accepted.

SECTION B

CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT

1. Definitions

- 1.1 In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated;

“Bills of Quantities” means the priced and completed Bill of Quantities forming part of the tender [where applicable].

“Schedule of Rates” means the priced Schedule of Rates forming part of the tender [where applicable].

“The Completion Date” means the date of completion of the Works as certified by the Employer’s Representative.

“The Contract” means the agreement entered into by the Employer and the Contractor as recorded in the Agreement Form and signed by the parties.

“The Contractor” refers to the person or corporate body whose tender to carry out the Works has been accepted by the Employer.

“The Contractor’s Tender” is the completed tendering document submitted by the Contractor to the Employer.

“The Contract Price” is the price stated in the Letter of Acceptance.

“Days” are calendar days; **“Months”** are calendar months.

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

“The Defects Liability Certificate” is the certificate issued by Employer’s Representative upon correction of defects by the Contractor.

“The Defects Liability Period” is the period named in the Appendix to Conditions of Contract and calculated from the Completion Date.

“Drawings” include calculations and other information provided or approved by the Employer’s Representative for the execution of the Contract.

“Employer” includes Central or Local Government administration, Universities, Public Institutions and Corporations and 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 for the execution of the Works.

“Site” means the place or places where the permanent Works are to be carried out including workshops where the same is being prepared.

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

“Employer’s Representative” is the person appointed by the Employer and notified to the Contractor for the purpose of supervision of the Works.

“Specification” means the Specification of the Works included in the Contract.

“Start Date” is the date when the Contractor shall commence execution of the Works.

“A Sub-contractor” 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 which are needed for construction or installation of the Works.

“A Variation” is an instruction given by the Employer’s Representative which varies the Works.

“The Works” are what the Contract requires the Contractor to construct, install, and turnover to the Employer.

2. Contract Documents

2.1 The following documents shall constitute the Contract documents;

- (1) Agreement,
- (2) Letter of Acceptance,
- (3) Contractor’s Tender,
- (4) Conditions of Contract,
- (5) Specifications,
- (6) Drawings,
- (7) Bills of Quantities or Schedule of Rates [whichever is applicable]

3. Employer’s Representative’s Decisions.

3.1 Except where otherwise specifically stated, the Employer’s Representative will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

4. Works, Language and Law of Contract.

- 4.1 The Contractor shall construct and install the Works in accordance with the Contract documents. The Works may commence on the Start Date and shall be carried out in accordance with the Programme submitted by the Contractor, as updated with the approval of the Employer's Representative, and complete them by the Intended Completion Date.
- 4.2 The ruling language of the Contract shall be English language and the law governing the Contract shall be the law of the Republic of Kenya.

5. Safety, Temporary works and Discoveries.

- 5.1 The Contractor shall be responsible for design of temporary works and shall obtain approval of third parties to the design of the temporary works where required.
- 5.2 The Contractor shall be responsible for the safety of all activities on the Site.
- 5.3 Anything of historical or other interest or significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Employer's Representative of such discoveries and carry out the Employer's Representative's instructions for dealing with them.

6. Work Programme and Sub-contracting

- 6.1 Within seven days after Site possession date, the Contractor shall submit to the Employer's Representative for approval a programme showing the general methods, arrangements, order and timing for all the activities in the Works.
- 6.2 The Contractor may sub-contract the Works (but only to a maximum of 25 percent of the Contract Price) with the approval of the Employer's Representative. However, he shall not assign the Contract without the approval of the Employer in writing. Sub-contracting shall not alter the Contractor's obligations.

7. The site.

- 7.1 The Employer shall give possession of all parts of the Site to the Contractor.
- 7.2 The Contractor shall allow the Employer's Representative and any other person authorized by the Employer's Representative, 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.

8. Instructions.

- 8.1 The Contractor shall carry out all instructions of the Employer's Representative which are in accordance with the Contract.

9. Extension of Completion Date.

- 9.1 The Employer's Representative shall extend the Completion Date if an occurrence arises which makes it impossible for completion to be achieved by the Intended Completion Date. The Employer's Representative shall decide whether and by how much to extend the Completion Date.

- 9.2 For the purposes of this Clause, the following occurrences shall be valid for consideration;

Delay by:-

- (a) force majeure, or
- (b) reason of any exceptionally adverse weather conditions, or
- (c) reason of civil commotion, strike or lockout affecting any of the trades employed upon the Works or any of the trades engaged in the preparation, manufacture or transportation of any of the goods or materials required for the Works, or
- (d) reason of the Employer's Representative's instructions issued under these Conditions, or
- (e) reason of the contractor not having received in due time necessary instructions, drawings, details or levels from the Employer's Representative for which he specifically applied in writing on a date which having regard to the date for Completion stated in the appendix to these Conditions or to any extension of time then fixed under this Clause was neither unreasonably distant from nor unreasonably close to the date on which it was necessary for him to receive the same, or
- (f) delay on the part of artists, tradesmen or others engaged by the Employer in executing work not forming part of this Contract, or
- (g) reason of delay by statutory or other services providers or similar bodies engaged directly by the Employer, or
- (h) reason of opening up for inspection of any Work covered up or of the testing or any of the Work, materials or goods in accordance with these conditions unless the inspection or test showed that the Work, materials or goods were not in accordance with this Contract, or
- (i) reason of delay in appointing a replacement Employer's Representative, or
- (j) reason of delay caused by the late supply of goods or materials or in executing Work for which the Employer or

- his agents are contractually obliged to supply or to execute as the case may be, or
- (k) delay in receiving possession of or access to the Site.

10. Management Meetings.

- 10.1 A Contract management meeting shall be held regularly and attended by the Employer's Representative and the Contractor. Its business shall be to review the plans for the remaining Work. The Employer's Representative shall record the business of management meetings and provide copies of the record to those attending the meeting and the Employer. The responsibility of the parties for actions to be taken shall be decided by the Employer's Representative either at the management meeting or after the management meeting and stated in writing to all who attend the meeting.
- 10.2 Communication between parties shall be effective only when in writing.

11. Defects.

- 11.1 The Employer's Representative shall inspect the Contractor's work and notify the Contractor of any defects that are found. Such inspection shall not affect the Contractor's responsibilities. The Employer's Representative may instruct the Contractor to search for a defect and to uncover and test any Work that the Employer's Representative considers may have a defect. Should the defect be found, the cost of uncovering and making good shall be borne by the Contractor. However, if there is no defect found, the cost of uncovering and making good shall be treated as a variation and added to the Contract Price.
- 11.2 The Employer's Representative 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 Appendix to Conditions of Contract.
- 11.3 Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified by the Employer's Representative's notice. If the Contractor has not corrected a defect within the time specified in the Employer's Representative's notice, the Employer's Representative will assess the cost of having the defect corrected by other parties and such cost shall be treated as a variation and be deducted from the Contract Price.

12. **Bills of Quantities/Schedule of Rates.**

- 12.1 The Bills of Quantities/Schedule of Rates shall contain items for the construction, installation, testing and commissioning of the Work to be done by the Contractor. The Contractor will be paid for the quantity of the Work done at the rates in the Bills of Quantities/Schedule of Rates for each item. Items against which no rate is entered by the Tenderer will not be paid for when executed and shall be deemed covered by the rates for other items in the Bills of Quantities/Schedule of Rates.
- 12.2 Where Bills of Quantities do not form part of the Contract, the Contract Price shall be a lump sum (which shall be deemed to have been based on the rates in the Schedule of Rates forming part of the tender) and shall be subject to re-measurement after each stage.

13. **Variations.**

- 13.1 The Contractor shall provide the Employer's Representative with a quotation for carrying out the variations when requested to do so. The Employer's Representative shall assess the quotation and shall obtain the necessary authority from the Employer before the variation is ordered.
- 13.2 If the Work in the variation corresponds with an item description in the Bill of Quantities/Schedule of Rates, the rate in the Bill of Quantities/Schedule of Rates shall be used to calculate the value of the variation. If the nature of the Work in the variation does not correspond with items in the Bill of Quantities/Schedule of Rates, the quotation by the Contractor shall be in the form of new rates for the relevant items of Work.
- 13.3 If the Contractor's quotation is unreasonable, the Employer's Representative may order the variation and make a change to the Contract Price, which shall be based on the Employer's Representative's own forecast of the effects of the variation on the Contractor's costs.

14. **Payment Certificates and Final Account**

- 14.1 The Contractor shall be paid after each of the following stages of Work listed here below (subject to re-measurement by the Employer's Representative of the Work done in each stage before payment is made). In case of lump-sum Contracts, the valuation for each stage shall be based on the quantities so obtained in the re-measurement and the rates in the Schedule of Rates.

- | | | |
|-------|--------------------------------------|----------------------------------|
| (i) | Advance payment- | No advance shall be paid. |
| (ii) | First stage (<i>define stage</i>) | AS PER PROGRESS |
| (iii) | Second stage (<i>define stage</i>) | AS PER PROGRESS |
| (iv) | Third stage (<i>define stage</i>) | AS PER PROGRESS |
| (v) | After defects liability period. | |

14.2 Upon deciding that Works included in a particular stage are complete, the Contractor shall submit to the Employer's Representative his application for payment. The Employer's Representative shall check, adjust if necessary and certify the amount to be paid to the Contractor within 21 days of receipt of the Contractor's application. The Employer shall pay the Contractor the amounts so certified within 30 days of the date of issue of each Interim Certificate.

14.3 The Contractor shall supply the Employer's Representative with a detailed final account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Employer's Representative shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 30 days of receiving the Contractor's account if it is correct and complete. If it is not, the Employer's Representative shall issue within 21 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 Employer's Representative shall decide on the amount payable to the Contractor and issue a Final Payment Certificate. The Employer shall pay the Contractor the amount so certified within 60 days of the issue of the Final Payment Certificate.

14.4 If the period laid down for payment to the Contractor upon each of the Employer's Representative's Certificate by the Employer has been exceeded, the Contractor shall be entitled to claim simple interest calculated pro-rata on the basis of the number of days delayed at the Central Bank of Kenya's average base lending rate prevailing on the first day the payment becomes overdue. The Contractor will be required to notify the Employer within 15 days of receipt of delayed payments of his intentions to claim interest.

15. **Insurance.**

15.1 The Contractor shall be responsible for and shall take out appropriate cover against, among other risks, personal injury; loss of or damage to the Works, materials and plant; and loss of or damage to property.

16. Liquidated Damages.

- 16.1 The Contractor shall pay liquidated damages to the Employer at the rate of Ksh 100,000 (One Hundred thousand shillings) per week for each week that the actual Completion Date is later than the Intended Completion Date except in the case of any of the occurrences listed under Clause 9.2. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

17. Completion and Taking Over.

- 17.1 Upon deciding that the Work is complete the Contractor shall request the Employer's Representative to issue a Certificate of Completion of the Works, upon deciding that the Work is completed.

The Employer shall take over the Site and the Works within seven days of the Employer's Representative issuing a Certificate of Completion.

18. Termination.

- 18.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. These fundamental breaches of Contract shall include, but shall not be limited to, the following;
- (a) the Contractor stops Work for 30 days continuously without reasonable cause or authority from the Employer's Representative;
 - (b) the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (c) a payment certified by the Employer's Representative is not paid by the Employer to the Contractor within 30 days after the expiry of the payment periods stated in Sub-Clauses 14.2 and 14.3 here above.
 - (d) the Employer's Representative 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.
- 18.2 If the Contract is terminated, the Contractor shall stop Work immediately, and leave the Site as soon as reasonably possible. The Employer's Representative shall immediately thereafter arrange for a meeting for the purpose of taking record of the Works executed and materials, goods, equipment and temporary buildings on Site.

Payment Upon Termination.

- 18.3 The Employer may employ and pay other persons to carry out and complete the Works and to rectify any defects and may enter upon the Works and use all materials on Site, plant, equipment and temporary works.
- 18.4 The Contractor shall, during the execution or after the completion of the Works under this Clause, remove from the Site as and when required within such reasonable time as the Employer's Representative may in writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to him, and in default thereof, the Employer may (without being responsible for any loss or damage) remove and sell any such property of the Contractor, holding the proceeds less all costs incurred to the credit of the Contractor.
- 18.5 Until after completion of the Works under this Clause, the Employer shall not be bound by any other provision of this Contract to make any payment to the Contractor, but upon such completion as aforesaid and the verification within a reasonable time of the accounts there for the Employer's Representative shall certify the amount of expenses properly incurred by the Employer and, if such amount added to the money paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with this Contract, the difference shall be a debt payable to the Employer by the Contractor; and if the said amount added to the said money be less than the said total amount, the difference shall be a debt payable by the Employer to the Contractor.

19. Corrupt Gifts and Payments of Commission

- 20.1 The Contractor shall not:
- (a) Offer or give or agree to give to any person in the service of the Employer any gifts or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract with the Employer or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract with the Employer.
 - (b) Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the Laws of Kenya.

20. **Settlement of Disputes:**

- 21.1 Any dispute arising out of the Contract which cannot be amicably settled between the parties shall be referred by either party to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed by the chairman of the Chartered Institute of Arbitrators, Kenya branch, on the request of the applying party.

APPENDIX TO CONDITIONS OF CONTRACT

THE EMPLOYER IS: The Vice Chancellor,
Masinde Muliro University of
Science and Technology,
P.O. Box 190-50100
Kakamega.

The name (and identification number) of the project is: **The PROPOSED FOOT BRIDGE AND ASSOCIATED WORKS**

TENDER NO. MMUST/005EST/2020- 2021

The Works consist of **Construction of the PROPOSED FOOT BRIDGE AND ASSOCIATED WORKS** at Masinde Muliro University of Science and Technology, Kakamega Town.

The Start Date shall be **as notified by the Employer.**

The Intended Completion Date for the whole of the Works shall be **Twenty Six (26 No.) Weeks from date of site possession.**

The following documents also form part of the Contract: **add Notification of Award.**

The Site Possession Date shall be **as notified by the Employer.**

The Site is located **Within Masinde Muliro University of Science and Technology Main Campus along Kakamega/Webuye Road, Kakamega.**

The Defects Liability Period is **6 Months from practical completion date.**

All Tenders must be accompanied by a Tender Security of **Kshs. 200,000/-** in form of a bankers cheque, a bank guarantee from a reputable bank or an insurance bond issued by an insurance firm approved by the PPRA located in Kenya.

The name and Address of the Employer's representative for the purposes of submission of tenders is:

The Vice Chancellor
Masinde Muliro University of
Science and Technology
P.O. Box 190-50100
Kakamega.

The tender opening date and time is **Friday 12th March, 2021** immediately after tender closing

The amount of performance security is **seven (7%) percent** of Tender Sum in form bank guarantee of the Tender Sum.

Liquidated and Ascertained damages: **at the rate of Ksh 100,000/= (One Hundred thousands) per week or part thereof.**

Period of honouring certificate: **30 days**

Percentage of certified value retained: **10%**

Limit of certified value retained: **5%**

Period between program updates is: **7 days**

The amount to be withheld for late submission of an updated program is **1% of certified amount to be paid to the contractor.**

The Price Adjustment clause **SHALL NOT** apply

Advance payment **SHALL NOT be** granted

The rate of exchange for calculation of foreign currency payment is – **Not applicable**

The schedule of basic rates used in pricing by the contractor is as attached (contractor to attach).

The minimum insurance covers shall be:

1. Minimum cover for insurance of the works, plant and material in respect of the contractor's faulty design **Ksh 10,000,000**
2. The minimum cover for loss or damage to equipment is **Ksh 1,000,000.**
3. The minimum for insurance of other property is **Ksh 1,000,000**
4. The minimum cover for personal injury or death insurance
 - a. For the contractor's employee is **Ksh 1,000,000**
 - b. And for other people is **Ksh 1,000,000**

The following events shall also be compensation events:

1. Nil
2. Nil
3. Nil
4. Nil

SECTION C:

STANDARD FORMS

NOTE:

**ALL FORMS IN THIS SECTION MUST BE FILLED WHERE APPLICABLE AS
THEY SHALL BE PART OF THE EVALUATION CRITERIA**

NOTE:

1.0 Tenderers must duly fill these Standard Forms as a mandatory requirement except item 1&2

2.0 Any tender returned with **unfilled Standard Forms** as indicated in 1.0 above shall be considered **non- responsive and shall automatically be disqualified.**

PERFORMANCE BANK GUARANTEE

To: The Vice Chancellor,
Masinde Muliro University
of Science and Technology,
P.O. Box 190-50100,
Kakamega.

Dear Sir,

WHEREAS (Hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No. dated to execute (Hereinafter called “the Works”);

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of:

Kshs. (*Amount of Guarantee in figures*)

Kenya Shillings (*Amount of Guarantee in words*),

and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of Kenya Shillings (*Amount of Guarantee in words*) as aforesaid without your needing to prove or to show grounds or reasons for your demand for 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 be valid until the date of issue of the Certificate of Completion.

SIGNATURE AND SEAL OF THE GUARANTOR

Name of Bank

Address

Date

FORM OF AGREEMENT

THIS AGREEMENT is made theday of

Between (Hereafter called “the Employer”) of
the one part and of **P.O. BOX**
(hereafter referred to as “the Contractor”) of other part.

WHEREAS the Employer is desirous that the Contractor executes
(hereinafter called “the Works”) located in the, and the Employer has accepted
the tender submitted by the Contractor for the execution and completion of such works and the
remedying of any defects therein for the fixed Contract Price of Ksh..... (Kenya
Shillings)

NOW THIS AGREEMENT WITNESSETH 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.
2. The following documents shall be deemed to form and shall be read and construed as part of this agreement i.e.
 - i. Letter of Notification of Award
 - ii. Letter of Acceptance
 - iii. Form of Tender
 - iv. Conditions of Contract and Appendix to Conditions of Contract.
 - v. Specifications
 - vi. Drawings
 - vii. Priced Bills of Quantities.
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the works and remedy any defects therein conformity to the provisions of the contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the works and the remedying of defects therein, the Contract price or such other sums 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 herein 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.....

Binding signature of Employer.....

Binding signature of the Contractor.....

In the presence of

(i) Name

Address.....

Signature.....

(ii) Name.....

Address.....

Signature.....

TENDER QUESTIONNAIRE

Please fill in block letters.

1. Full names of Tenderer:
.....
2. Full address of Tenderer to which tender correspondence is to be sent (including building, street and plot number):
.....
3. Telephone number (s) of Tenderer:
.....
4. Email Address of Tenderer:
.....
5. Name and Telephone of Tenderer's representative to be contacted on matters of the tender during the tender period:
.....
6. Details of Tenderer's nominated agent (if any) to receive tender notices. This is essential if the Tenderer does not have his registered address in Kenya (name, address, telephone, telex, telefax, email):
.....
.....

Signature of Tenderer

CONFIDENTIAL BUSINESS QUESTIONNAIRE

You are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2 (b) or 2(c) and (2d) whichever applies to your type of business.

You are advised that it is a serious offence to give false information on this Form.

Part 1 – General

Business Name

Location of business premises: Country/Town.....

Plot No..... Street/Road

Postal Address..... Tel No.....

Email address.....

Nature of Business.....

Current Trade Licence No..... Expiring date.....

Maximum value of business which you can handle at any time:

Kenya Shillings.....

Name of your bankers.....

Branch.....

Part 2 (a) – Sole Proprietor

Your name in full..... Age.....

Nationality..... Country of Origin.....

Citizenship details

Part 2 (b) – Partnership

Give details of partners as follows:

	Name in full	Nationality	Citizenship Details	Shares
1.
2.
3.
4.

Part 2(c) – Registered Company

Private or Public

State the nominal and issued capita of the company:

Nominal: Ksh.

Issued: Ksh.

Give details of all directors as follows:

	Name in full	Nationality	Citizenship Details*	Shares
1.
2.
3.
4.

Part 2(d) Interest in the Firm:

Is there any person/persons in the employment of MMUST WHO has interest in this firm?
Yes/No (Delete as necessary)

I certify that the above information is correct.

.....
Title

.....
Signature

.....
Date

*** Attach proof of citizenship**

KEY PERSONNEL

Qualifications and experience of key personnel proposed for administration and execution of the Contract. (Attach CV and copies of certificates which **MUST** be signed by owners of the certificate in blue ink)

(Note: The persons herein indicated shall be subject to approval by the PM to administer the project.)

Position	Name	Highest Qualification	Years Of Experience (General)	Years Of Experience In Proposed Position

I certify that the above information is correct.

.....
Title

.....
Signature

.....
Date

CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS

Work performed on works of a similar nature, complexity and volume over the last 5 years. (Notification of award and Completion Certificates **MUST** be attached)

Project Name	Name of Client	Type of Work and Year of Completion	Value of Contract (Ksh.)

I certify that the above works were successfully carried out and completed by ourselves.

.....

Title

.....

Signature

.....

Date

SCHEDULE OF ON-GOING PROJECTS

Details of on-going or committed projects, including expected completion date. (Letters of Acceptance, Notification of Award or Contract Agreements **MUST** be attached)

Project Name	Name of Client	Contract Sum (Kshs)	% Complete	Completion Date

I certify that the above works are currently being carried out by ourselves.

.....
Title

.....
Signature

.....
Date

**SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT
PROPOSED FOR CARRYING OUT THE WORKS**

Details of contractor's equipment to be used in carrying out the works. (Attach copies of log books, lease agreements, evidence of purchase or and other documentary evidence)

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?)

I certify that the above equipment are currently in our possession

.....
Title

.....
Signature

.....
Date

FINANCIAL REPORTS FOR THE LAST FIVE YEARS

(Balance sheets, Profits and Loss Statements, Auditor's reports, etc.

List below and attach copies)

1. _____.
2. _____.
3. _____.
4. _____.
5. _____.
6. _____.
7. _____.
8. _____.
9. _____.
10. _____.

**EVIDENCE OF FINANCIAL RESOURCES TO MEET QUALIFICATION
REQUIREMENTS.**

(Cash in Hand, Lines of credit, e.t.c. List below and attach copies of supportive documents.)

1. ._____.
2. ._____.
3. ._____.
4. ._____.
5. ._____.
6. ._____.
7. ._____.
8. ._____.
9. ._____.
- 10 ._____.

NAME, ADDRESS AND TELEPHONE, EMAIL OF BANKS

(This should be for banks that may provide reference if contacted by the Employer)

NAME	ADDRESS	TELEPHONE	EMAIL	FACSIMILE

DRAFT PROGRAM OF WORKS IN THE FORM OF A BAR CHART

**DETAILS OF LITIGATIONS OR ARBITRATION PROCEEDINGS IN WHICH
THE TENDERER IS INVOLVED AS ONE OF THE PARTIES**

1. _____.
2. _____.
3. _____.
4. _____.
5. _____.
6. _____.
7. _____.
8. _____.
9. _____.
10. _____.

SECTION D:

GENERAL SPECIFICATIONS

GENERAL ITEMS

Materials generally

All materials shall be new and of the qualities and kinds specified herein and equal to approved samples.

Deliveries shall be sufficiently in advance to enable samples to be taken and tested if required. No materials shall be used until approved; materials, which are damaged in any way, shall be immediately removed from site at the contractor's expense

Alternative to proprietary brands or specified standards

Where materials are specified to a particular standard or by their proprietary names of where fittings are specified by catalogues numbers of description, the contractor may offer alternatives which are of equal quality. In such event the tender must be qualified by listing the various alternatives to be used. The successful tenderer must then subsequently submit samples of the alternative materials to the project manager as soon as practicable after the award of the contract, and must obtain his written approval before purchasing.

Measuring and testing equipment

The contractor shall provide on the site the following equipment for carrying out measuring and control and tests and maintain the same in full working order; if relevant to the scope of the works:

- a) Straight edges 3 metres and 4 metres long for testing accuracy of finished surface.
- b) 150mm steel cube moulds with base plates and tamping rods to B.S. 1881
- c) two 30 metres steel tapes
- d) one dumpy or quick set level and staff

Minor details of construction

Minor details of construction which are fairly and obviously intended and which may not definitely be referred to in this specification and/ or drawings, but which are usual in sound building practice and are essential to the works, shall be considered as included in the contract sum.

EXCAVATION AND EARTHWORKS

DEFINITIONS

Removing trees, hedges and the like

The removal from site of trees, stumping, roots hedges bushes, scrub, under growth and the like shall be deemed to be included with the items for cutting down and grubbing up roots.

Surface level

The term “surface level” shall mean ground level after clearing site.

Clearing site

Clearing site shall include the site of all loose debris and rubbish, bushes, scrub, Undergrowth, vegetable and small trees (i.e. not exceeding 600mm girth) and grubbing up their roots.

Rock

The term “rock” shall mean any natural materials, which cannot be dislodged by a pick and which can only be removed by the use of compressors or by blasting or wedging. This classification does not include materials that can be removed by other means other than drilling and blasting or drilling and wedging, but which for reasons of economy in excavating, the contractor prefers to remove by drilling and wedging. Unless specifically stated thereafter, the contractor must assume that permission to use explosives to remove rock will be refused and he must therefore price for removing rock by compressors etc.

“ Tuff” will not be treated as rock for the purpose of extra payment to the contractor under clause d5 of the S.M.M. should isolated boulders of a different harder nature be located in the course of excavations, these will be treated as rock.

GENERALLY

Levels

The contractor shall be responsible for setting up and maintaining an accurately ascertained datum level for the work. Immediately following the issue of the order to commence, the contractor shall carry out and record a check grid of the site which shall be agreed between the Architect and the Contractor within one week of the above order being given: no alterations of levels shall be undertaken until an agreement has been reached and the Architect’s instructions have been received.

Nature of the soil

It will be deemed that the contractor has inspected the drawings and the site and consulted all available information concerning subsoil conditions before submitting the tender. In making information available on subsoil conditions, the Employer does not in any way absolve the contractor from his responsibilities, nor is it guaranteed that similar conditions apply to any specific part of the site.

Unauthorized excavations

The contractor is prohibited from making excavations other than those approved by the project manager as necessary for the works.

“filling”

Bottoms of excavations to be approved

The contractor shall give the engineer at least 48 hours notice when the excavations will be ready for inspection. The bottom of every excavation will be inspected by the

Engineer and the level thereof agreed between the Engineer and the Contractor. If a good bearing bottom is not obtained at the level shown, the Engineer is to be informed. No concrete is to be laid until the bottom has been approved and the level thereof taken. Any concrete work or other work done before such approval, shall, if so directed be removed and new work substituted after excavations have been approved, at the Contractors expense. Notwithstanding such approval any bottom which becomes water-logged or otherwise spoilt after approval, shall be cleaned out and reformed to the Engineer's approval before any concrete is placed.

Before placing concrete or masonry on rock surfaces, the surfaces shall be leveled off or shelved to a slope not exceeding 25mm per 300mm.

Disposal of excavated material

Vegetable soil shall be spread and leveled where directed by the Engineer on site. surplus excavated where directed or required shall be removed from the site to a tip, the location of which first be approved by the Project Manager in writing. All fees and charges in connection shall be deemed to be included in the Contract Sum.

Excavation below required levels

Should any excavation be taken below the required levels or depth necessary to obtain a suitable bottom, the Contractor will be required to fill in excavation to the proper level with concrete of the same specifications for the foundation, at his own expense

Timbering, planking, strutting, etc

The contractor shall provide all necessary timbering, planking, strutting, etc to uphold the faces of excavation, which shall only be removed when it is safe to do so.

Where the Project Manager instructs or agrees that it is necessary for the safety of the works to leave in certain timbering, planking and strutting etc., such timber shall be measured and agreed before covering up.

Filling

Return filling foundations and filling to make up levels under floors and pavings shall be deposited until the formation level has been approved by the Project Manager.

In no case shall fill be deposited until the formation level has been approved by the Engineer

In no case shall fill be deposited on a muddy foundation. Filling shall be deposited in layers not exceeding 150mm in depth before compaction and shall be compacted by rolling, pneumatic tamping or other approved means over whole of the area.

If necessary the filling shall be allowed to dry or be moistened to the correct moisture content before compaction. The finished surface shall be approved by the Project manager prior to further construction work thereon.

The Contractor shall afford every assistance to the specialist executing site sterilization to enable each layer to be treated.

No excavation or foundation work shall be filled in or covered up until all measurements necessary for the adjustment of variations have been made. Walling shall not be built upon the foundation four days after depositing of concrete.

CONCRETE WORK

DEFINITIONS

Designation of concrete mixes

The various mixes of concrete are designated in the subsequent measured items by the following criteria:-

Nominal mixes; by the weight proportion of whole bags of ordinary Portland cement to fine and coarse aggregate and by the maximum size of coarse aggregate. The contractor shall regularly submit details giving specific gravities and moisture content of aggregate.

Tamping

The term “tamping” as used herein in conjunction with the phrase “treating surfaces of unset concrete” shall mean the final compaction and surface finish to be applied top unset concrete beds or the like, with steel shod beam tamper, either manually or mechanically operated unless otherwise stated. The resulting surface shall have a slightly ribbed appearance.

Keying

The term “keying” as used herein in conjunction with the phrase surfaces of unset concrete” shall mean the preparation of bed, or the like, to receive in-situ pavings by raking with a standard horticultural rake whilst the concrete is still green and when the concrete is set and cured, protecting the raked surfaces with a layer of clean sand and removing the sand immediately before the in-situ paving is laid.

Precast concrete units

Unless otherwise described in the measured items, precast concrete units are deemed to be basically rectangular in cross section and rough on exposed faces. Reinforcement bars shall have hooked ends, bedding sand pointing mortar shall be either cement or cement-lime mortar, as appropriate, and units shall be deemed to be fixed by hoisting bedding and building in unless otherwise described.

Nominally non-reinforced units may contain any reinforcement the Contractor may wish to introduce for handling purposes.

GENERALLY

STANDARDS

The whole of Concrete work and testing thereof shall comply with B.S Code of practice no. 110 and with the subsequent clauses of this document and shall be carried out in strict accordance with the working drawing and instruction of the Project Manager.

A competent person shall be employed whose first duty will be to supervise all stages in the preparation and placing of the concrete. All cubes should be made and site tests carried out under his direct supervision. This person shall also be responsible for keeping an accurate record of the dates on which concrete is poured.

Bar bending schedules

The Consultant Structural Engineer will prepare and provide all necessary bar bending schedules and explanatory details.

MATERIALS

Samples

Samples of all materials are to be submitted for approval of the Project Manager at least one week before it is desired to commence deliveries. All condemned materials are to be removed from the site within 24 hours.

Cement

Cement unless otherwise specified shall be that of a brand manufactured in the country or region and approved by the Engineer and shall comply with the requirements of B.S 12 and a Manufacturer's certificate of test in accordance with B.S 12, shall be supplied for each consignment delivered to the site. Provided that the approval of the Engineer is obtained, the cement may vary from B.S 12, in that up to 10% of the total weight may be reactive volcanic ash and the quantity of insoluble residue may exceed that specified by B.S 12.

Portland cement	K.S.02-1262
Rapid hardening cement	K.S.02-1262
Sulphate resisting Portland cement	B. S. 4027

Rapid hardening cement may be used in lieu of ordinary Portland cement only with the prior approval of the Project Manager, provided that all conditions applying to its use are strictly observed. Any additional expense in connection with the use of such cement shall be borne by the Contractor.

The use of high alumina will not be permitted.

All cement shall be delivered to the site in sealed bags bearing the mark of the manufacturer. Rebagged cement, cement in plain bags and cement in torn bags will not be allowed on the site.

Each consignment of cement shall be accompanied by the manufacture's certificate showing that the representative sample of the consignment has been tested and complies with the appropriate specifications. From time to time, as requested by the Project Manager, copies of the cement manufacture's test certificates shall be delivered to the Engineers of his representative on the site promptly, but such documents shall not preclude the Engineer from rejecting any cement which does not in every way comply with the specification.

Any comment which has failed to pass the tests or has been damaged by water or contaminated in any way on site shall immediately be put into bags and removed from the site.

Aggregates

Aggregate shall comply with B.S 882. or K.S.

Each type of aggregate shall be obtained from one approved source, capable of maintain adequate supplies of consistency graded material throughout the Contract.

Aggregates for exposed concrete shall be free from all impurities likely to cause discoloration and shall be of consistent colour throughout the work.

Fine aggregates and sand shall be clean, sharp, coarse, hard material and equal at all times to the samples, which shall be deposited with and approved by the Engineer. The caustic soda test for organic impurities shall show a colour not deeper than that of the standard solution. The settling test for natural sand shall be made and after being allowed to settle for three hours the layer of silt deposit on the coarse material shall not exceed 10%.

The Contractor shall supply all necessary equipment for the testing of fine aggregate and sand for the use of the Project Manager.

Coarse aggregate shall be hard, clean gravel or broken stone from approved quarries and shall be free from earth, decomposed stone, and extraneous matter they shall conform to K. S. 02-95 and shall be "Graded aggregate" 20mm to 5mm. Thin, elongated, friable, flaky or laminated pieces, mica or shale shall only be present in such small quantities as not to affect adversely the strength and durability of the concrete. The amount of fine particles occurring in a free state or as loose adherent shall not exceed 1% when determined by the laboratory sedimentation test. After twenty-four hours in water, a previously dried sample shall not gain more than 10% in weight.

Each grade of aggregate shall be stored in the works in separate heaps so that there shall be no possibly of any inter- mixing. Any materials, which have become inter-mixed, shall be removed from the site forthwith by the Contractor.

If, in the opinion of the Project Manager, the aggregate is dirty or adulterated in any manner, it shall be washed and/or screened by the contractor.

Graded samples of all types of aggregate each weighing 10 Kg., shall after approval, be kept on site behind glass for visual checking of subsequent deliveries for grading, shape, and where applicable, colour.

Reinforcement

Reinforcement shall comply with the following standards:-

- a) Mild steel rod reinforcement shall comply with B.S 4449 or K.S.02-22
- b) High tensile steel reinforcement shall be either cold worked ribbed steel bars of section complying with B.S 4461 or hot rolled deformed high tensile bars having a

guaranteed minimum yield stress of 4200Kg/sq cm (60,000 p.s.i) and other physical qualities in accordance with B.S 4449.

- c) Welded steel fabric reinforcement shall comply with B.S 4483. All reinforcement shall be in the “diameter and metric “range and the substitution of “square twisted” or imperial range shall be allowed but only at no extra cost to the Employer.

The contractor will be required to submit at his own expense certified test data of the following characteristics: ultimate tensile stress, yield point stress, elongation, cold bed test. Should such certificates not be submitted by the manufacture, the Contractor shall have the requisite tests made at his own expense at an independent testing laboratory.

Expansion joints- filler and sealers

Filler shall be “Flexcell” impregnated fiberboard joint filler.

Top edges of filler to be covered with plastic tape as a bond-breaking barrier to filling with sealer.

- a) sealers to be:-

- i) “pli-astic” grade 99 applied hot with a machine pourer as recommended by the manufactures. Prior to application surfaces to be treated with a brush coat of Expandite No. 3 primer or
- ii) “plastijoin” hard-applied bitumen putty sealant. Prior to application surfaces to be primed as last, or
- iii) “High duty sealer cold applied two part sealant”. Porous surfaces to be primed with Expandite No. 20. Primer

- b) The appropriate sealers are specified in the measurement work hereafter and must all be applied and used strictly in accordance with the manufacture’s printed instructions.

Water

Water shall be from the mains and kept free of any impurities and acid or alkaline substance in suspension or in solution, and shall be stored in proper storage tanks to the approval of the Project manager.

Storage of materials

Cement shall be kept dry and used in rotation of deliveries. If delivered in bags these shall be stored off the ground in a well-ventilated and weatherproof shed used exclusively for this purpose.

The shed is to be sufficiently large to contain a working stock and provided with partitions or such other means as may be necessary to ensure the effectual separation of the various consignments and type of cement. Stacking of cement in bags over a height of ten bags will not be permitted. Cement may be delivered in bulk containers provided additional suitable arrangements are made for bulk storage on site to the approval of the Project Manager.

Aggregates shall be stored in a mixer positions on drained concrete paved areas, with stout diving walls between different sizes and types of aggregates.

Reinforcement shall be stored by type, size and length, either off the ground or on clean surfaced areas, and shall be kept free from rust.

Proportions of concrete mix

The quantity of cement shall be measured by weight and each batch of concrete is to use one or more whole bags. The quantity of fine aggregate and coarse aggregate shall be measured separately by weigh batching plant. Volume mixing will not be permitted.

For grading tests the Contractor shall supply and deliver at his own cost to the Nominated Testing Authority, samples of the aggregates which the Contractor propose to use, consisting of not less than 50 kilograms weight in coarse aggregate and not less than 25 kilograms weight in fine aggregate. It is the Contractor's responsibility to ensure that the subsequent deliveries of aggregate conform to the grading analysis of the approved samples.

The proportions of materials to be used for the preliminary cube tests and subsequent batching, shall be ascertained by calculation from the results of the aggregate grading tests carried out by the Nominated Testing Authority.

Preliminary concrete cubes shall be made by the Contractor on site as required by the Project Manager and tested by the Nominated Tested Authority. As a result of these tests definite weights of each material for batching shall be ascertained and agreed with the Project Manager. Thereafter these proportions shall be adhered to throughout the works and may be varied only by instructions given by the Project Manager.

The weight of damp aggregate must be adjusted to take into account the weight of water in the aggregate, and this in turn will effect the amount of water to be added into the mix.

Throughout the carrying out of the Contract, "works cube tests" are to be made from Concrete drawing from newly laid concrete or concrete about to be placed in position, such cubes being made when directed by the Project Manager and in his presence. Such cubes shall be made in 150 mm cube steel or cast iron moulds and shall be marked and cured strictly in accordance with the Appendices of the Code of Practice, and shall be forwarded carriage paid in time for testing at the required age to a testing laboratory to be nominated by the Project Manager.

Three cubes shall be made on each occasion, concrete for each cube being from different batch. Two cubes shall be forwarded in time for testing in twenty-eight days. Each cube shall be marked with the date of casting and a distinctive reference number in accordance with a system agreed by the Project Manager.

Proportions of concrete mix

A record shall be kept of the position from which the concrete for each set of cube was drawn, or to which it was about to be placed.

At least three sets of three cubes shall be cast during each week concrete is being cast including sets of cubes of each quality of concrete used during the period, or at a frequency agreed by the Project Manager.

Concrete is required to have the properties and give the strength in Newton's per square millimeter as follows:-

	CLASS	MIN VOLUMETRIC RATIO OF MIX	MAX SIZE OF AGGREGATE	MAX WATER TO CEMENT RATIO	MIN CRUSHING STRENGTH OF CUBES IN N/Sq mm	
TEST					7 DAYS	28 DAYS
A	30/20	1: 1:2	20	0.45	23	30
B	25/20	1:1.5:3	20	0.50	19	25
C	20/21	1:2:4	20	0.58	15.5	20
D	15/25	1:3:6	25	0.60	11	15
E	10/25	1:4:8	25	0.60	7.5	10

Proportions of concrete mix

The above properties and crushing strengths are to be considered as the minimum standard that will be accepted in the finished works.

If the strengths required in the table are not attained and maintained throughout the carrying out the Contract, the Contractor will be required to increase the proportions of cement or substitute aggregates at his own cost so as to give concrete which does comply with the requirements of this clause. The Contractor may be required to remove and replace at his own cost any concrete which fails to attain the required strength as ascertained by the Works Cube Tests.

Testing of materials generally

The Contractor shall include in his tender prices for the execution on his part of operations specified for testing herein and for supply of the requisite equipment. After initial testing and approval of materials, it is the Contractor's responsibility to ensure and to demonstrate by the submission of further similar sample when so required that subsequent deliveries conform to the quality, grading and (where applicable), colour of the approved samples.

Testing of cement

Before work commences and when subsequently directed, the Contractor shall take 6Kg samples in accordance with BS 12 procedure, of cement and deliver this in tins approved by the Project Manager, to an approved Testing Laboratory for testing.

Each consignment of cement to the site shall be accompanied by the manufacture's advice note and forwarded without delay to the Engineer, shall be delivered to the site at least 7 days before it is intended to be used in the works so that the required tests may be carried out without retarding the progress of works

Testing of aggregates

Before work commences and when subsequently instructed, the Contractor shall take the site samples methods given in B.S. 812, or K.S. 02-95 and deliver these to the Nominated Testing Authority for testing.

Such samples shall be submitted for approval at least 7 days before they intended to be used in the works.

Testing of reinforcement

Should the Project Manager require reinforcement to be tested, it shall be tested at the Contractor's expense and representative test pieces of such reinforcement to be used in the works are to be sent to an approved laboratory for testing.

Manufacture's test reports of reinforcement shall be supplied to the Engineer for all reinforcement to be used in the works.

Testing of concrete in the field

a. Trial mixture

Prior to the commencement of the actual concreting work, the Contractor shall make, or have made, preliminary test Cubes in accordance with B.S 1881, using the aggregate from which sample were taken from for grading analyses. Six cubes are to be made on each occasion, 3 for testing at 7 days and 3 for testing at 28 days. The cube strength obtained in the preliminary tests should show crushing strength of at least $1 \frac{1}{3}$ times the specified works cube test strengths.

The preliminary test cubes will be submitted to an approved Testing Authority for crushing, and from the results of these test, definite weights of each material for batching will be ascertained, and agreed with the Project Manager.

If any of the concrete materials are to be varied or obtained from different source, a further set of preliminary Cube tests, using the proposed new materials, will be required.

b. workability

the total water content in the mixture determines its consistency and once a consistency of a trial has been approved it must remain constant throughout the contract.

In order to help the concrete maintain the desired consistency the slump of an approved trial mix shall be measured and thereafter all mixes must give the slump as the approved slump shall be in order of 75 mm for hand compacted concrete and 35mm for vibrated concrete. The slump test shall be made on concrete actually being placed in the works at the commencement of each period of concrete placing and at such other times as instructed.

c. Test Specimens

The moulds for test cubes shall be of metal and true to shape to give a 150mm cube and shall be well oiled before filling. The mould shall be filled with concrete taken from that actually placed in the works the concrete being selected by the Project Manager from the point as near as possible to the position of placing. The filling of the moulds shall be done immediately after the selection of the sample concrete and in such a way that the concrete in the moulds be truly representative of that in the works.

The concrete shall be placed in the moulds in three layers of equal thickness, each layer being rammed with 25 strokes of a steel bar 40mm diameter, (or equivalent), weighing 2 Kg. If the concrete in the works is to be consolidated by mechanical vibration, the test cube moulds shall be likewise vibrated after filling. Each cube shall be inscribed with the date of manufacture and identification mark.

A record shall be kept for each batch of cubes showing the position in the works, which the concrete represents, the date of manufacture, and slump of the concrete, particulars of the cement and aggregate use, a statement of whether or not the cubes were vibrated and other information relating to the subsequent history of the cubes.

The moulds containing the test shall be stored for 24 hours on the site in a damp place free from vibration. At the end of this period the cubes shall be taken from the moulds and stored damp sand for 20 days in they are to be tested 28 days or for 4 days if they are to be tested at 7 days.

The Contractor shall be instructed about the dispatch of the cubes to an approved laboratory and will pay all costs relating to the tests. A set of three cubes will be required for not more than every 60 cubic metres of concrete placed in the works.

d. Quality of Specimen

The test specimens shall have the compressive strength specified for each quality of concrete at the appropriate age as given herein.

If the required strength is not obtained at 28 days, the Contractor will be required to cut out and reconstruct all work represented by the test specimens at his own expense with all dispatch, always provided the Project Manager may first permit further tests, at the Contractor's expense, to prove the quality of the deposited concrete.

In the case of seven day Works cube Tests proving unsatisfactory, the works may be stopped, but shall not be liable to rejection until the result of the twenty eight-day test is known.

In the event of the results of the twenty eight-day Works Cube Tests Proving unsatisfactory, the work represented shall be immediately be liable to rejection. The Contractor may, however be given the option of cutting three specimens from the completed work subject to the direction of the Project Manager, and preparing therefrom test cubes or cores, which shall be sent to the Test Laboratory for testing as Works Cubes Test.

Should the average strength of these specimens attain the specified Minimum twenty-eight day strength, the work will, subject to the Engineer's discretion, be accepted. Alternatively, the Project Manager may instruct the Contractor to make a loading test as described hereinafter. The cost of all cutting, preparation of specimen, testing and making good the portions of the structure affected, shall be borne by the Contractor.

The cost of all delays on site due to concrete not attaining the desired strength, or caused by investigation of defects, cutting away and making good, shall be entirely the Contractor's responsibility.

Damaged or materials unsatisfactory

All materials, which have damaged, contaminated or have deteriorated, or which do not comply in any way with the requirement of the specification, shall be immediately removed from site.

No materials shall be stored or stacked on suspended floors without the Engineers prior approval.

Should any of the samples tested be found, in the opinion of the Project manager in any respect unsatisfactory or likely to produce unsound work. The whole consignment or load from which samples were taken will be rejected, and the Contractor shall forthwith remove it from site. Notwithstanding that any sample of the material may have passed the test, the Engineer may later reject such consignment or loads if he shall decide that the quality has deteriorated.

The contractor at his own expenses shall remove from the site, without delay all rejected material. Any delay caused by such rejection will not in any relieve the Contractor from his responsibility with regard to the completion within the limit(s) specified. Any bag of cement that is opened shall be used on the same day or be discarded from the works.

Plant and method

Before the commencement of any work, the Contractor shall submit the following for the Project Manager's written approval:-

- a. The concreting method, including the size and type of machines for weighing and mixing concrete and the methods of transporting, placing and compacting.
- b. Details of formwork proposals, clearly indicating the general method of construction and assembly, fixing of linings together with positions of joints and the make and type of mould oil proposed.

- c. The proposed position and type of every construction joint not already shown in the Project Manager's drawings.

Such approval by the Engineer shall not be deemed to relieve the Contractor of his obligations to comply with any of the provisions herein.

Measurement and mixing

All cement is to be measured by weight, the 50Kg bag of cement being used as a unit. The amount of water shall be the minimum required to produce a dense cohesive concrete of adequate workability, to be determined by trial mixes. This amount shall be accurately gauged and adjusted from time to time to compensate for variations in the moisture content the aggregate by an approved method.

All concrete shall be mixed in batch type mechanical mixer of approved type having a drum rotating about a horizontal or inclined axis. The speed of the drum is to be not more than twenty and not less than fourteen revolutions per minute.

Each mixer is to be fitted with water measuring device capable of accurate measurement to one gallon for one cubic yard mixers and pro-rata for small sizes and so arranged that the accuracy is not affected by variations in the pressure of water supply line. The fine and coarse aggregate and the cement shall be mixed for at least four turns, after which the required amount of water shall be gradually while the mixer is in motion and the concrete mixer for not less than two minutes to a uniform colour and consistency.

The volume of concrete mixed in any one batch is not to exceed the rated capacity of the mixer.

The whole of the mixed batch is to be removed before materials for a fresh batch enter the drum.

Concrete as mixed in accordance with the foregoing shall not be modified by the addition of further water or in any other manner. On the cessation of work, including all stoppages exceeding twenty minutes or any change of type of cement used in the mix, the mixer and all handling plant shall be washed out with clean water. At least one sump test shall be made each day concreting is in progress under the supervision of the Project Manager.

Reinforcement

Reinforcement shall be free from all loose scale, loose rust, oil, grease or similar defects, immediately before placing the concrete. It shall be bent cold exactly to detail similar defects, immediately before placing the concrete. It shall be bent cold exactly to detail using an approved bending machine. Hooks, bends, etc. where not specifically detailed, are to be in accordance with B.S 4466. Each bundle of bent bars shall be clearly tagged with the bar list number.

Reinforcement shall be placed in the exact position shown on drawings with all intersections tack welded or securely tied with 16 gauge soft steel tying wire. The designated cover shall be maintained by approved spacers, chairs, bolsters or ties fixed to the reinforcement. These shall be dense concrete left with a wire brushed

surface or be dipped in grout before fixing. These blocks are particularly important where the surface of the concrete is exposed to the weather or dampness.

The Contractor must ensure that the bars are securely fixed so as to maintain their indicated positions during the progress of pouring, tamping or vibration of concrete. Six chairs are to be provided around each column to hold top steel in position and are to be made up of mild steel bars of adequate diameter. The cost of providing and fixing these steel chairs must be allowed for by the Contractor in his rates of reinforcement generally.

No laps or splices in bars shall be made except those detailed on the drawings without prior approval of the Project Manager. The size and position of the reinforcement bars or mesh shall be approved the Project Manager, before concreting commences. The insertion of reinforcement into concrete already placed the lengthening of bars by welding and re-bending of incorrectly bent bars will not be permitted.

For concrete having exposed surfaces, reinforcement shall be assembled and placed in such a manner as to avoid any damage to formwork faces.

Where reinforced concrete slabs or wall are constructed against tanking, care shall be taken in position reinforcement to avoid damage to tanking.

Unless otherwise shown upon the Engineer drawings, or specified in B.S 8110 the reinforcement bars shall be given the following is greater.

In columns, a cover of concrete of 40mm to main reinforcement or the size of the bar, whichever is greater.

In foundation and column bases a cover of 50mm to main reinforcement or size of the bar, whichever greater.

Inspection of reinforcement

When the placing of reinforcement for a particular section of the works in completed and before concrete commences, the reinforcement will be inspected by the Project Manager and no concrete shall be placed until the Project Manager's approval has been given. The Contractor shall give the Project Manager 48 hours notice of the time when the reinforcement will be ready for inspection.

Formwork

Formwork shall be true to line, level, face and profile and of robust construction, adequately framed, braced, strutted, cramped, tied and propped to restrict deformation due to the constructional loads to not more than 3 mm, and to entirely eliminate deformation of the form faces by warping or buckling, wire ties will not be permitted. formwork shall be grout-tight under all conditions including vibration when specified or used.

Formwork shall be designed to allow prefabrication of conveniently sized elements to facilities ease of handling and assembly, to permit striking without force, shock or any damage whatever to the concrete member or formwork face and permit the removal of sides without disturbing soffits. Propping shall be carried down to an approved

bearing, shall not be supported by timber floors and shall be arranged so that formwork may be lowered smoothly.

Re-propping will not be permitted. Provision shall be made for cleaning out and draining.

Formwork shall be constructed of material or lined with materials as may be necessary to achieve the finishes specified herein and in such a manner as to eliminate screw or nail head imperfections.

Before each use, for faces shall be treated with the minimum amount of an approved mould oil necessary to obtain a clean release. Mould oil shall not come into contact with the reinforcement.

The use of cement retarders will not be permitted except where a key for other finishes is required.

Before the placing of the concrete, bolts and fixing shall be in position and cores and other devices used for forming openings, holes, pockets, recesses, ducts or other cavities shall be fixed to the shuttering.

Formwork to soffits of beams shall be cambered upwards to a total rise at the centre of the span of one centimeter per metre of span.

Immediately prior to concreting, formwork shall be thoroughly cleaned out and rechecked. No placing shall commence until the Project Manager has inspected the formwork and given his responsibility for its sufficiency. After striking, formwork shall be cleaned, stacked and protected and before re-use shall be cleaned, stacked and protected and before re-use shall be serviced, made good or replaced with new as may be necessary to maintain the finish standard specified.

Tolerances

The maximum tolerances within which Concrete Work shall be constructed are as follows:

- | | |
|--|-------|
| 1. All setting out dimensions, and dimensions, horizontally and vertically | ±5mm |
| 2. Sections of concrete members | ±3mm |
| 3. Levels of floor slabs, beams, lintels etc | ±5 mm |
| 4. Plum of columns and walls in full building height | ±3 mm |
| 5. Plumbing of columns and walls in full building height | ±6 mm |
| 6. Inside faces of lift shafts in storey height | ±5 mm |
| 7. Inside faces of lift shafts in full building height | ±15mm |
| 8. Concrete cover to reinforcement | ±3mm |

No surface intended to be horizontal or vertical shall slope more than 2 mm in 1 mm. Any surface intended to be horizontal or vertical shall be rectified entirely at the responsibility and expense of the Contractor.

Placing and compaction

No traffic whatsoever, wheeled or foot, shall take place over reinforcement or placed concrete and the Contractor shall provide all necessary stools, walkways, platforms and borrow runs. Concrete shall be placed in its final position as rapidly as practicable by methods which preclude segregation or loss of ingredients and in any case, within 30 minutes from the time that water is added to the mix; compaction shall be completed before initial set commences. Partially set concrete shall not be re-worked or used. Flowing in formwork shall be avoided by placing and compacting in shallow layers in quick succession.

Concrete shall be placed into the forms from less a height as possible and shall in no case be dropped from a height of more than 1.5 m except with the approval of the Project Manager.

When chutting is used, the inclinations of the chute must be such as to allow the concrete to flow without the use of excessive water and without segregation or loss of the ingredients. Details of any proposed chutting plant must be approved by the Project Manager before the plant is delivered to the site.

If the contractor wishes to distribute concrete by means of pumps, full details of the system must be available to the Engineer for approval.

Concrete shall be thoroughly compacted and carefully worked with suitable tools, into formwork and round reinforcement and fixtures so as to avoid displacement. A competent steel fixer shall attend throughout concreting to correct any unavoidable displacement.

Compaction shall be by means of vibrators: these shall be of an approved pattern, of the immersion type; clamp on external vibrators in adequate numbers shall be used only where the density of reinforcement shall be avoided. Vibration shall be executed by a competent operative and shall not be carried out to the detriment of adjacent partly hardened concrete.

An accurate record is to be kept by the Contractor showing dates and times when various portions of work were concreted. The concreting foreman must not vary the approved mix or water content without the permission of the representative of the Project Manager. It may occasionally be found that in constricted structural members or where the proportion of reinforcement to concrete is high, the workability of the concrete must be increased locally in order to affect full compaction. Such increase in workability shall be achieved by an increase in mortar content of not more than 10% of the concrete by weight in any single batch and must be made only with the approval of the representative of the Project Manager.

The workability of the concrete must never be altered by the use of additional water or sand alone.

Foundations shall be placed their full depth in one operation and the top surface carefully levelled. Concrete placed in timbered excavations shall be well rammed close against the excavation face as the timber is withdrawn.

Where the design of work demands the placing of reinforced concrete against the sides of excavation without the use of formwork, the earth face in such locations be prevented from crumbling or washing into concrete during placing and compaction by

any efficient means, and care shall be taken to maintain the correct cover to the reinforcement.

All concretion shall be continuous to completion or to approved construction joint.

During placing of all concrete, a workman shall be in constant attendance with a hose pipe to wash off any cement slurry which appears on the face of any previously poured concrete immediately it occurs.

Concrete shall not be poured in forms to a depth exceeding 1.5m without the prior approval of the Project Manager.

Column plinths

Column kicker plinths not cast monolithically with the beam or slab will be allowed only at the discretion of the Project Manager and special precautions must be taken if permission is granted especially in regard to the quality of the mix used and the curing of the concrete.

Blinding concrete

No casting of any concrete on the ground shall take place until the ground has been passed as satisfactory by the project manager. All ground to carry reinforced concrete shall be covered with a blinding layer of concrete class 'E' of the thickness shown on the drawings, or if not so shown, a minimum of 50mm.

Waterproof concrete.

Wherever water proof concrete is shown on the drawing it shall be Class A nominal and it shall be compacted by mechanical vibration so that a dense and homogeneous mass of concrete is obtained throughout every pour of the structure, all in accordance with C.P. 2007.

The Contractor shall be allowed at his own cost to add an approved waterproofing additive to the mix using it strictly in accordance with the maker's printed instructions.

All permanent and construction joints shall be constructed in accordance with the drawings and Specification to achieve complete water tightness.

It shall be Contractor's responsibility to ensure that all structures required to be constructed in waterproof concrete are completely watertight and any work found to be defective shall be made good to the Engineers satisfaction at the Contractor's expense.

Where waterproof concrete forms a water retaining structure it is to be tested by filling with water for a period of not less than four days.

Any percolation or porous concrete or leaking joint is to be made good at the Contractor's expense. Tanks and pools constructed below ground level are not to be backfilled prior to the satisfactory completion of this test.

Construction joints

All construction joints shall be straight, truly vertical or level as the case may be, of profile shown and formed in the exact positions shown on the drawing or if not shown on the drawings, with the prior approval of the Project Manager. Vertical joints shall be formed against adequately secured rigid stop boards having splayed fillets, designed to pass the continuous steel reinforcement without temporary bending or displacement.

The rate and method of placing concrete and the arrangement of joint bulkheads shall be such that the concrete between construction joints shall be placed in a continuous operation.

Joints in reinforced slabs and beams shall be perpendicular to the axis or surface of the member jointed and at one third of the span. If an intersecting member occurs at that point, the joint shall be located at a point of minimum shear.

Construction joints in columns shall be as shown on the drawings. Whenever it becomes necessary to stop work, such stops shall be located at one third span of slab and beams or as directed by the Project Manager.

An adequate and acceptable key for succeeding work shall be formed by using stop boards, which shall be constructed tightly to prevent any grout leak. As early as possible board shall be removed and the surface thoroughly hacked and brushed to remove all laitance.

Any leakage past stop boards shall be hacked off as soon as the concrete has set. The surface shall be left clean and dry. Immediately prior to further concreting the joint face shall be soaked with water and covered with cement/ sand mortar of proportional identical to that in the concrete to be placed punned into the body of the set concrete.

For exposed finishes, care shall be exercised to preserve an unbroken line at the exposed edge of the joint.

In no circumstances shall the concrete be allowed to finish at a break running down a rough slop. Such cases, if found will be treated as contrary to the specification and the Contractor will be required to cut out the member and re-cast. In the case of horizontal joints any excess water and laitance shall be removed from the surface after the concrete is deposited and before it has set.

Before casting slabs the haunchings or seatings for the slab shall be thoroughly hacked, scored and washed and covered with a least 5mm mortar immediately before the slab is cast.

Any necessary construction joints in foundations shall be stepped and lapped 600mm. Joint faces shall be prepared and treated as described above.

Striking times

It shall be the Contractor's responsibility that no distortion, damage, overloading or undue deflection is caused to the structure by the striking of formwork, but the Engineer reserves the right to delay the time of striking in the interest of the work.

Formwork shall not be struck until the concrete has sufficiently hardened. Approval of the Project Manager shall not relieve the Contractor of his liability to make good any concrete damaged by premature removal or collapse of forms. In no circumstances shall forms be struck until the concrete reaches cube strength of at least twice the stress to which the concrete may be subjected at the times of striking.

The following striking times given in (24 hours) are the absolute minimum that will be permitted:-

Form	Ordinary Cement	Portland Rapid Hardening Cement
Walls, Columns (unloaded) Beam sides	2	2
Slabs – props left under	4	2
Beams soffits – props left under	7	5
Slabs – props	10	5
Beams – props	18	8

The time for removal of forms as set out shall not apply to slabs and beams spanning more than 10 metres. For such spans appropriate times shall be recommended or advised by the Project Manager.

Curing

The curing of the concrete must receive particularly careful attention. The concrete shall be covered with a layer of sacking, canvas, hessian or suitable absorbent material, and concrete, formwork and covering kept constantly wet for the first seven days after casting.

Holes and chase casting in

No holes chase are to be cut in reinforced Concrete Works. The Contractor shall ensure that all necessary holes and chases, including fixing holes for railings and balustrades, e.t.c., are carefully formed in the correct position by requisite measures prior to the placing of concrete.

All conduits, pipes, tubes and the like shall unless otherwise detailed, be run on top of the bottom reinforcement of the concrete work. It shall be the Contractor's responsibility to ensure full co-ordination with Sub-Contractors in the setting out for this purpose.

Generally, conduits, pipes and special fixtures shall be concreted in where required and in exact positions demanded.

Concrete fixing blocks shall not affect the strength or cover of the structure nor effect finished work due to movement or other cause.

Details of positions of all holes, chases and fixing blocks shall be submitted to the Project Manager for his approval prior to putting the work in hand.

Tests of completed structural members

The Project Manager shall instruct that a loading test be made on the works, or any part thereof, if in his opinion such a test be deemed necessary for one or more of the following reasons:-

- a. The site – made concrete test cubes failing to attain the specified strength.
- b. The shuttering being prematurely removed,
- c. Overloading during construction of works, or part thereof
- d. Concrete improperly cured,
- e. Any other circumstances attributable to negligence on the part of the Contractor which, in the opinion of the Project Manager, may result in the works, or part thereof, being less than the required strength.

If the loading test be instructed to be made solely, or in part, for one or of the reasons mentioned above, the test shall be made at the Contractor's own cost. If a test instructed is to be made for other reason than specifically stated above, the Contractor shall make the test and shall be reimbursed for all costs relating thereto, provided the test results show the concrete to be satisfactory.

Loading tests are to be in conformity with Clause 605 of British Standard Code of Practice C.P 114.

If the result of loading test be not satisfactory, the Project Manager shall instruct that the part of works concerned shall be taken down or removed and reconstructed to comply with this specification, or such other remedial measures shall be taken as to make the works secure.

If the tests be instructed to be made for one or more of the reasons (a) to (b) inclusive as herein before specified, the Contractor shall take down or remove and reconstruct the defensive work or shall take the remedial measures instructed all at his own cost.

Protection

All in-situ and precast concrete shall be protected from rain and during hot, dry and windy weather approved hessian covering constantly damp shall be used to prevent premature drying out.

All in-situ and precast concrete shall be protected from damage by disturbance, shock vibrations, early loading or overloading. In addition all exposed finishes shall be constantly protected from mechanical damage to arise on faces and damage due to dropping flashing and staining from any source including rusty scaffolding or reinforcement.

No materials or equipment of any kind shall be stored or staked on suspended floor without the Engineers prior approval.

Surface finishes

After removal of shuttering, unless instructed to the contrary, the face of exposed concrete is to be rubbed off immediately to remove fins or other irregularities. In the event of parts of the concrete being honey combed, such portions are to be cut to the depth and shape required by the Engineer and made up with fine concrete of equal quality in such a manner as shall be directed. The face of the concrete for which shuttering

is not provided, other than slabs, is to be smoothed with wooden float to give a finish equal to that of the rubbed-down surface where shuttering is provided.

The top face of slab which is not intended to cover with other material is to be leveled and floated before setting to a smooth finish at the level or falls shown on the drawings or elsewhere. The floating must be carried out in such a way as will prevent an excess of mortar being brought to the surface of the concrete. The top face of slab intended to be surfaced with mortar, granolithic or similar material is to be brushed with a stiff broom while still green to remove any laitance and provide a roughened surface.

a. Samples

Before the execution of any specified finish, the Contractor shall prepare 1200 mm square sample, for the Engineers approval. No concreting in finish works shall be attempted until after the approval of a sample. Approved samples shall be retained till the completion of all such work and closely adhered to throughout the work. Rejected samples shall be demolished and removed.

b. Rendered or plastered surfaces.

Concrete surfaces to be rendered or plastered shall be thoroughly hacked to form a good key.

c. Fair faced surfaces.

Fair faced surfaces shall be free from honeycomb, stains fins lippings, nail holes or excessive air holes and shall be uniform in colour and texture. This surface shall be obtained by the use of:

- (i) Wrot form, i.e. timber forms planed smooth on the surface in contact with the concrete.
- (ii) Forms lined hardboard or plywood or other material, or
- (iii) Smooth steel forms.

All imperfections shall be cut out, made good in cement mortar and rubbed down with carborundum stone and finally bag-rubbed with cement slurry to finish to a high standard without trace of shuttering mark, joints or other disfigurements.

STRUCTURAL STEEL

DEFINITIONS

Holes for attachments

Where lugs or other subsidiary members are given in the description of main members of plates, bars sections or tubes, holes required for the screws, bolts or rivets by which the subsidiary members are attached to the main members shall be deemed to be included.

Welding

In the absence of specific requirements the technique and materials employed in welding shall be selected with due regard to the character of the work and the metal being connected.

GENERALLY

Shop drawings

The contractor shall submit complete shop drawings as and when required by the project manager for his approval.

Standard of construction for structural work

Structural metalwork and testing shall comply with the relevant clauses of B.S. 449 part 2.

Fabrication of Structural metalwork

Structural metalwork shall be fabricated by a specialist firm and before an order is placed by the contractor; such specialist firm shall be approved by the Engineer.

Shop details for structural work

The contractor shall include for the preparation of all shop details for structural work from the drawings supplied by the Engineer. All such details shall be approved in writing, by the Engineer before the work is put in hand. Every drawing shall show the number and sizes of all rivets and bolts, complete details of welds, type of electrodes, welding procedure, whether the welds are to be made in the shop or elsewhere and any other relevant information.

Accuracy of drawings

The contractor shall be responsible for the correctness of his shop details and for shop fittings and site connections.

Dimensions to be verified

The contractor shall take the dimensions from the site of buildings and he shall verify all dimensions given on the drawings before the work is put in hand.

MATERIALS

Steel generally

The steel used for (i) hot rolled steel products (ii) cold-formed steel products and (iii) hard drawn steel wire and steel sections shall comply with the relevant B.S. or K.S. 02-18 as approved by the engineer. Where applicable this standard shall overrule any other standard hereafter stated.

Steel for general metalwork

Mild steel shall comply with B.S. 4360, Grade 43a1 of 43A. Hot rolled sections shall comply with B.S. 4, Part 1 Hot rolled hollow sections shall comply with B.S. 4848, Part 2. Tubes (other than circular hot rolled hollow sections) shall comply with B.S. 6323 and shall be of the type of steel and method of manufacture described.

Steel for structural metalwork

- (a) All structural mild steel shall comply with B.S. 449 Part 2 and B.S. 4360.
- (b) All structural steel tubes shall comply with B.S. 1775 and B.S. 449 Part 2.
- (c) Mild steel and medium tensile steel electrodes for metal-arc welding shall comply with the requirements of B.S. 639.
- (d) All mild steel bolts and nuts shall have a tensile strength of not less than 432 N/mm² (38 tons/in) (37 tones/in²).
- (e) All high tensile bolts, nuts and washers have a minimum tensile strength of 570N/mm² (37tons/in²)
- (f) High strength friction grip bolts and washers shall comply with B.S. 4395 Part 1.
- (g) All plain washers shall be of steel. Tapered or other specially shaped washers shall be made of steel or malleable cast iron complying with B.S. 3410.

Cast Iron

Cast iron shall comply with B.S. 1452

Galvanised work

Galvanised plain steel sheets shall be to the standards approved by the Engineer. Zinc sprayed iron and steel shall comply with B.S. 2569 Pat 1. The nominal thickness of zinc coating shall be not less than 0.102mm and at no point less than 0.07-mm.

Bolts and nuts

Bolts and nuts shall comply with B.S. 1494 and B.S. 916 (imperial) or B.S. 4190 (metric).

Aluminium

Wrought aluminium shall be of the alloys described and shall comply with the following:-

Plate, sheet and strip B.S. 1470

Drawn tube B.S. 1471

Extruded round tube and hollow sections, bar and rods,- to approved manufacturer's specification.

WORKMANSHIP

Smithing, etc.

All smithing and bending shall be soundly and neatly executed, care being taken not to overheat.

Forging

All straps bolts and similar work shall be forged neat and clean from the anvil.

Welding

The word 'welded' is to be understood to include the normal trade methods of jointing metals using electric arc welding apparatus or an oxyacetylene torch, rod and flux. The joints shall be made so that they will transmit the loads and resist the stresses to which they will be subjected. All excess metal is to be filed down and smoothed off to a workmanlike finish to the approval of the Engineer. The materials employed in welding shall be selected with due regard to the character of the work and the metals being connected.

Structural work generally

The whole of the fabrication and erection of the structural metalwork shall be carried out in accordance with B.S. 449; Part 2. The welding of steel to B.S. 4360 must conform to:

B.S. 1140 – "General requirement for the spot welding of light assemblies in mild steel", or

B.S. 5135 – "Metal arc welding of carbon and carbon manganese steels" as applicable.

For welding any particular type of joints the contractor shall provide evidence acceptable to the project manager that the welder has satisfactorily completed the appropriate tests as described in B.S. 449, part 2, chapter 6. Any welders tests shall be made at the contractor's expense and shall include the cost of any

fees incurred by the Employer for witnessing of, or making such tests and any other instructions the project manager may give from time to time during the progress of works.

Fabrication

As much of the work of fabrication of the structural metalwork as reasonably practicable shall be completed in the manufacturer's works. Field connections shall be made in accordance with the approved drawings. The contractor shall give four days' clear notice of structural metalwork ready for inspection at the manufacturer's works, to facilitate inspection before delivery.

Joints and connections

No variation of the number, type or position of the joints or connections shown on the drawing of structural metalwork shall be made without the consent of the Engineer. If such consent is desired the contractor shall submit detailed drawings of the proposed joints for the approval of the project manager and no extra cost incurred by reason of such additions or alterations will be allowed to the contractor.

Painting at works

Where described as primed at works, structural metalwork shall be freed of rust, mill scale, welding slag and flux residue and shall be dry immediately prior to painting with primer.

For joints with high strength friction grip bolts the contact surface shall be left unpainted but special care shall be taken after assembly to paint all edges and corners near the joints together with bolt heads, nuts and washers to prevent the ingress of moisture. For joints made with other bolts and rivets the contact surfaces shall each be given a coat of priming paint and for shop connections the contact surfaces shall be brought together while the paint is still wet.

For welded connections where the contact surfaces are not completely sealed the contact surfaces shall be painted to within 50mm of the edges that are to be welded. The primer shall be touched up with similar primer if damaged by subsequent handling.

Welded members to be galvanized

All galvanised members which are to be welded shall be galvanised only after all fabrication is complete.

Metalwork to be painted

All metalwork which is to be painted shall be painted with one coat of primer before fixing.

Above Ground Soil Waste and Ventilation Pipe Systems.

All soil, waste and ventilating pipe system forming part of the above ground installation shall be given a smoke test to a pressure of 38mm of water gauge and this pressure shall remain constant for a period of not less than 3 minutes.

Water tests on above ground soil, waste and ventilating pipe systems shall be permitted.

Pressure tests shall be carried out before any work which is to be concealed is finally enclosed.

Any defects revealed by the tests shall be made good by the Sub-contractor and the test repeated to the approval of the Project Manager.

In all other respects, tests shall comply with the requirements of B.S Code of Practice 304.

SITE-TEST PERFORMANCE

Following satisfactory tests on pipework systems, operational tests shall be carried out in accordance with the relevant B.S. Codes of Practice on the system as a whole to establish the special valves, gauges, controls, fittings equipment and plant are functioning correctly to the satisfaction of the Project Manager.

Diversion of Water

Excavation and filling operation shall be carried out with side slopes so that water can run off the surface. The contractor shall at his own expense maintain sufficient drainage of the works to prevent ponding and scour.

Tolerances

The finished sub grade and shoulder levels shall at no place vary more than 15mm above or below the levels shown on the Drawings. Deviations shall not be one sided.

Improved Sub-grade

Where necessary the contractor shall be responsible for providing material for earth-works fill that is required over the above that which is available from cuttings on site. His rates for this work shall include for all costs incurred in provision of this material such as purchase of the land, site clearance, overburden strip, haulage, processing, spreading compaction and any other associated costs.

PREAMBLE AND NOTES TO BILLS OF QUANTITIES

1. These Bills of Quantities form part of the Contract Documents and are to be read in conjunction with the conditions of Contract, Standard and Special Specification and Drawings.
2. The quantities set forth in the Bills of Quantities are believed to represent the character of the work to be carried out. There is no guarantee to the Contractor that he will be required to carry out the quantities of work indicated under any one particular item or group of items in the Bills of Quantities, though on the Contract as a whole the quantities are believed to represent the overall value of the work to be carried out.
3. The prices and rates inserted in the Bills of Quantities will be used for valuing the work executed and the Engineer will measure the whole of the works executed in accordance with the Contract.
4. The prices and rates inserted in the bills of quantities are to be the full inclusive costs of the works described under the items, complete in place and in accordance with the Specification and Drawings including costs and expenses which may be required in and for the construction of the works described, together with any temporary works and installations which may be necessary and all general risks, liabilities and obligations set forth or implied in the Documents on which the Contract is based.
5. The brief description of the items given in the Bills of Quantities are purely for the purpose of identification and in no way modify or supersede the detailed descriptions given in the Conditions of the Contract, Specifications or Drawings and Special Specification for the full directions and descriptions of work and materials.
6. A price or rate is to be inserted, in ink against each item in the Bills of Quantities, whether quantities are stated or not, and if the Tenderer includes the cost of a particular item elsewhere in his rates or prices, he shall insert in the word “nil” against both the rate and extension of that particular item. Should the Tenderer omit to price an item, then it will be assumed that he has included the cost of the item elsewhere in his rates or prices.
7. No alteration shall be made to the Bills of Quantities and no extra item shall be inserted. The Tenderer shall satisfy himself that the Contract Sum arrived at by pricing the quantities and items given is sufficient compensation for constructing and maintaining the whole of the works in accordance with the Contract Documents.

8. For the purpose of payment by Interim Certificate of “Lump Sum” items the Engineer may assess the portion of the work completed on the “Lump Sum” items and allow for payment the portion of the “Lump Sum” he deems fair and reasonable. The total of all portions allowed shall not exceed the “Lump Sum”. All interim payments shall be subject to the retention stipulated in the Contract Documents.
9. During construction the unit rate established for an item in one Bill of Quantities may be used as a basis for establishing a unit rate for similar work in another Bill of Quantities which contains no unit rate for the said item.
10. The Contractor will be provided by Employer with all that land occupied by the Permanent Works including the specified working width for pipe laying and the costs of compensation and entry upon land will be paid from Provisional Sums.
11. It shall be the responsibility of the Contractor to arrange for the removal of, or alteration to, services where necessitated by the Works. Incurred costs being paid by the Employer.
12. Quantities for site clearance stripping and spreading shall be based on the horizontal projection of the area cleared or stripped.
13. The rates for excavation items shall include inter alia for setting aside spoil for reuse in the Works or disposing to approved tips, except where otherwise provided for in the Bills of quantities.
14. Generally, the excavation items are based on volume for structures and on linear measurement for certain pipelines. One or more items may cover the works. The rates shall include as appropriate for:-
 - a) Breaking through surfaces; handling different classes of material separately: excavation beyond the net plan area of the foundations for working space and for battering or timbering etc
 - b) Timbering
 - c) Dealing with water
 - d) Backfilling as specified
 - e) Disposal of surplus spoil

Measurement of the volume in pipe trench will be measured from ground level to the invert of the trench. Measurement for other excavations will be to the size which is required to accommodate the permanent work. A tenderer shall accordingly allow in his

prices for any amount of extra excavation which may be necessary for working space to complete the work to the satisfaction of the Engineer.

Items are included for “Extra for Rock” on a volume basis. The rates shall include for Breaking out and any other additional costs and the items shall apply to work encountered within measured excavation. Different classifications may be billed separately. Rock shall be measured as a volume calculated from the thickness encountered within the plan area of a mass excavation, within the plan dimensions of a structure, or within the notional width of a trench. Timbering left in excavations shall only be measured for payment where it is specified or ordered by the Engineer.

15. When the site of any particular item of Works has been sufficiently cleared of trees, undergrowth etc. and before any excavation or filling has been carried out, the Contractor shall carry out survey under the supervision of Engineer’s Representative to take, record and agree adequate ground levels. The data so obtained shall be used as a basis for the computation of excavation and filling.
16. The volume of fill will be measured net to the finished levels as shown on the drawings or as amended by the Engineer.
17. All reinforcement will be paid for on the basis of its computed weight except for reinforcement that will be paid for on the basis of the area placed. The unit rates inserted in the Bills of Quantities shall include for all necessary cutting, bending and fixing, and all additional bars which may be required as spacer supports and lacing and also for all soft iron tying wires, fixing clips of approved pattern and manufacture and chairs. The cost of all temporary works including clips, chairs etc. shall be included in the rates for the reinforcing steel.

The weight for reinforcing bars shall include for all hooked or bent ends as per the bending schedule. Rates for fabric reinforcement or other reinforcement shall include for all laps, cuttings to size, bending and waste.
18. The rates for concrete shall include for making and testing preliminary test cubes, for making works test cubes and forwarding them to the Testing Engineer, forming the concrete to the slopes and falls shown on the drawings and any additional concrete used in excess of the net requirements. The rates shall also include for forming construction joints, for protection, for curing, for the rubbing down of exposed surfaces of concrete after removal of formwork and for floating or brushing of other exposed surfaces where this is required.

19. The rates for precast concrete paving shall include for all cutting, bending, jointing and laying to falls.
20. The rates for precast concrete edging and kerbs shall include for formwork, concrete bed and backing, all cutting, bedding, jointing and laying to falls.
21. The rates for formwork shall include for fillets and chamfers up to 50mm wide on the spay, coating to prevent adherence of concrete and the provision of temporary openings to facilitate inspection and cleaning. Rates shall also be inclusive of all necessary box outs and cut outs for holes up to 1 square metre.

The rates for forming rebates in concrete walls etc shall include for forming pockets for the fish tail fixing cleats where required. Deductions from formwork quantities will be made for openings more than 1 square metre in area.

22. Formwork for upper surfaces inclined at 15 degrees or less to the horizontal is not measured and the cost of any such formwork used will be deemed to be included in the relevant concrete item rate.
23. Wrought formwork where specified will be measured to 150mm below final ground level.

Abbreviations

E.O	Extra Over
Avg	Average
Max	Maximum
Min	Minimum
n.e.	Not Exceeding
mm	Millimetres
lm	Linear Metres
sm	Square Metres
cm	Cubic Metres
Ha	Hectares
No	Number
Drg.	Drawing
Kg	Kilogramme
H.T.	High Tensile
M.S.	Mild Steel
B.L	Bitumen Lined
C.I.	Cast Iron
D.I.	Ductile Iron
UPVC	Unplasticised Polyvinyl Chloride
G.I.	Galvanized Iron
G.M.S.	Galvanized Mild Steel
P.E.H.	Palothene
Hr.	Hour

31. The rates for metal work shall include for bolts, nuts, washers and rawl bolts, fixing as Specified or in accordance with the manufactures instructions and rectifying as specified any parts of the painted, coated or galvanized surface that may be damaged either before or after erection.

32. The rate for fixing penstocks and flap valves etc. shall include for bedding and grouting, testing for water tightness, greasing all working parts and leaving in good working order: where the item includes supply, the rates shall also include for supplying drawings for approval before manufacture is commenced.

Sewers, Drains and Pipelines

The rates for pipes, pipe work specials shall include for supply of all materials, setting of concrete blocks and hardwood wedges where specified, provide any temporary support that may be necessary, preparing ends of pipes for jointing and all labour in jointing, protection to detachable joints, cleaning pipelines and rectifying as specified any damage to surface coating. The rates shall also include for all cutting of pipes consequent upon structures, specials and fittings being construction in the designated positions.

33. The rates for concrete surround, bed and haunching to pipes, concrete in anchor blocks to pipes, and to gulley pots shall include for all formwork required and for any additional concrete the Contractor may place for his own convenience or by reason of the method or carrying out the work.

Prime Cost Items

34. Attendance on nominated Sub-Contractors shall include for all or any of the following as appropriate; labour, materials and plant required for taking delivery, carting, storing, hoisting and builders work entailed in fixing, erecting and installing as specified or in accordance with the manufactures instructions and all overheads and profits.
35. When, in the opinion of the Engineer, it is reasonable to expect the Contractor to price the attendance item it will be so included in the Bills of Quantities in all other cases it will form the subject of a Provisional Sum to be expended on a Day works basis.
36. Profit shall include for establishment charges, profit and any other costs not included in the attendance item.

The rates for the supply for any mechanical and electrical equipment shall include for witnessed works as directed by the Engineer.

- a) *Provide* –shall mean all costs to cover purchase of materials in good condition, services for transaction with supplier, supervision, and transport to site or works all charges for rental, consumptions, overheads and profits throughout the Contract. It shall also include for all maintenance, insurance, handling and storage whenever applicable.

- b) *Excavate for-* shall mean handling of any material from its incumbent position intended for specified work shown in the drawings or directed by the Engineer and backfilling and compacting part of material after laying of pipes, and cart away remaining to tips to be provided by the Contractor. The cost for this work shall include all survey, supervision, labour, tools machinery, protection of work, pumping, insurances and overheads and profits.
- c) *'Laying'*- shall cover all work necessary for placing an object or materials to true line and level and level specified in a drawing or as directed by the Engineer.
- d) *'Jointing'*- shall mean process of fixing specified material, pipes, fittings and specials together using appropriate tools, materials, labour and machinery. It should cover for all work necessary to provide matching of opposite parts in size, shape, and position indicated and clamps, settings and holders to hold firmly.
- e) *'Testing'*-shall mean provision of all materials, apparatus, labour, machinery, charges for the media or chemical to be used and their transport, repair of object to be tested if required, re-testing, excavation of any part for visual inspection, erection of any type all until the object has been certified as having passed the required test satisfactorily.
- f) *'Install'*-shall include for all work requirements stipulated for "laying and jointing"

38. Government Taxes

- a) Tenderers to include in their rates for 16% V.A.T., all duties and other statutory taxes as no claim on the same shall be allowed.
- b) Tenderers should note that the Employer will deduct 3% of the contract being withholding tax and will be remitted directly to the commissioner of Income Tax.

39. Pricing of Preliminaries Items.

Prices will be inserted against item of preliminaries in the contractor's Bills of Quantities and specification. Where the contractor fails to insert his price in any item he shall be deemed to have made adequate provision for this on various items in the Bills of Quantities. The preliminaries form part of this contract and together with other Bills of Quantities covers for the costs involved in complying with all the requirements for the proper execution of the whole of the works in the contract.

40. **Statement of Compliance**

- a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.
- b) I confirm I have not made and will not make any payment to any person, which can be perceived as an inducement to win this tender.

Signed:*for and on behalf of the Tenderer*

Date:

Official Rubber Stamp:

SECTION E:

TENDER EVALUATION CRITERIA

TENDER EVALUATION CRITERIA

After tender opening, the tenders will be evaluated in 2 stages, namely:

1. Determination of Responsiveness
2. Financial Evaluation.

STAGE 1- DETERMINATION OF RESPONSIVENESS

A) PRELIMINARY EXAMINATION

This stage of evaluation shall involve examination of the pre-qualification conditions as set out in the Tender Advertisement Notice or Letter of Invitation to Tender and any other conditions stated in the bid document.

These conditions shall include the following:

- i. Category of Registration with National Construction Authority in the relevant trade and or any other statutory bodies.
- ii. Single Business Permit with relevant County Government.
- iii. Current certified Tax Compliance Certificate issued by Kenya Revenue Authority.
- iv. Company Certificate of Incorporation.
- v. Provision of bid security and of the correct amount.
- vi. Dully filled Form of Tender.
- vii. Submission of Two bid documents (clearly marked ‘**original**’ and ‘**copy**’)

The Employer may seek further clarification/confirmation if necessary to confirm authenticity/compliance of any condition of the tender.

The tenderers who do not satisfy any of the above requirements shall be considered Non-Responsive and their tenders will not be evaluated further.

B) TECHNICAL EVALUATION

The tender document shall be examined based on the Instruction to Tenderers which states as follows:

In accordance with Instruction to Tenderers, the tenderers will be required to provide evidence for eligibility of the award of the tender by satisfying the employer of their eligibility and adequacy of resources to effectively carry out the subject contract. The tenderers shall be required to fill the Standards Forms provided for the purposes of providing the required information. The tenderers may also attach the required information if they so desire.

The award of points in this section shall be as shown below;

PARAMETER	MAXIMUM POINTS
(i) Statement of Compliance	2
(ii) Tender Questionnaire	2
(iii) Confidential Business Questionnaire	2
(iv) Key personnel	16
(v) Contract Completed in the last Five (5) years	12
(vi) Schedules of on-going projects	6
(vii) Schedules of contractors equipment	34
(viii) Audited Financial Report for the last 3 years	10
(ix) Evidence of Financial Resources	10
(x) Name, Address and Telephone of Banks (Contractor to provide)	2
(xi) Litigation History	2
(xii) Sanctity of the tender document as in accordance with clause 5 of instruction to tenderer	2
Total	100

The detailed scoring plan shall be as shown in table 1 below: -

TABLE 1

Item	Description	Point Scored	Max. Point
i	Statement of Compliance Signed and stamped ----- 2 Not signed nor stamped -----0		2
ii	Tender Questionnaire Form Completely filled -----2 Partially filled -----1 Not filled -----0		2
iii	Confidential Business Questionnaire Form. Completely filled ----- 2 Partially filled ----- 1 Not filled ----- 0		2
iv	Key Personnel to be engaged on the project (Attach copies of certificates)		16
	Director of the firm ○ Holder of degree in Civil Engineering, Construction Technology, Architecture or Quantity Surveying--4 ○ Ditto with Diploma-----3 ○ Ditto with certificate-----1 ○ No relevant certificate -----0	4	
	At least 1 No. degree holder of key personnel in Civil Engineering/Quantity Surveying, Construction Technology or Architecture. ○ With over 10 years relevant experience -----4 ○ With over 5 years relevant experience ----- 3 ○ With under 5 years relevant experience -----1	4	
	At least 2 No Diploma holder of key personnel in Civil Engineering/Construction Technology, Quantity Surveying or Architecture ○ With over 10 years relevant experience-----4 ○ With over 5 years relevant experience -----3 ○ With under 5 years relevant experience -----1	8	

Item	Description	Point Scored	Max. Point
v	Contract completed in the last Ten (10) years (A max of 3 No. Projects) Shall attach Completion Certificates. <ul style="list-style-type: none"> ○ Project of similar nature, complexity and magnitude (one of which shall be a bridge) ----- (4x3) ○ Project of similar nature but of lower value than the one in consideration (without swimming pool)----- (2x3) ○ No completed project of similar nature -----0 		12
vi	On-going projects (A max of 3 No. Projects) Shall attach Notification of award or Contract Agreements. <ul style="list-style-type: none"> ○ Project of similar nature, complexity and magnitude ----- (2x3) ○ Project of similar nature but of lower value than the one in consideration ----- (1x3) ○ No ongoing project of similar nature -----0 		6
vii	Schedules of contractors equipment and transport (Shall attach proof or evidence of ownership by the company, if owned or and indicate the ability to lease (attach letter from the lessor), if leased) <ul style="list-style-type: none"> ○ Concrete Hoist Owned-----4 Leased -----1 Not provided-----0 ○ 0.5CM Concrete Mixer (at least 2No) Owned ----12 Not provided-----0 ○ Dump Trucks/Lorries (at least 2 No) Owned -----4 Leased -----2 Not provided-----0 ○ Ten Tonne Drum Vibrating Roller. Owned -----4 Leased -----1 Not provided-----0 ○ Any other relevant equipment to be used in the concreting of a 50 metres bridge deck in a single shift of 12hours.(E.g boom crane, concrete chutes and equipment to deliver concrete to the required point) (Maximum No. of equipment to be considered – 3No.) (4x3) 		34

Item	Description	Point Scored	Max. Point
viii	Annual audited financial reports (last three (3) years) <ul style="list-style-type: none"> ○ At least one of the annual turnover greater or equal to 5 times the cost of the project 10 ○ At least one of the annual turnover greater or equal to 3 times the cost of project 6 ○ At one of the annual turnover greater or equal to the cost of the project 3 ○ Annual turn-over below the cost of the project 0 		10
ix	Evidence of financial resources (cash in hand, lines of credit, overdraft facility etc give proof of availability) Cash in hand and lines of credit: <ul style="list-style-type: none"> Of more than 30% of tender sum 10 Of between 20% and 30% of tender sum 6 Of between 10% and 20% of tender sum 3 Below 10% of tender sum 1 		10
x	Name, address and telephone of banks (Contractor to provide) <ul style="list-style-type: none"> ○ Provided 2 ○ Not provided 0 		2
xi	Litigation History <ul style="list-style-type: none"> ○ Filled 2 ○ Not filled 0 		2
xii	Sanctity of tender documents <ul style="list-style-type: none"> ○ Having the document intact (not tampered with in any way) -----2 ○ Having mutilated or modified the tender document---0 		2
	TOTAL TECHNICAL SCORE (TS)		100

Any bidder who scores 70 points and above shall be considered for further evaluation

RECOMMENDATION

The evaluation committee shall recommend for award of the Tender to the firm that attained 70% and above in the technical evaluation and with the lowest quoted tender price

SECTION F:

BILL OF QUANTITIES

**The Proposed Olympic size swimming pool and Associated Works at Masinde
Muliro University of Technology.**