REPUBLIC OF KENYA

EMBU COUNTY GOVERNMENT

TENDER NO: EBU/CNT/T/02/2017-2018

PROPOSED UPGRADING TO BITUMEN STANDARD OF UCHUMI-KIAMBUITHI-MINNI INN ROAD

24 JAN 2018

NOVEMBER, 2017
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2. INTRODUCTION

1.1 This standard tender document for procurement of works has been prepared for use by procuring entities in Kenya in the procurement of works (i.e. Roads, Bridges, Airports and Dams).

1.2 The following guidelines should be observed when using the document:-

(a) Specific details should be furnished in the tender notice and in the special conditions of contract (where applicable). The tender document issued to tenderers should not have blank spaces or options.

(b) The instructions to tenderers and the General Conditions of Contract should remain unchanged. Any necessary amendments to these parts should be made through Appendix to instructions to tenderers and special conditions of contract respectively.

1.3 (a) Information contained in the invitation to tender shall conform to the data and information in the tender documents to enable prospective tenderers to decide whether or not to participate in the tender and shall indicate any important tender requirements.

(b) The invitation to tender shall be as an advertisement in accordance with the regulations or a letter of invitation addressed to tenderers who have been prequalified following a request for prequalification.

1.4 This document is based on PART 1 of the latest Edition of the International Federation of Consulting Engineers (Federation Internationale des Ingenieurs Con Seils – FIDIC) General Conditions of Contract for works of Civil Engineering.

1.5 The cover of the tender document should be modified to include -: 

   i. Tender number.
   ii. Tender name.
   iii. Name of procuring entity.
   iv. Delete name and address of PPOA.
SECTION I: INVITATION FOR TENDERS

DATE: 24th January, 2018

Tender reference No EBU/CNT/T/02/2017-2018

Tender Name: Upgrading To Bitumen Standards of Uchimi-Kiambuthi-Minni inn Road

1.1 The Embu County Government invites sealed tenders for the construction of Road Carriage Construction, Storm Water Drainage Structures and walkways

1.2 Interested eligible candidates may obtain further information and inspect tender documents from our website www.embu.go.ke

1.3 A complete set of tender documents may be obtained by interested candidates from our website www.embu.go.ke.

1.4 Prices quoted should be net inclusive of all taxes, must be in Kenya shillings and shall remain valid for 120 days from the closing date of tender opening.

1.6 Completed tender documents are to be enclosed in plain sealed envelopes marked with Tender name and reference number and deposited in the Tender Box at the Reception of Embu Town Hall or to be addressed to:

County Secretary,
Embu County Government
P.O Box 36-60100
EMBU

so as to be received on or before 7th February, 2018 at 10.00 am

Tenders will be opened immediately thereafter in the presence of the candidates or their representatives who choose to attend at Embu County Hall Boardroom

Head Supply Chain Management Services

For: County Secretary
# SECTION II: INSTRUCTIONS TO TENDERERS

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SECTION III: INSTRUCTION TO TENDERERS

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

GENERAL

1. Definitions

(a) “Tenderer” means any 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 a Central Government Ministry, Local Authority, State Corporation or any other Public Institution.

2. Eligibility and Qualification Requirements

2.1 Eligibility requirements
This invitation to tender is open to all tenderers who are qualified as stated in the appendix.

2.2 Qualification Requirements
To be qualified 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 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 plaint, 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 sub contractors to whom it is proposed to sublet any portion of the Contract and for whom authority will be requested for such subletting in accordance with clause 4 of the Condition of Contract.

(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 Engineer.

(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 authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners

(c) The partner in charge shall be authorized to incur liabilities and receive instructions for an 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.

(d) 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)

(e) A copy of the agreement entered into by the joint venture partners shall be submitted with the tender.

3. Cost of Tendering

3.1 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.
3.2 The price to be charged for the tender document shall not exceed Kshs.5,000/=.

3.3 The procuring entity shall allow the tenderer to view the tender document free of charge before purchase.

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.

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. 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

5.0 **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. Tender and Confidential Business Questionnaires
h. Details of Sub contractors
i. Schedules of Supplementary Information
j. General Conditions of Contract – Part I
k. Conditions of Particular Application – Part II
l. Specifications
m. Bills of Quantities
n. Drawings
o. Declaration Form

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 **Inquiries by tenderers**

6.1 A tenderer making an inquiry relating to the tender document may notify the Employer in writing or by telex, cable or facsimile at the Employer’s mailing address indicated in the Invitation to Tender. The Employer will respond in writing to any request for clarification which he receives earlier than 7 days prior to the deadline for the submission of tenders. Written copies of the Employer’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.

6.2 The procuring entity shall reply to any clarifications sought by the tenderer within 3 days of receiving the request to enable the tenderer to make timely submission of its tender.
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 cable, telex or facsimile to all prospective tenderers who have purchased the tender documents and will be binding upon them.

7.3 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 TENDERS

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:
   i. the Form of Tender and Appendix thereto,
   ii. a Tender Security
   iii. the Priced Bills of Quantities and Schedules
   iv. the information on eligibility and qualification
   v. any other materials required to be completed and submitted in accordance with the Instructions to Tenderers.

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 initialed 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, taxes and other levies payable by the Contractor under the Contract, or for any other cause prior to the deadline for submission of tenders, shall be included in the rates and prices and the total Tender Price submitted by the tenderer.

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 basic unit rates for the supply of items listed in the Conditions of Contract clause 70 where appropriate. The Employer may require the tenderer to justify such rates so obtained from the suppliers or manufacturers.

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 70 of the Conditions of Contract Part II.
10.6 Contract price variations shall not be allowed within the first 12 months of the contract.

10.7 Where quantity contract variation is allowed, the variation shall not exceed 25% of the original contract quantity.

10.8 Price variation requests shall be processed by the procuring entity within 30 days of receiving the request.

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 or the rates of exchange used for pricing the tender shall be the 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, telex 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 Security

13.1 The tenderer shall furnish as part of his tender, a Tender Security in the amount and form stated in the Appendix to Instructions to Tenderers.

13.2 The tender security shall not exceed 2 percent of the tender price.

13.3 The Tender Security shall be valid at least thirty (30) days beyond the tender validity period.

13.4 Any tender not accompanied by an acceptable Tender Surety will be rejected by the Employer as non-responsive.

13.5 The Tender Sureties of unsuccessful tenderers will be returned as promptly as possible but not later than twenty eight (28) days after expiration of the tender validity period. The Tender Surety of the successful tenderer will be returned upon the tenderer executing the Contract and furnishing the required Performance Security.

13.6 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, within the specified time limit
      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 unless otherwise provided for in the appendix.

Only one tender may be submitted by each tenderer either by himself or as partner in a joint venture. A tenderer who submits or participates in more than one tender will be disqualified.

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 If a pre-tender meeting is convened, the tenderer’s designated representative is invited to attend at the venue and time 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.

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 (7) 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) Nonattendance at the pre-bid 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. All pages of the tender where amendments have been made shall be initialed 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 initialed by the person of 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 separate envelopes, duly marking the envelopes as “ORIGINAL” and “COPY”. The envelopes shall then be sealed in an outer separate 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 indicate 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 prescribe 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 marked “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 at the 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 telex, 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. 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) In the event of a discrepancy between the tender amount as stated in the Form of Tender and the corrected tender figure in the main summary of the Bills of Quantities, the amount as stated in the Form of Tender shall prevail.

(d) The Error Correction Factor shall be computed by expressing the difference between the tender amount and the corrected tender sum as a percentage of the corrected builder’s work (i.e. corrected tender sum less Prime Cost and Provisional Sums).

(e) The Error Correction Factor shall be applied to all builders’ work (as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuations of variations.

(f) 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 one (21) 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.

26.7 Preference where allowed in the evaluation of tenders shall not exceed 15%.

26.8 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.

26.9 The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.

26.10 A tenderer who gives false information in the tender document about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.

26.11 Poor past performance shall not be used as an evaluation criteria unless specifically provided for in the appendix.

27 Award of Contract

Award Criteria

27.1 Subject to Sub-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 as required in Sub-clause 2.1 and 2.2 here above.

27.2 The Employer reserves the right to accept or reject any tender, and to annual 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 telex 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 At the same time that the Employer notifies the successful tenderer that his tender has been accepted, the Employer shall notify the other tenderers that the tenders have been unsuccessful.

28.3 Within fourteen [14] 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.

28.4 The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.

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 the amount stated in the Appendix to Instructions to Tenderers and in the format stipulated in the Conditions of Contract.

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 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 60(5) 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.

23
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 60(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.

31 **Corrupt or fraudulent practices**

31.1 The procuring entity requires that tenderers observe the highest standard of ethics during the procurement process and execution of contracts. A tenderer shall sign a declaration that he has not and will not be involved in corrupt or fraudulent practices.
Notes on the Appendix to Instructions to Tenderers

The following appendix to instructions to tenderers shall complement or amend the provisions of the instructions to tenderers (Section II). Wherever there is a conflict between the provisions of the instructions to tenderers and the provisions of the appendix, the provisions of the appendix herein shall prevail over those of the instructions to tenderers.

CLAUSE

13 Tender Security
Amount of Tender Security is the amount equivalent to 2% of the total tender sum.

(i) The name and address of the Employer for the purposes of submission of tenders is The County Secretary Embu County Government P.O Box 36-60100 Embu

(ii) Tender Number is EBU/CNT/T/02/2017-2018

(iii) Tender name is Upgrading To Bitumen Standards of Uchumi-Kiambuthi-Minni inn Road

(iv) There shall be a pre tender site visit on 31st January, 2018 starting at 10.00 am. Prospective tenderers are to assemble at the former County Public Works offices at Majimbo Estate.

(v) The tender opening date and time is 7th February, 2018 at 10.00 am.

28 Performance Guarantee
The amount of Performance Security is 5% of the Tender price either in form of Local Bank Guarantee, or Insurance approved by PPOA
SECTION IV: CONDITIONS OF CONTRACT

PART I – GENERAL CONDITIONS


Note

i. The standard text of the General Conditions of Contract must be retained intact to facilitate its reading and interpretation by tenderers. Any amendments and additions to the General Conditions, specific to a given Contract, should be introduced in the Conditions of Particular Application or in the Appendix to Form of Tender.

ii. The Conditions of Particular Application take precedence over the General Conditions of Contract.

iii. Copies of the FIDIC Conditions of Contract can be obtained from:
FIDIC Secretariat
P.O. Box 86
1000 Lausanne 12
Switzerland
Fax: 41 21 653 5432
Telephone: 41 21 653 5003
## SECTION V: CONDITIONS OF CONTRACT PART II
(CONDITIONS OF PARTICULAR APPLICATION)

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SECTION VI: CONDITIONS OF CONTRACT PART II

CONDITIONS OF PARTICULAR APPLICATION

GENERAL

The Conditions of Contract Part II – Conditions of Particular Application modify and compliment like-numbered clauses in the Conditions of Contract Part I – General Conditions. Both Parts shall be read together, with the Conditions of Particular Application prevailing in case of conflict or discrepancy. Clauses of the General Conditions not specifically modified and supplemented shall remain in effect.

Clause No.

Definitions and Interpretation

1.1 (a)(i) The said “Employer” shall be *Embu County Government* represented by *Chief Officer Infrastructure, Public Works, Housing and Energy*

   (ii) The said “Engineer” shall be _County Engineer_

Engineer’s Duties and Authority

2.1 (b) The Engineer shall obtain specific approval of the Employer before taking any of the following actions specified in Part I:

   (i) Consenting to the sub-letting of any part of the Works under clause 4.

   (ii) Certifying additional cost determined under Clause 12

   (iii) Determining an extension of time under Clause 44

   (iv) Issuing a variation under Clause 51 except in an emergency situation as reasonably determined by the Engineer.

   (v) Fixing rates or prices under clause 52

4 Assignment and Subcontracting

4 Delete the second and third sentence and substitute:

   No single subcontract may be for more than 10 percent of the Contract Price nor shall the sum of all subcontracts exceed 25 percent of the Contract price. No one subcontractor may be awarded subcontracts to a total value greater than 10 percent of the Contract Price. All subcontracts greater than 2 percent of
the Contract Price are to have the prior consent of the Engineer. The Contractor shall however, not required such consent for purchases of materials or to place contracts for minor details or for any part of the Works of which the manufacturer of supplier is named in the Contract. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.

5 Contract Documents

5.1 (a) The language governing this Contract shall be English.

The “Ruling Language” which shall be used to interpret this Contract shall be English. Communication between the Contractor and Engineer or Engineer’s representative shall be in English.

(b) The law applicable to this Contract shall be the laws of the Republic of Kenya. Except to the extent otherwise provided by the Contract, the Kenyan courts shall have exclusive jurisdiction to hear and to determine all actions and proceedings in connection with and arising out of the Contract, and the Contractor shall submit to the jurisdiction of Kenyan courts for the purpose of any such actions and proceedings.

(1) Company dossier with proof corporation
(2) List of similar civil works and their value undertaken within the last five years.
(3) List of ongoing works
(4) List of plant and equipment owned by firm including registration numbers and year of manufacture and their current condition.
(5) List of personnel proposed for execution of works and detailed qualification and experience (attach cvs and certificates.
(6) Reports of financial standing of the firm including profits and loss statements, balance sheets and auditor report for the last three years;
(7) Evidence of access to lines and credit and availability of other financial resources.
(8) Litigation of history of the company
(9) Certificates of tenderers visit to site
(10) Copy of PIN certificate
(11) Copy of VAT certificate
(12) Bid bond of kshs. 300,000.00 from reputable bank

8.1 Add to sub clause 8.1 the following:
(a) Within 28 days after receipt of the Engineer's order to commence the Works, the Contractor shall establish an office at the Site duly equipped for the Contractor's representative and his supervisory personnel.

The Contractor shall maintain this office throughout the Contract period. The said office shall be the legal domicile of the Contractor, and all correspondence sent to this office shall be deemed to have been sent to the Contractor's head office.

(b) A foreign Contractor or a Kenya-foreign joint venture, if not registered in Kenya under the applicable laws of Kenya, shall undertake registration upon receipt of the letter of acceptance and prior to signing of the Contract.

10.1 **Performance Security**

In lines 1, 2 and 3 delete the words “If the Contract... within 28 days” and substitute “The Contractor shall obtain a Performance Security within 28 days .........”

Add the following at the end of this Sub-Clause:-

The Performance Security shall be issued by a Bank incorporated in Kenya. The amount of guarantee shall be as stated in the Appendix to Form of Tender.

The bank guarantee, shall be issued either (a) by an established and reputable bank approved by the Employer and located in Kenya or a foreign bank through a correspondent established and reputable bank located in Kenya and approved by the Employer or (b) directly by a foreign bank acceptable to the Employer. The performance security shall normally be in the currency or currencies requested for payment by the Contractor and in the same proportions as those requested for payment in the Contract.

The performance security may, subject to the approval of the Engineer, be adjusted at the end of each period of 12 months to reflect the residual value of the Contract Works.

11 The performance guarantee shall be valid until a date 28 days after the date of issue of the Taking-Over Certificate. The security shall be returned to the Contractor within 28 days of the expiration.
11.1 **Inspection of Site**

Add the words “and the Contractor shall be deemed to have based his tender on all the aforementioned” after the words “affect his tender”.

Delete the last paragraph completely and replace with the following:

“The Employer in no way guarantees completeness nor accuracy of the soil, materials, subsurface and hydrological information made available to the Contractor at the time of tendering or at any other time during the period of the Contract, and the Contractor shall be responsible for ascertaining for himself all information as aforesaid for the execution of Works and his tender shall be deemed to have been priced accordingly.

14.1 **Programme to be Submitted**

The time within which the Programme shall be submitted shall be twenty eight (28) days. This detailed Programme shall be based upon the programme submitted by the Contractor as part of his tender and shall, in no material manner, deviate from the said programme.

The Contractor shall allow in his Programme for the following 11 public holidays per calendar year in Kenya upon which the Contractor shall not be permitted to work:

- New Year’s Day (1st January)
- Good Friday
- Easter Monday
- Labour Day (1st May)
- Madaraka Day (1st June)
- Idd-Ul-Fitr
- Mashujaa Day (20th October)
- Jamhuri Day (12th December)
- Christmas Day (25th December)
- Boxing Day (26th December)

The Contractor should also allow per calendar year for a further 2 unspecified public holidays which may be announced by the Government of Kenya with no prior notification, and upon which he shall not be permitted to work.

14.2 Add the following at the end of this sub clause:-

The Employer shall have the right to withhold payment at any time if the Contractor fails to submit the contractual construction programmes in accordance with sub clause 14.1.
above or revise construction programmes due to his negligence, failure or omission.

14.3 **Cash Flow Estimate to be Submitted**

The time limit within which a detailed cash flow estimate is to be submitted shall be twenty eight (28) days.

In preparing the estimates, the Contractor shall make provision for Advance payment, repayment of advance, retention, payment for services provided by the Employer and timing implications of sub clause 60 – Certificates and Payments.

15 **Contractor’s Superintendence**

15.1 The Contractor shall, within seven (7) days of receipt of the Engineer’s order to commence the Works, inform the Engineer in writing, the name of the Contractor’s representative and the anticipated date of his arrival on Site.

15.2 The Contractor’s agent or representative on the Site shall be an Engineer registered by the Engineer’s Registration Board of Kenya in accordance with the Laws of Kenya cap. 530 or have equivalent status approved by the Engineer and shall be able to read, write and speak English fluently.

16.2 **Engineer at Liberty to object**

At the end of this clause add “by a competent substitute approved by the Engineer at the Contractor’s own expense”.

The Contractor is encouraged to the extent practicable and reasonable, to employ staff and labour with appropriate qualifications who are Kenyan citizens.

**Safety, Security and Protection of the Environment**

The formulation and enforcement of an adequate safety program shall be the obligation of the Contractor with respect to all the Works under this Contract, regardless of whether performed by the Contractor or his subcontractors. The Contractor shall, within 14 days after commencement of the Works, meet the Engineer to present and discuss his plan for the establishment of such safety measures as may be necessary to provide against accidents, unsafe acts and so forth. Within 28 days after commencement of the Works, the Contractor shall
submit a written safety program to the Engineer covering the overall Works and based on the laws and regulations of Kenya. In addition, he shall prepare special safety programs for blasting and handling of explosives as stipulated in the General and Special Specifications.

Notwithstanding the foregoing, the Contractor shall observe the following measures with a view to reducing or eliminating adverse environmental effects by the Site Works:

(i) All queries and borrow pits shall be filled and landscaped to their original state after extraction of construction material.

(ii) Soil erosion due to surface runoff or water from culverts or other drainage structures should be avoided by putting in place proper erosion control measures that shall include, but not limited to grassing, planting of trees, gabions etc.

(iii) Long traffic diversion roads shall be avoided so as to minimize the effect of dust on the surrounding environment. In any case all diversions shall be kept damp and dust free at the Contractor’s expense.

(iv) Spillage of oils, fuels and lubricants shall be avoided and if spilt, shall be collected and disposed off in such a way as not to adversely affect the environment.

(v) Rock blasting near settlement areas shall be properly coordinated with the relevant officers of the Government so as to minimize noise pollution and community interference.

(vi) Dumping shall be done only at designated dumping areas and not haphazardly on surroundings.

**Insurance of Works & Contractor’s Equipment**

21.1 (a) Prior to commencement of the Works the Contractor shall, without limiting his or the Employer’s obligations and responsibilities under Clause 20, insure to the satisfaction of the Employer. It being understood the insurance shall provide for compensation to be payable in the types and proportions of the currencies required to rectify the loss or damage incurred.
(b) It being understood the insurance shall provide for compensation to be payable in the types and proportions of the currencies required to rectify the loss.

(c) It shall be the responsibility of the Contractor to notify the insurance company of any change in the nature and extent of the Works and to ensure the adequacy of the insurance coverage at all times during the period of the Contract.

23.1 Third Party Insurance

Prior to commencement of the Works the Contractor shall, without limiting his or the Employer’s obligations and responsibilities under Clause 20, insure to the satisfaction of the Employer.

23.2 Minimum Amount of Insurance

Its being understood the insurance shall provide for compensation to be payable with no limits to the number of occurrences.”

25.5 Insurance Notices

Each policy of insurance effected by the Contractor for the purpose of the Contract shall include a provision to the effect that the Insurer shall have a duty to give notice in writing to the Contractor and Employer of the date when a premium becomes payable not more than thirty (30) days after the giving of such notice.

25.6 Re-insurance in Kenya

The risks against which the Contractor is obliged to insure under the Contract shall be insured through established and reputable companies approved by the Employer and located in Kenya and any cover against risks which the Contractor may enjoy shall be reinsured in Kenya by an approved Kenyan Insurance Company In respect of the Contractor’s obligations under the Contract.

25.7 It shall be the responsibility of the Contractor to notify the insurers under any of the insurances referred or event which by the terms of such insurances are required to be so notified and the Contractor shall indemnify and keep indemnified the Employer against all losses, claims, demands, proceedings, costs, charges and expenses whatsoever arising out of or in consequence of any default by the Contractor in complying with the requirements of this sub clause whether as a result of avoidance of such insurance or otherwise.
26. **Compliance with Statutes, Regulations**

The Employer will repay or allow to the Contractor all such sums as the Engineer shall certify to have been properly payable and paid by the Contractor in respect of such fees. Provided always that, without prejudice to sub clause, nothing contained in this clause shall be deemed to render the Employer liable to all claims which may be considered to fall within the provisions of clause 22.1.

**Royalties**

28.2 The Contractor shall also be liable for all payments or compensation, if any, that are levied in connection with the dumping of part or all of any such material.

**Interference with Traffic and Adjoining Properties**

29.2 The Contractor shall reinstate all properties whether public or private which are damaged in consequence of the construction and maintenance of the Works to a condition at least equal to that prevailing before his first entry on them.

If in the opinion of the Engineer the Contractor shall have failed to take reasonable and prompt action to discharge his obligations in the matter of reinstatement, the Engineer will inform the Contractor in writing of his opinion, in which circumstances the Employer reserves the right to employ others to do the necessary work of reinstatement and to deduct the cost thereof from any money due or to become due to the Contractor.

The Contractor shall promptly refer to the Employer all claims, which may be considered to fall within the provisions of Clause 22.1.
LABOUR

34.2 Conditions of Employment of Labour

The Contractor shall be responsible for making all arrangements for and shall bear all costs relating to recruitment, obtaining of all necessary visas, permits or other official permission for movements of staff and labour.

34.3 Fair Wages

The Contractor shall, in respect of all persons employed anywhere by him in the execution of the Contract, observe and fulfill the following conditions:

(a) The Contractor shall pay the rates of wages, observe hours of labour and provide conditions, housing amenities and facilities not less favorable than those required by the Regulation of wages (Building and Construction Industry) Order 1998, and any subsequent amendments thereto, or in any ministry of labour or other government department in consultation with the district whose general circumstances in the trade or industry in which the Contractor is engaged are similar. The Contractor shall at all times during the continuation of the Contract display, for the information of his employees, a notice setting out the general rates of wages, hours and conditions of labour of his employees and a copy of this clause.

(b) In the absence of any rates for wages, hours or conditions of labour so established, the Contractor shall pay rates or wages and observe hours and conditions for labour which are not less favourable than the general circumstances in the trade or industry in which the Contractor is engaged.

(c) Where the absence of established rates of wages, hours and conditions of labour or the dissimilarity of the general circumstances in the trade or industry in which the Contractor is engaged prevent the Contractor from observing rates of wages, hours and conditions of labour ascertained under sub-paragraph (a) or (b) above, the Contractor in fixing the rates of wages, hours and conditions of labour of his employees shall be guided by the advise of the labour department.

(d) The Contractor shall recognize the freedom of his employees to be members of trade unions.

(e) The Contractor shall maintain records of the times worked by, and the wages paid to his employees. The Contractor shall furnish to the Employer, if called upon so to do, particulars of the rates of wages, hours and conditions of labour as the employer may direct.
(f) The Contractor shall be responsible for observance by his sub-
Contractors of the foregoing provisions.

34.4 **Breach of Fair Wages Clause**

Should a claim be made to the Employer alleging the Contractor’s default in
payment of fair wages to any workman employed on the Contract and if
proof thereof satisfactory to the Employer is furnished by the labour
department, the Employer may, failing payment by the Contractor, pay the
claims out of any monies due or which may become due to the Contractor
under the Contract.

34.5 **Recruitment of Unskilled Labour**

Any additional unskilled labour which may be required by the Contractor
for the Works and which is not in his employ at the time of the acceptance
of the tender shall be recruited by the Contractor from the labour office
nearest to the Site of the Works.

34.6 **Compensation for injury**

The Contractor shall, in accordance with the Workman’s Compensation Act
Chapter 236 of the laws of Kenya and any other regulations in force from
time to time in Kenya, pay compensation for loss or damage suffered in
consequence of any accident or injury or disease resulting from his work to
any workman or other person in the employment of the Contractor or any
sub-contractor.

34.7 **Labour Standards**

a) The Contractor shall comply with the existing local labour laws,
regulations and labour standards.

b) The Contractor shall formulate and enforce an adequate safety
program with respect to all Work under this Contract, whether

performed by the Contractor or his sub-contractors. The Contractor
has assurance from the Employer of cooperation where the
implementation of these safety measures requires joint cooperation.

c) Upon written request of the Employer the Contractor will remove or
replace any of his employees employed under this Contract.

34.8 **Recruitment**

The Contractor shall not induce personnel of the employer or the Engineer
to leave their regular employment and shall not, without the prior consent
in writing of the Employer, employ personnel who have resigned from such service within the preceding twelve months.

35. The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer immediately by the quickest available means. The Contractor shall also notify the relevant authority(s) whenever such report is required by the law.

41.1 **Definition of Commencement**

For the purposes of this clause, the Works shall be deemed to have commenced when all of the following conditions are satisfied;

a) The approved competent and authorized agent or representative of the Contractor is resident in the project area and is giving his whole time to the superintendence of the Works.

b) The provision by the Contractor of evidence that all insurances required by the Contract are in force.

c) The Contractor has an established office in the project area with postal address for receipt of correspondence.

d) The principal items of constructional plant have been brought to Site and put to work in the execution of the permanent Works.

42.4 **Possession of Site and Access Thereeto**

The Contractor shall not enter any part of the Site until he has requested and received permission to do so from the Employer or the Engineer.

The Contractor shall not use any portion of the Site for any purpose not connected with the Works.

44.1 Neither rains falling between 1\textsuperscript{st} November and 31\textsuperscript{st} December (inclusive) and between 1\textsuperscript{st} February and 31\textsuperscript{st} May (inclusive) nor floods caused by such rains shall be deemed exceptional weather conditions such as may fairly entitle the Contractor to an extension of time for the completion of the Work.
45 **Working Hours**

Subject to any provision to the contrary contained in the Contract, the Contractor shall have the option to work continuously by day and by night and on locally recognized days of rest.

If the Contractor requests for permission to work by day and night and if the Engineer shall grant such permission, the Contractor shall not be entitled to any additional payment for so doing. All such work at night shall be carried out without unreasonable noise or other disturbance and the Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out night work and from and against all claims, demands, proceedings, costs, charges and expenses whatsoever in regard or in relation to such liability. In addition, the Contractor shall be required to provide, for any work carried out by night or recognized days of rest, adequate lighting and other facilities so that the Work is carried out safely and properly. In the event of the Engineer granting permission to the Contractor to work double or rotary shifts or on Sundays, the Contractor shall be required to meet any additional costs to the Employer in the administration and supervision of the Contract arising from the granting of this permission.

47.2 **Reduction of Liquidated Damages**

There shall be no reduction in the amount of liquidated damages in the event that a part or a section of the Works within the Contract is certified as completed before the whole of the Works comprising that Contract.

No bonus for early completion of the Works shall be paid to the Contractor by the Employer.

The sum stated in the Appendix to Form of Tender as liquidated damages shall be increased by a sum equivalent to any amount payable by the Employer to the Contractor under clause 70.1 in respect of an increase in costs in such period that would not have been incurred by the Contractor if the Works had been completed by the due date for completion prescribed by clause 43.

**Defects Liability**

49.2 Any work ordered to be executed under this clause shall be done at a time and in a manner as directed by the Engineer so as to interfere as little as possible with the operations of the Employer or of other contractors and no extension(s) of the defects liability period will be allowed for the execution of this Work.

52 **Variations**

52.1 The agreement, fixing or determination of any rates or prices as aforesaid shall include any foreign currency and the proportion thereof.
52.4 **Day work**

The Work so ordered shall immediately become part of the Works under the Contract. The Contractor shall, as soon as practicable after receiving the Day work Order from the Engineer undertake the necessary steps for due execution of such Work. Prior to commencement of any work to be done on a Day work basis, the Contractor shall give a notice to the Engineer stating the exact time of such commencement.

**Quantities**

55.1 The quality and quantity of the Work included in the Contract Price shall be deemed to be that which is set out in the Contract Bills. The Bills, unless otherwise expressly stated therein, shall be deemed to have been prepared in accordance with the principles of the latest edition of the Civil Engineering Standard Method of Measurement.

Any error in description or in quantity or any omission of items from the Contract Bills or Specifications shall not vitiate this Contract but shall be corrected and deemed to be a variation required by the Engineer. Subject to the foregoing, any error whether arithmetical or not in the computation of the Contract Price shall be deemed to have been accepted by the parties hereto.

The Contract Price shall not be adjusted or altered in any way whatsoever otherwise than in accordance with the express provisions of these Conditions.

55.2 Items of Work described in the Bills of Quantities for which no rate or price has been entered in the Contract shall be considered as included in other rates and prices in the Contract and will not be paid for separately by the Employer.

**Measurement**

56.1 The Contractor shall prepare and submit to the Engineer all necessary field notes and other records taken and computations made for the purpose of quantity measurements, of which the forms shall be approved by the Engineer, for the monthly progress payment under clause 60. The measurement of work quantities made by the Contractor shall be verified and certified by the Engineer based on the above-mentioned documents.

The Contractor shall furnish all personnel, equipment and materials to make such surveys and computations as necessary to determine the quantities of work performed. Unless otherwise prescribed in the specifications or the drawings, all measurements for payment shall be made by the dimensions, lines and grades as shown on the drawings or by direct survey of which the methods shall be approved by the Engineer.
The documents submitted for measurement and payment shall become the property of the Employer and shall be used to the extent necessary to determine the monthly progress payment to be made to the Contractor under the Contract. Direct survey, if done, shall be subject to checking and verification by the Engineer and all errors in the said survey work and related computations as found during such checking shall be immediately corrected by the Contractor.

57.1 The Works shall be measured net with deductions made in accordance with the principles of the latest edition of the Civil Engineering Standard Method of Measurement. All measurements shall be given in metric (SI) units.
Provisional Sums

58.4 **Prime Cost sum**

Wherever an item in the Bills of Quantities has been referred to as a “P.C. Sum” (Prime Cost Sum), that item shall be construed as a Provisional sum and the provisions of Sub-clauses 58.1 to 58.3 will apply.

59.5 If the Engineer desires to secure final payment to any nominated sub-contractor before final payment is due to the Contractor and if such sub-contractor has satisfactorily indemnified the Contractor against any latent defects, the Engineer may, in an interim certificate, include an amount to cover the said final payment, and thereupon the Contractor shall pay to such nominated sub-contractor the amount so certified. Upon such final payment, the amount named in the Appendix to Form of Tender as Limit of Retention Money shall be reduced by the sum which bears the same ratio to the amount as does the subcontract and sub-contractor shall be discharged from all liability for the Work, materials or goods executed or supplied by such subcontractor under the Contract to which the payment relates.

Certificates and Payment

60.1 **Advance Payment**

In the event that an advance payment is granted, the following shall apply:-

a) On signature of the Contract, the Contractor shall at his request, and without furnishing proof of expenditure, be entitled to an advance of 10% (ten percent) of the original amount of the Contract. The advance shall not be subject to retention money.

b) No advance payment may be made before the Contractor has submitted proof of the establishment of deposit or of a directly liable guarantee satisfactory to the Employer in the amount of the advance payment. The guarantee shall be in the same currency as the advance.

c) Reimbursement of the advance shall be effected by deductions from monthly interim payments.

d) Reimbursement of the lump sum advance shall be made by deductions from the Interim payments and where applicable from the balance owing to the Contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached.

The amount to be repaid by way of successive deductions shall be calculated by means of the formula:
\[ R = \frac{A (X^1 - X^{11})}{80 - 20} \]

Where:

\( R \) = the amount to be reimbursed

\( A \) = the amount of the advance which has been granted

\( X^1 \) = the amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not exceed 80%.

\( X^{11} \) = the amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.

(e) With each reimbursement the counterpart of the directly liable guarantee may be reduced accordingly.

### 60.2 Interim Payment Certificate

The Contractor shall submit to the Engineer, in the manner required by the Engineer after the end of each month a statement showing the estimated total value of permanent Work properly executed and materials or goods for permanent works brought to Site up to the end of the previous month (if the value shall justify the issue of an interim certificate) together with any adjustments under clause 70 and any outstanding claims and sums the Contractor considers may be due to him. The Contractor shall amend or correct his estimate as directed by the Engineer and the latter shall not accept it until he is satisfied that it is fair and reasonable. With respect to the said materials and goods, no payment for them shall be made unless:

(i) The materials are in accordance with the specifications for the Works;

(ii) The materials have been delivered to Site and are properly stored and protected against loss, damage or deterioration;

(iii) The Contractor’s record of the requirements, orders, receipts and use of materials are kept in a form approved by the Engineer, and such records are available for inspection by the Engineer;

(iv) The Contractor has submitted a statement of his cost of acquiring and delivering the materials and goods to the Site, together with such documents as may be required for the purpose of evidencing such cost;

(v) The materials are to be used within a reasonable time.

The Contractor will be paid on the certificate of the Engineer the amount due to him on account of the estimated total value of the permanent Work executed up to the end of the previous month together with such amount (not exceeding 75% of the value) as the Engineer may consider proper on
account of materials and goods for permanent Work delivered by the Contractor on Site and in addition, such amount as the Engineer may consider fair and reasonable for any Temporary Works for which separate amounts are provided in the Bill of Quantities, all of which shall be subject to a retention of the percentage named in the Appendix to Form of Tender until the amount retained (hereinafter and in all Contract documents called the “Retention Money”) shall reach the “Limit of Retention Money” named in the said Appendix. Provided always that no interim certificate shall be issued for a sum (such sum always being the net amount thereof after all deductions for retention etc) less than that named in the Appendix to Form of Tender as “Minimum Amount of Interim Certificate” at one time.

Within 14 days after receiving a statement from the Contractor as aforesaid, and subject to the Contractor having made such further amendments and corrections as the Engineer may require, the Engineer shall issue a Certificate of Payment to the Employer showing the amount due, with a copy to the Contractor.

The Engineer shall not unreasonably withhold certifying an Interim Payment Certificate and where there is a dispute regarding an item for payment, the Engineer may delete this disputed item from the Interim Payment Certificate and certify the remainder for payment provided the said payment is in accordance with the preceding paragraph. In cases of difference in opinion as to the value of any item, the Engineer’s view shall prevail.

60.3 Final Account and Final Payment Certificate

As soon as possible after the issue of Taking-Over Certificate or the termination of the Contract and not later than the time of issue of Defects Liability Certificate, the Contractor shall prepare and submit to the Engineer (with a copy to the Employer), a Statement of Final Account showing in detail the total value of work done in accordance with the Contract together with all sums paid in previous payments. Within thirty(30) after receipt of such further information as may be reasonably required from the Contractor for its verification, the Engineer shall check the said statement, prepare and submit a Final Payment Certificate to the Employer (with a copy to the Contractor).

The Final Payment Certificate shall state;

(a) The (final) total value of all Work done in accordance with the Contract;

(b) After giving credit to the Employer for all amounts previously paid to the Contractor, the balance, if any, due from the Employer to the Contractor or the Contractor to the Employer, as the case may be.
Unless the Contractor notifies the Engineer of his objection to the Final Payment Certificate within twenty eight [28] days of delivery thereof, he shall be deemed to have agreed that he accepts the total Contract Price as set out in the Final Payment Certificate as full settlement for all work done under the Contract including any claims, variations and omissions thereof.

However, a Final Certificate of Payment shall not be conclusive:

a) to the extent that fraud or dishonesty relates to or affects any matter dealt with in the Certificate, or

b) if any arbitration or court proceedings under the Contract have been commenced by either party before the expiry of 84 days after the issue of the Final Certificate of Payment.

### 60.4 Payment of Certificates

Payment upon each of the Engineer’s Certificates for Interim Payments shall be made by the Employer within the time stated in the Appendix to Form of Tender from the date of issue of each Certificate of Payment.

Payment upon the Engineer’s Final Payment Certificate shall be made by the Employer within the time stated in the Appendix to Form of Tender from the date of issue of the Final Certificate of Payment signed by the Engineer and countersigned by the Contractor or his authorized agent or representative.

Making of a payment by the Employer shall be considered to have been duly executed on the day that the Employer has issued a cheque.

### 60.5 Payment of Retention Money

One half of the retention money shall become due upon the issue of a Taking – Over Certificate and shall be paid to the Contractor when the Engineer shall certify in writing that the last section of the whole of the Works has been substantially completed and the other half shall be paid to the Contractor after the expiration of the Defects Liability Period and the issue of a Certificate under Clause 62. Provided always that if such time there shall remain to be executed by the Contractor any Works ordered during such period pursuant to Clauses 49 and 50 thereof, the Employer shall be entitled to withhold payment [until the completion of such Works] of so much of the second half of the Retention Money as shall in the opinion of the Engineer represent the Costs of the Works so remaining to be executed. Provided further that in the event of different Defects Liability Periods having become applicable to different parts of the Works pursuant to clause 48 hereof the expression “expiration of the Defect Liability Period” shall for the purpose of this Sub-clause be deemed to mean the expiration of the latest of such periods.
60.6 **Currency of Payment**

The Contract price shall be stated in Kenya Shillings. All payments to the Contractor shall be made in Kenya shillings and foreign currency(s) in the proportion indicated in the tender, or agreed prior to the execution of the Contract Agreement and indicated therein. The rate[s] of exchange for the calculation of the amount of foreign currency payment[s] shall be the rate of exchange indicated in the Tender. If the Contractor indicated foreign currencies for payment other than the currencies of the countries of origin of related goods and services, the Employer reserves the right to pay the equivalent at the time of payment in the currencies of the countries of such goods and services. The Employer and the Engineer shall be notified promptly by the Contractor of any changes in the expected foreign currency requirements of the Contractor during the execution of the Works as indicated in the Statement of Foreign Currency Requirements and the foreign and local currency portions of the balance of the Contract Price shall then be amended by agreement between Employer and the Contractor in order to reflect appropriately such changes.

60.7 **Overdue Payments**

Unless otherwise stated in the appendix interest shall be paid on the overdue amounts and the interest to be paid shall be in accordance with prevailing commercial bank rates.

60.8 **Correcting and With-holding**

The Engineer may by any interim certificate or through the final account make any correction or modification to any previous certified sum and shall have authority, if any work or part thereof is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate.

60.9 **Completion by Sections.**

If a Taking-Over Certificate shall be issued for any section or part of the Works separately, the payments herein provided for on or after issue of such a Certificate shall be made in respect of such section or part and references to the Contract Price shall mean such part of the Contract Price as shall in the absence of agreement be apportioned thereto by the Engineer.

60.10 **Proportion of Foreign Currency**

Subject to the provision of sub clause 60.5 the proportion of foreign currency in any amount due to the Contractor or Employer shall be determined in the following manner:-

a) For all measured Work, the percentages of foreign currency for the appropriate section of the Bill of Quantities as stated in the schedule of foreign currency requirements shall be applied.
b) Variations in the cost of imported materials shall be paid in foreign currency.

c) Variations in the cost of locally purchased materials and those due to changes of legislation shall be paid in local currency.

d) For Day works labour and plant, the respective percentages of foreign currency stated in the schedule shall be applied.

e) For Day works materials and materials on site, payment in foreign currency will only be made for imported materials.

f) The provisions for the deduction and release of Retention Money and the payment of interest shall be applied similarly to both the local and foreign portions.

g) The advance mobilization loan, its repayment thereof and liquidated damages shall all be apportioned on the basis of the ration between local and foreign currency indicated in the Contract Price.

h) In the event that the payment is for an item not covered in the foregoing paragraphs, the Engineer shall determine the proportion of foreign and local currency based on the information given in the Schedule of Foreign Currency Requirements, together with any additional information he may request the Contractor to provide.

60.11 **Statement at Completion**

Not later than 14 days after the issue of the Taking-Over Certificate in respect of the whole of the works, the Contractor shall submit to the Engineer a statement at completion showing in detail, in a form approved by the Engineer;

(a) The final value of all work done in accordance with the Contract up to the date stated in such Taking-Over Certificate.

(b) Any further sums which the Contractor considers to be due; and

(c) An estimate of amounts, which the Contractor considers, will become due to him under the Contract.

Estimate amounts shall be shown separately in the Statement at Completion. The Contractor shall amend and correct the Statement as directed by the Engineer who shall issue a Certificate at Completion to be processed in accordance with sub-clause 60.4.
60.12 **Final Statement**

Not later than 56 days after the issue of the Defects Liability Certificate, the Contractor shall submit to the Engineer for consideration a draft final statement with supporting documents showing in detail, in the form approved by the Engineer;

(a) The final value of all work done in accordance with the Contract;

(b) Any further sums which the Contractor considers to be due to him.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonable require and shall make such changes in the draft as may be required.

60.13 **Discharge**

Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment under the Final Payment Certificate issued pursuant to Sub-clause 60.14 has been made and the Performance Security referred to in Sub-clause 10.1 has been returned to the Contractor.

60.14 **Final Payment Certificate**

Upon acceptance of the Final Statement as given in Sub-clause 60.12, the Engineer shall prepare a Final Payment Certificate which shall be delivered to the Contractor's authorized agent or representative for his signature. The Final Payment Certificate shall state:

(a) The final value of all work done in accordance with the Contract;

(b) After giving credit to the Employer for all amounts previously paid by the Employer, the balance, if any, due from the Employer to the Contractor or the Contractor to the Employer as the case may be

Final Certificate shall be issued for any sum due to the Contractor even if such is less than the sum said named in the Appendix to the Form of Tender.

60.15 **Cessation of Employer’s Liability**

Unless the Contractor notifies the Engineer of his objection to the Final Certificate within fourteen days of delivery thereof he shall be deemed to
have agreed that he accepts the total Contract Price as set out in the Final Certificate as full settlement for all work done under the Contract including any variations and omissions thereof.

**Remedies**

63.4 **Assignment of Benefit of Agreement**

But on the terms that a supplier or sub-contractor shall be entitled to make any reasonable objection to any further assignment thereof by the Employer and the Employer may pay the supplier or sub-contractor for any such materials supplied or Works executed under such agreement, whether the same be assigned as aforesaid or not, before or after the said determination, the amount due by such arrangement in so far as it has not already been paid by the Contractor.

65 **Special Risks**

a) In the event of the Employer unilaterally ordering the final cessation of performance of the Contract for reasons not specified elsewhere in the Conditions of Contract the Contract shall be considered to be frustrated and the Contractor shall be indemnified as provided for under clause 65.1.

(b) In the event of the Employer ordering the adjournment of the Contract before or after commencement of the Works for reasons not specified elsewhere in the Conditions of Contract, the Contractor shall be entitled to indemnity for any injury which he may have suffered as a consequence of such adjournment. The Engineer shall award the Contractor payment of such sum as in his opinion shall be reasonable giving regard to all material and relevant factors including the Contractor’s on costs and overheads, and the nature of the instruction to adjourn the Contract.
Settlement of Disputes

Arbitration

For the purposes of this Clause, the Arbitrator shall be a person to be agreed between the parties or failing agreement, the Arbitrator shall be appointed by the appointer designated in the Appendix to the Form of Tender.

Arbitration shall take place in Nairobi, Kenya. The language of all arbitration proceedings shall be in English. The cost of arbitration shall be apportioned by the Arbitrator according to his findings.

 Notices

Notwithstanding the foregoing, the Contractor shall either maintain an address close to the Works or appoint an agent residing close to the Works for the purpose of receiving notices to be given to the Contractor under the terms of the Contract. This obligation shall be terminated upon the issue of the Certificate of Completion.

Changes in Cost and Legislation

The Contract Price shall be deemed to have been calculated in the matter set below and shall be subject to the adjustment in the event specified hereunder:

(a) The rates contained in the priced Bill of Quantities are based upon the rates of wages and other emoluments and expenses applicable at the site and the date of tender pricing (as defined in sub-clause 70.4 hereinafter);

(b) If the said rates of wages and other emoluments and expenses shall be increased or decreased by act, statue, decree, regulation and the like after the said date of tender pricing then the net amount of increase the emoluments and expenses shall, as the case may be, paid to or allowed by Contractor;

(c) The rates contained in the price Bill of Quantities are based upon the rates of the Contractor’s compulsory contributions payable at the date of tender under or by virtue of any Act, Statue, Regulations and the like applicable at the site;

(d) If any of the said rates of contribution becomes payable after that date then the net amount of new statutory contribution becomes payable after that date then the net amount of increase or decrease of the emoluments and expenses shall, as the case may be, be paid to or allowed by the Contractor. Difference between what the Contractor actually pays in respect of work people engaged upon or in connection with the works and what he would have paid in respect of such
person had any of the said rates not been increased or decreased or had a new contribution not become payable as aforesaid, shall as the case may be, be paid to or allowed by the Contractor. Provided always that the Engineer and the Contractor may agree a sum, which shall be deemed to be the net amount of the aforesaid difference, and such sum shall be deemed for the purpose of this Contract to be, that which is to be paid to or allowed by the Contractor by the virtue of this sub-paragraph;

(e) If the market price or any materials or goods specified as aforesaid shall be increased or decreased after the said Date of Tender Pricing, then the net amount of difference between the basic price and the market price payable by the Contractor and current when any such goods and materials are bought shall, as the case may be, be paid to or allowed by the Contractor. Orders for materials and goods listed as aforesaid shall have been placed within a reasonable time after the date at which sufficient information is available for the placing of such orders, and the placing of orders at that time shall be a condition precedent to any payments being made to the Contractor in respect of increased market prices.”

70.2 (a) If the Contractor shall decide subject to Clause 4 thereof to sub-let any portion of the work he shall incorporate in the sub-contract provisions to the like effect as those contained in sub-clause (1) of this Clause;

(c) If the price payable under a sub-contract as aforesaid is increased above or decreased below the price in such sub-contract by reason of the operation of the incorporated provisions of sub-clause (1) of this clause then the net amount of such increase or decrease shall as the case may be, be paid to or allowed by the Contractor under this Contract.

70.3 The expression “the date of tender pricing” as used in this Clause means the date 28 days prior to the final date for submission of Tenders as determined by the Employer in the Tender documents.

70.4 For imported materials, the supplier's/manufacturer's Prime costs shall be C.I.F. cost at point of entry by the same means of transport as determined by the Contractor's Basic Rate.

For locally produced materials, the supplier’s or manufacturer’s prime costs shall be at their nearest depot or the nearest railway station relevant to the works.

For materials, which are subject to Government Price Control, payments for price variations will be determined from the difference between the control price in force at a date 28 days prior to date for submission of Tenders and the price in force on the date of purchase.
70.5 The materials to which this Variation Clause applies are:

- All bitumen material
- Fuels, oils and lubricant
- Cement
- Lime
- Flex beam guardrail
- Explosives
- Gabion mesh
- Reinforcing steel

70.6 The Contractor shall not change the supplier or manufacturer during the Contract without the approval of the Engineer.

70.7 No payments will be made for price variation related to expenses incurred by the Contractor in his Head Office in Kenya, or overseas.

70.8 All payments made pursuant to Clause 70 shall be in Kenya Shillings.

70.9 No payments will be made for the cost of preparing V.O.P. claims.

70.10 Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited as aforesaid if the same shall already have been taken into account in accordance with the provisions of sub-clause 70.1
ADDITIONAL CLAUSES

Clause 73  Declaration Against Waiver

The condoning by the Employer of any breach or breaches by the Contractor or any authorized sub-contractor of any of the stipulations and Conditions contained in the Contract shall in no way prejudice or affect or be construed as a waiver of the Employer's rights, powers and remedies under the Contract in respect of any breach or breaches as aforesaid.

Clause 74  Bribery and Collusion

The Employer shall be entitled to determine the Contract and recover from the Contractor the amount of any loss resulting from such determination if the Contractor shall have offered or given or agreed to give any person any gift or consideration of any kind as an inducement of regard for doing or fore bearing to do or for having done or fore borne to do any action in relation to obtaining or the execution of the Contract or any other contract with the Employer or if any of the like acts shall have been done by any person employed by the Contractor or acting on his behalf (whether with or without the knowledge of the Contractor) or if the Contractor shall have come to any agreement with another contractor or number of contractors whereby an agreed quotation or estimate shall be tendered to the Employer by one or more contractors.

Clause 75  Contract Confidential

The Contractor shall treat the Contract and everything in connection therewith as private and confidential. In particular, the Contractor shall not publish any information, drawings or photographs concerning the Works in any trade or technical paper etc, and shall not use the Site for the purpose of advertising except with the written consent of the Engineer and subject to such conditions as the Engineer may prescribe.

Clause 76  Employer’s Officials etc., Not Personally Liable

No official of the Employer or the Engineer or the Engineer’s Representative or anyone of their respective staffs or their employees shall be in any way personally bound or liable for the acts or obligations of the Employer under the Contract or answerable for default or omission in the observance or performance of any of the acts, matters or things which are herein containe
Clause 77 Taxes and Duties

(1) The Contractor shall list in his tender the plant and vehicles which he intends to import for the execution of the Works. The Engineer will consider the list in the context of the program of the Works and will give his approval subject to any modifications that he may see fit to make. No appeal against the Engineer’s decision shall be permitted.

The Contractor will be permitted to import approved plant and vehicles required for the execution of the Works on the basis of temporary admission into Kenya and re-export thereafter upon completion of the Contract without payment of customs duties and Value Added Tax for them. If the plant and equipment shall not be re-exported, duties and taxes shall then be paid based upon their residual value at the date of completion of the Contract, or the date of withdrawal from the Works, if earlier. Plant and vehicles so imported shall not be utilized on other works not associated with the Contract unless specifically authorized by the Engineer.

(2) The Contractor will be permitted to import approved spare parts, tires and tubes without payment of customs duty and Value Added Tax for maintenance of any imported vehicles and plant as provided in sub-clause 77.1 above, within a financial limit indicated by himself. However, this limit will not exceed 15% of the Contract Price excluding Contingencies.

(3) All materials approved by the Engineer to be incorporated into the Works or temporary works, and whose importation into Kenya is agreed to be essential shall be free of customs duties and Value Added Tax. The Contractor shall submit a list of such materials required with the tender. The Contractor shall be required to satisfy the Engineer that such materials have actually been incorporated into the Works.

Items produced in Kenya will not be permitted to be imported without payment of customs duty and Value Added Tax.

Items produced in Kenya shall mean commercially recognized goods or products that are either mined, grown, manufactured, processed or assembled (whether the components are imported or not) in Kenya.

Clause 78 Joint Ventures

78.1 If the Contractor is a joint venture, all partners of the joint venture shall be jointly and severally liable to the Employer for the execution of the entire Contract in accordance with its terms and Conditions.
SECTION VII
SPECIFICATIONS
1. GENERAL

1.01 TESTS AND SAMPLES

Samples of all materials shall be deposited with the Engineer and approved prior to ordering or delivery on site. The Engineer reserves the right to test any sample to destruction and retain samples until the end of the maintenance period. All materials delivered to site shall be at least equal in all respects to the samples delivered to the Engineer.

All sampling of materials on the site must be done by or in the presence of the Engineer. All other samples will be deemed to be not valid under the Contract.

1.02 KENYA STANDARDS

All materials and goods supplied for incorporation in the works must comply with any relevant current standards issued by the Kenya Bureau of Standards. Where these are not established or are unclear the latest British Standards and Codes of Practice shall apply.

1.03 PROTECTION OF EXISTING "MANHOLES AND CHAMBERS"

Where it is necessary to remove existing manhole covers and gulley gratings for adjustment thereof, or in connection with any other work, the Contractor shall take all necessary precautions to prevent the entry of debris into such manhole or chambers.

1.04 WATER SUPPLY, LIGHT AND POWER

The Contractor shall provide for all purpose of the work, an adequate supply of water. He must pay the water charges and make all arrangements for supply, transport and distribution.

In addition, the Contractor shall make his own arrangements for the supply of light and power required by him for the construction of the Works and shall pay all fees and charges in connection therewith.

1.05 PROVISION OF INSTRUMENTS AND LABOUR

The Contractor shall provide at his own expense all instruments, materials, tools and other things which the Engineer considers necessary for his proper supervision of the Works and shall maintain the same in good order. He shall also provide labour for attendance on the Engineer and his representative in carrying out operations connected with the supervision of the Works.

1.06 PROTECTION OF WORKS FROM RAINS

The Works shall be so executed that should it be necessary to suspend work due to rain, no part thereof is left in such a state as to be liable to damage thereby. No claim by the Contractor arising out of the reinstatement of any damage caused by or accidental to rain shall be accepted.
1.07 WORKMANSHIP

Notwithstanding anything mentioned to the contrary in this Specification, the whole of the Works shall be carried out in a thoroughly workmanlike manner.

1.08 LEAVE WORKS CLEAN

On completion of the Works, or if directed by the Engineer, on completion of any portion thereof, the Contractor shall carefully restore to the original condition the ground, fences and other structures that may have been interfered with in any way by him or his employees and shall remove all rubbish, tools and materials which are not required, so as to leave the Works and site in a clean and orderly condition, such work being carried out by the Contractor without extra charge over and above his scheduled rates for the execution of the Works.

2. SITE CLEARANCE

2.01 CLEARING SITE

The Contractor shall remove buildings, walls, gates, fences and other structures and obstructions, grub up and remove trees, hedges, bushes and shrubs and clear the site of the Works at such time, and to the extent required by the Engineer, but not otherwise, the materials so obtained shall so far as suitable be reserved and stacked for further use; all rubbish and material unsuitable for use shall be destroyed or removed from the site.

2.02 BUSHES, SMALL TREES AND FELLING TREES

All bushes and small trees the main stem of which is less than 100mm girth at 1 metre above ground level shall be uprooted (unless otherwise directed by the Engineer) and burnt or otherwise disposed off as directed by the Engineer.

Where directed by the Engineer, trees shall be uprooted or cut down as near to ground level as is possible. No trees shall be cut down without the express permission of the Engineer.

2.03 GRUBBING UP ROOTS

Stumps and tree roots shall, unless otherwise directed, be grubbed up, blasted, burnt or removed and disposed of in approved dumps to be provided by the Contractor where directed by the Engineer, the holes resulting from grubbing up shall be filled with approved materials, which shall be deposited and compacted in layers not exceeding 225mm loose depth, to the same dry density as that of the adjoining soil.
2.04 UNDERGROUND CHAMBERS, ETC. TO BE CLEANED

Demolition of pits, walls etc shall be to a depth of 1 metre below ground level and the remainder shall be properly cleaned out and filled with approved materials, which shall be deposited and compacted in layers not exceeding 225mm loose depth to the same dry density as that of the adjoining soil. Soil and surface water drains, lying within the site of the Works, shall, where directed by the Engineer, be sealed off, and all other services satisfactorily severed and sealed to the satisfaction of the appropriate authorities and/or owners. Disused soil and surface water drains within 1 metre of formation level shall if required by the Engineer be removed and trenches shall be backfilled as necessary.

2.05 WEED CONTROL

The Contractor shall take all necessary precautions against the growth on the site of weeds and remove them as necessary throughout the period of works and maintenance.

The formation level and finished surface of base of all footways and elsewhere as directed shall be sprayed with an approved persistent total herbicide at the rate recommended by the manufacturer. The application shall be by an even spray in a high volume of water at about 0.07 to 0.11 litres per square metre. After this application the footways shall receive at least two further waterings before the surface is sealed.

3. FENCING

3.01 REMOVING EXISTING FENCING AND GATES

Where instructed by the Engineer, the Contractor shall carefully remove existing fences and gates, dismantle the components and stack them in separate heaps where directed. All wires shall be neatly coiled and tied. Materials which in the opinion of the Engineer are not suitable for re-use shall be destroyed or removed to a tip to be provided by the Contractor.

3.02 STOCK PROOF FENCING

Where stockproof fencing is called for in the Bills of Quantities or ordered by the Engineer it shall comprise 75mm sawn cedar posts painted with two coats of creosote, firmly fixed into the ground and placed at 2m centres together with 100mm diameter posts suitably strutted at all changes of direction, and having four wires equally spaced throughout its height. The Contractor’s rate for temporary fencing shall include for its provision, erection, maintenance during the period of the Works, and removal on completion of the Contract. The fence shall remain the property of the Contractor.
3.03 TEMPORARY FENCING

Where temporary fencing is called for in the Bills of Quantities or ordered by the Engineer it shall comprise 75mm diameter sawn cedar posts firmly fixed into the ground and placed at 2m centres together with 100mm diameter posts suitably strutted at all changes of direction, and having four wires equally spaced throughout its height. The Contractor's rate for temporary fencing shall include for its provision, erection, maintenance during the period of the Works, and removal on completion of the Contract. The fence shall remain the property of the Contractor.

4. EARTHWORKS

4.01 FORMATION LEVEL

Formation level on embankments and in cuttings shall be the surface level of the ground obtained after completion of the earthworks, i.e. the underside of the sub-base, or where no sub-base is specified, the underside of the base. The levels and tolerance of irregularity of the surface of the embankment shall be within the limits specified.

4.02 DEFINITION AND CLASSIFICATION OF EXCAVATED MATERIALS

Excavation in solid rock will be classified in two grades: HARD & SOFT.

No material which can be excavated by the use of a pick and shovel will be considered as rock.

The breaking up of concrete roads, foundations or the demolition of any structure or like work will be classified as "Excavation in Rock".

The Engineers' decision on whether the excavation is in HARD or SOFT rock will be final, but will be based on Table 4.1 below.
### Table 4.1

<table>
<thead>
<tr>
<th>Material Characteristics and Tests</th>
<th>Material Types</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hard Rock</td>
</tr>
<tr>
<td>Typical Material</td>
<td>Black volcanic rocks trachyte, phonolite ignimbrite in a fresh state</td>
</tr>
<tr>
<td>Hammer Blow</td>
<td>Solid note from ringing to dully</td>
</tr>
<tr>
<td>Pliers Crushing</td>
<td>Not possible or grani fracture</td>
</tr>
<tr>
<td>50mm diameter Core in Hard</td>
<td>Cannot break 500mm long piece</td>
</tr>
<tr>
<td>Soaked in Water for one Hour</td>
<td>No change</td>
</tr>
<tr>
<td>Expected Crushing Strength</td>
<td>Above 40N/mm$^2$</td>
</tr>
</tbody>
</table>

Common excavation shall mean excavation in any materials which are not rock as defined in this Clause. All excavation shall be classified either as unsuitable material or as suitable material. Unsuitable material shall comprise:

(i) Material from swamps or marshes, silt, perishable material, slurry or mud; or

(ii) Any material:

(a) Which is a highly organic clay or silt;

(b) Which is clay having a liquid limit exceeding 80 and/or a plasticity index exceeding 55;
(c) Which is outside the limits of moisture content specified for the earthworks elsewhere in this Specification when excavated or thereafter;

(d) Which is susceptible to spontaneous combustion;

(e) Consisting of such domestic refuse which by virtue of its physical or chemical composition or moisture content will not compact to form a stable fill.

Suitable material shall comprise all that which is acceptable in accordance with the requirements of the Specification for use in the Works, whether obtained from within or without the site of the Works.

For the purpose of selection for use in earthworks all common excavation shall be classified as either plastic or non-plastic. Non-plastic materials shall be defined as those on which it is impossible to carry out a plasticity index test and shall include "coarse-grained, non-cohesive materials" included in Table 1 of British Standard Code of Practice CP 2001: Site Investigations, and such shales, silts and other materials which in the opinion of the Engineer are readily self-draining. Plastic materials shall be defined as all other materials included in the above-mentioned Table as "fine-grained cohesive materials", as defined in CP2001.

**4.03 EXCAVATION OF CUTTINGS**

The Contractor shall carry out the excavation of cuttings in accordance with the drawings and shall adhere to the slopes, levels, depths and height shown thereon.

The sloping sides of all cuttings shall be cleared of all rock fragments which move when prised with crowbar and are therefore liable to cause injury or damage through falling.

Where excavation reveals a combination of suitable and unsuitable materials, the Contractor shall, wherever the Engineer considers is practicable, carry out the excavation in such a manner that the suitable materials are excavated separately for use in the Works without contamination by the unsuitable materials.

No excavated material shall be dumped or run to spoil except on the direction or with the permission of the Engineer who may require material which is unsuitable to be retained on site. Material used for haul roads shall not be re-used in embankments, or elsewhere without the permission of the Engineer.

The completion of cuttings shall, unless otherwise permitted by the Engineer be undertaken in two stages. First the area between the extremities of the carriageway(s), including verges shall be excavated to a level 300mm above formation level whereupon construction traffic may continue to be allowed to use the surface so formed.

Second, when it is necessary to complete the formation level, this excess of material shall be trimmed off as a single operation and disposed of either elsewhere in the Works if regarded by the Engineer as suitable material or if not run to spoil. When the height above formation level has been reduced below 300mm the movement and
use of construction plant other than that used to complete this operation shall be in accordance with this specification. This trimming operation shall be regarded as the commencement of construction of the pavements.

4.04 FORMING OF EMBANKMENTS

The Contractor shall carry out the forming of embankments in accordance with the Drawings and shall adhere to the slopes, levels, depths and heights shown thereon.

All filling material other than rock in embankments or below formation level in cuttings shall be deposited in layers not exceeding 225mm loose depth unless as a result of compaction trials the Engineer approves spreading to a greater depth up to a maximum of 375mm loose depth. Each layer shall extend over the full width of the embankment and shall be compacted as specified.

Rock used in rock-fill embankments shall be of such size that it can be deposited in horizontal layers each not exceeding 450mm loose depth and extending over full width of the embankment except for any specified external cover to slopes or new formation level. The materials shall be spread and levelled by a crawler tractor weighing not less than 15 tonnes. Each layer shall consist of reasonably well graded rock and all large voids shall be filled with broken fragments before the next layer is placed. The top surface with side slopes of embankments so formed shall be thoroughly blinded with approved fine graded material to seal the surface. Such material may be surface soil on side slopes.

Where materials of different characteristics are readily available those of relatively high bearing capacity shall be placed in the topmost 600mm below formation level.

The completion of embankments shall unless otherwise permitted by the Engineer be undertaken in two stages. First, the area between the extremities of the carriageway(s), including verges shall be brought up to a level 150mm above formation level whereupon construction traffic may continue to be allowed to use the surfaces so formed.

Second, when it is necessary to complete to formation level the excess of material shall be trimmed off as a single operation and disposed of either elsewhere in the Works if regarded by the Engineer as suitable material or if not, run to spoil.

When the height above formation level has been reduced below 150mm the movement and use of construction plant, other than that used to complete this operation, shall be in accordance with the requirements of Clause 6.18.

This trimming operation shall be regarded as the commencement of construction of the pavement.

4.05 COMPACTION OF EARTHWORKS

All filling material used in the earthworks shall be compacted to specification by plant approved by the Engineer for that purpose.
The Contractor shall submit to the Engineer for approval his proposals for the compaction of each main type of material to be used in the embankments, including those in relation to the type of plant, the number of passes and the loose depth of layer. The Contractor shall carry out compaction trials, supplemented by any necessary laboratory investigations, as required by the Engineer, using the procedure proposed by the Contractor for the earthworks, and shall satisfy the Engineer that all the specified requirements regarding compaction can be achieved.

Compaction trials with the main types of material likely to be encountered shall be completed before the works with the corresponding materials will be allowed to commence.

Work shall be continued until a state of compaction is reached throughout the embankments, including especially the slopes of embankments and the immediate approaches to bridge abutments such that at least 9 out of every 10 consecutive samples taken of the compacted material have a relative compaction determined according to B.S. 1377 of at least the following percentage of the maximum density at optimum moisture content:

(a) For the topmost 600mm below formation level a maximum density of 100 per cent;

(b) For the remainder below formation a maximum density of 95 per cent.

Each layer of rock used as rock-fill in embankments shall be systematically compacted by at least 8 passes of a towed vibrating roller weighing not less than 3 tonnes or a grid roller weighing not less than 13 tonnes dead weight or other approved plant. Where, however, it is established that rock can be compacted to the requirements for common excavation, the rock shall be compacted to such latter requirements.

**4.06 EXCAVATION BELOW EMBANKMENT IN MATERIALS UNSUITABLE FOR CONSTRUCTION**

Before forming the embankment, any unsuitable material naturally occurring on the site shall be removed to such depths and over such area as may be directed by the Engineer and shall be run to spoil. The resultant excavation shall be backfilled with suitable material deposited and compacted as specified for the forming of embankments. Nevertheless where in these circumstances such backfill has to be deposited below standing water, compaction may be omitted provided that the material used is completely free draining.

If ordered by the Engineer as an alternative method of construction, approved rock-fill material shall be placed directly on the naturally occurring unsuitable material to such total depth that on completion of compaction negligible deflection of the surface occurs due to the passage of vehicles hauling in the rock.
4.07 EXCAVATION BELOW FORMATION IN CUTTING IN MATERIALS UNSUITABLE FOR CONSTRUCTION

Where unsuitable material is encountered in the subgrade it shall be excavated to such depths and over such area as the Engineer shall direct and be run to spoil. The resultant excavation shall be backfilled with suitable material deposited in layers each not exceeding 225mm loose depth and compacted in the manner specified for the forming of embankments.

If ordered by the Engineer as an alternative method of construction, approved rock-fill material shall be placed directly on the natural occurring unsuitable material to such total depth that on completion compaction negligible deflection of the surface occurs due to the passage of vehicles hauling in the rock. The rock fill material shall be deposited in accordance with the requirements as previously specified for the compaction of rock.

4.08 COMPLETION OF EARTHWORKS

The formation shall be property shaped and regulated and compacted as specified herewith. When completed the formation shall be at the required level and generally parallel to the required finished surface of the road.

4.09 CURVES

Where the alignment of the carriageway is curved, the bottom of the cuttings and the tops of embankments shall be formed with the super-elevation and increased widths shown on the Drawings or as Engineer shall direct, to suit the degree of curvature of the alignment.

4.10 OPEN DITCHES

Open ditches for drainage purpose shall be cut where and of such cross section as the Engineer shall direct and where so required by him they shall be constructed before the cuttings are opened or the embankments begun. The sides shall be dressed fair throughout and the bottoms property graded so as to carry off the water to the outlet to be provided. The material excavated from the ditches shall be disposed of as directed by the Engineer.

4.11 CLEARING EXISTING DITCHES

Where directed by the Engineer existing ditches shall be cleared by removing vegetable growths and deposits. The sides shall be shaped fair throughout and the bottoms properly graded. Material removed from existing ditches shall be disposed off in tips provided by the Contractor.
4.12 FOUNDATIONS PITS AND TRENCHES OF GREATER WIDTH AND DEPTH THAN NECESSARY

Excavation to a greater depth or width than is directed shall be made good with concrete of the appropriate class as determined by the Engineer who may allow excavation to a greater width than is necessary to be filled and tightly packed with suitable material.

4.13 EARTHWORKS TO BE KEPT FREE OF WATER

The Contractor shall arrange for the rapid dispersal of watershed on or entering the earthworks from any source at any time during construction, or water which is shed on to the completed sub-grade. He shall provide within the site where necessary temporary water-courses, ditches, drains, pumping or other means of maintaining the earthworks free from standing water. Water discharged from the site shall not be run into a road but be carried direct to an approved sewer, ditch or river through troughs, shutes or pipes.

4.14 SUPPORTS FOR FOUNDATION PITS AND TRENCHES

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

4.15 BACKFILLING OF FOUNDATION PITS AND TRENCHES AND REMOVAL OF EXCAVATION SUPPORTS

Backfilling of foundation pits and trenches shall be carried out only after the foundation and structural works within the excavations have been inspected and approved by the Engineer. Unless otherwise directed by the Engineer all filling shall consist of approved excavated material which shall be deposited and compacted, using approved plant, in layers not exceeding 225mm loose depth, to a dry density not less than that of the adjoining soil. Timber sheeting and other excavation supports shall be carefully removed as the filling proceeds except as otherwise specified, but the removal of such supports will not relieve the Contractor of his responsibility for the stability of the works.

Where directed by the Engineer timbering, sheeting or other excavation supports shall be left in foundation pits and trenches and any timber so left in will be measured and paid for at the prices entered in the Bills of Quantities except where, in the opinion of the Engineer, the necessity for leaving the timber in has arisen from negligence on the part of the Contractor.

4.16 USE OF VIBRATORY COMPACTION PLANT
Where vibratory rollers or other vibratory compaction plant are used the mechanism for vibration shall be kept working continuously during compaction operations, except during period when the Engineer permits or directs discontinuance of vibration.

Unless otherwise permitted by the Engineer, the frequency of vibration shall be maintained within the range of amplitude and frequency recommended by the manufacturers of the plant for the material to be compacted.

4.17 PROVISION OF SPOIL HEAPS

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

5. CONSTRUCTION OF SUB-BASES, BASES AND VERGES

5.01 DRAINS TO BE COMPLETED

Before the construction of the carriageways, footways or verges is began, all drains, sewers, cables ducts or other special formation work shall be completed.

5.02 COMPACTION OF NON-PLASTIC SOIL IMMEDIATELY BELOW FORMATION LEVEL IN CUTTINGS

Where shown on the Drawings or directed by the Engineer non-plastic soils shall, for a depth of 150mm be scarified, pulverized and recompacted. Work shall be continued in such a manner as to produce a maximum density of 100 per cent at the optimum moisture content, or such other percentage as may be approved by the Engineer as a result of compaction trials.

Soft areas which may develop during compaction shall be removed and replaced by approved material.

5.03 MURRAM TO CARRIAGEWAY ON ROCK

Where the formation is rock, after excavation has been completed and if directed by the Engineer, a murram cushion shall be laid to the proper-cross falls to receive the carriageway base. It is anticipated that the depth of such murram shall not exceed 50mm and the cost of these works, shall be included for in the rates for excavation in rock.

5.04 PREPARATION OF FORMATION

The formation to carriageways, footways and verges shall be well cleaned, freed from mud and slurry, and prepared entirely as specified. Where directed by the Engineer, the surface of newly prepared areas of the formation or sub-base shall, before the completion of each day’s work, be surface dressed as specified. Alternatively, where directed by the Engineer, the formation shall be covered by the sub-base or base within 48 hours after formation level is reached.
Once the formation has been prepared, construction traffic shall not be allowed to run thereon without the permission of the Engineer, which permission if given shall not relieve the Contractor from total responsibility for any damage caused by such traffic.

5.05 GRANULAR SUB-BASE

Granular sub-base shall be of the thickness shown on the Drawings or stated in the Bills of Quantities, conform to the other requirements of this Clause and be constructed using permitted aggregates in the following manner:

Aggregates:

These shall comprise approved crushed building stone, crushed concrete, well graded natural sands, gravels, rock or mixtures thereof and of the following grading:

<table>
<thead>
<tr>
<th>B. S. Test Sieve Size</th>
<th>Percentage by Weight Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>75mm</td>
<td>100</td>
</tr>
<tr>
<td>38mm</td>
<td>85-100</td>
</tr>
<tr>
<td>5mm</td>
<td>25 - 45</td>
</tr>
<tr>
<td>No. 25</td>
<td>8 - 22</td>
</tr>
<tr>
<td>No. 200</td>
<td>0- 10</td>
</tr>
</tbody>
</table>

Wet sieving shall be used to determine the percentage passing the No. 200 sieve. Subject to the approval of the Engineer the proportion of material passing the No. 200 sieve may be increased to 10 per cent provided that all the material passing the No. 200 sieve is non plastic when tested otherwise in accordance with British Standard 1377: Methods of Testing Soils for Civil Engineering Purposes.

The material shall be laid and compacted at an optimum moisture content to a maximum dry density of 95 -100%, unless otherwise directed by the Engineer.

General Requirements:
The material shall be laid in one or more layers, each not exceeding 150mm compacted thickness, to produce the specified total depth of sub-base to the width and correct line and levels shown on the drawings or stated in the Bills of Quantities.

The material for each layer shall be deposited into the hopper of a paver or box spreader or sufficiently evenly on the existing surface for immediate spreading by a motor grader. Spreading shall be affected by one or other of the above types of machine.

Compaction shall be by means of an 8 - 1.0 tonne roller or by a vibratory tandem roller having a weight exceeding 3 tonnes, until a state of compaction is achieved such that not more than one field dry density determination in 10 is less than the average dry density achieved during compaction trials with 10 passes of such a roller or vibratory roller. The C.B.R. of the crusher-run layer to be not less than 100%.

The levels of the surface of the course shall be within the limits specified in Clause 6.18 for sub-bases.

5.06 MURRAM SUB-BASE

The murrain sub-base shall be in accordance with Clause 11.05 and shall be of the thickness shown on the Drawings or stated in the Bills of Quantities. It shall be laid in one layer and spread by a motor grader or other plant approved by the Engineer. Compaction shall be as specified for earthworks and material shall be compacted to a relative compaction of not less than 100% dry density as determined in accordance to British Standard 1377.

5.07 SCARIFYING EXISTING SURFACE AND MAKING GOOD

Where a new carriageway abuts on to or includes an existing carriageway and the Engineer so directs, the surface of the latter shall be scarified, adjusted and reshaped to conform with existing and new chambers or cross falls. Materials from the existing road shall be used or disposed off as directed by the Engineer.

5.08 LEAN CONCRETE BASE

General

Construction of a lean concrete base, including preliminary trials, shall be in accordance with the provisions of this Clause. Construction shall be to the specified thickness after compaction. If the Contractor proposes to compact in one layer he shall satisfy the Engineer that with the plant and method of construction used the specified requirements can be achieved throughout the whole depth of the base. Failing such satisfaction the Contractor shall compact the base in two layers each of approximately equal thickness.

Where a base of more than 200mm of lean concrete is required and the specified compaction requirements cannot be met using, single layer compaction, the materials shall be laid in separate layers each not less than 100mm nor more than 200mm in depth after compacting the top layer laid immediately after compacting the lower layer so that in any vertical section the lean concrete shall be fully compacted throughout
the whole depth and finished within two hours from the time of the completion of the mixing of the first batch of lean concrete in that section.

**Aggregates:**

The aggregates shall consist of gravel, sand, crushed rock or a mixture of these materials. All aggregate shall comply with the requirements of British Standard 882: Concrete Aggregates from Natural Sources. Gravel, sand or all-in gravel-sand mixtures shall be washed unless they can be shown to meet the requirement of British Standard 832 as regards freedom from clay, silt and other impurities.

**Gradings and Maximum Size:**

The nominal size of aggregate shall be either 4mm or 2mm as stated in the Bills of Quantities. The aggregate may consist of coarse and fine aggregate batched separately on an all-in aggregate, but subject to the following provision, the gradings of the fine aggregates or the material passing the 5mm sieve in an all-in material shall be within Zone 2 or Zone 3 of British Standard 832: Concrete Aggregates from Natural Sources and the overall grading shall be within the limits shown in Table 6.1 below.

In the event of the Contractor offering a material in which the fine aggregates or the material passing the 5mm sieve in an all-in material has a grading falling within either Zone 1 or Zone 4 of British Standard 882, the Engineer may approve its use and permit the proportions passing the 5mm sieve to exceed the figures given below by 5 per cent for a Zone 1 material or to fall below the figures given below by 5 per cent for a Zone 4 material subject to his being satisfied by trial mixes and a trial area said with the plant to be used on the work, that a mix can be satisfactorily compacted.

**Table 5.1**

<table>
<thead>
<tr>
<th>B.S. Test Sieve Size</th>
<th>Per cent by Weight passing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38mm Nominal Maximum Size</td>
</tr>
<tr>
<td>75mm</td>
<td>100</td>
</tr>
<tr>
<td>38mm</td>
<td>95 - 100</td>
</tr>
<tr>
<td>20mm</td>
<td>50 - 80</td>
</tr>
<tr>
<td>5mm</td>
<td>30 - 40</td>
</tr>
<tr>
<td>No. 25</td>
<td>8 - 30</td>
</tr>
<tr>
<td>No. 100</td>
<td>0 - 6</td>
</tr>
</tbody>
</table>
Mix Proportions:

The ratio of cement to aggregate by weight (including any absorbed moisture but excluding free water in the aggregate), shall be not less than 1:20 and shall be such as to produce average crushing strengths to the requirement of this Clause. The ratio of cement to aggregate by weigh shall not, however, be more than 1:15 except with the approval of the Engineer.

Water Content:

The water content of the mixed concrete shall be such as to ensure that the degree of compaction specified below can be achieved under all normal working conditions.

Crushing Strength Requirements:

The essential strength requirements for the material is that the average 28-day strengths of groups of three cubes determined in accordance with the specification shall be such that not more than one such average strength in any consecutive five such averages is less than 0.985 Kg/mm². If however an overall average of any consecutive five groups of three cubes (i.e. fifteen cube strengths) fails below 1.125 Kg/mm² at 28 days, the Engineer may require the use of different materials, mix proportions, plant or methods, notwithstanding any approval which may have been previously given to such materials, mix proportions, plant or methods.

Further, in order to ensure a high probability at an early stage that the above requirements will be met, the average 7-day strength of groups of three cubes determined as before described should be not less than 0.705 Kg/mm² and if more than one of the 8-day average strengths of groups of three cubes in any consecutive five such average falls below 0.705kgmm² the cement content shall be increased to such a value as may be approved by the Engineer and the pouring of cubes shall be continued at the same rate as the start of the work until the results show that a satisfactory material is being produced.

Density of Compacted Base:

The average density from groups of three determinations carried out as before described shall be not less than 95 per cent of the theoretical density of material as compacted to zero air content calculated from the specific gravities, determined in accordance with British Standard 812: Methods of Sampling and Testing of Mineral Aggregates, Sands and Fillers, and the nominal proportion of the constituents, including the water. If more than one average density in any consecutive five such averages fails to meet this requirement, the Engineer may require the removal of the base represented by the low densities and its replacement with further material to the requirements of this Clause.
Preliminary Site Trials:

In the event of the grading of the fine aggregate or of the material passing the 5 mm sieve in an all-in aggregate falling within either Zone 1 or Zone 4 of British Standard 882: Concrete Aggregates from Natural Sources, the Contractor shall construct, at least ten days before the main work of base construction is started, an area of lean concrete base 1,000 m² as a preliminary trial at a site to be approved by the Engineer. For this trial the Contractor shall use the materials, mix proportions, mixing, laying and compacting plant and construction procedure that are proposed for the main work. The preliminary trial is to establish the suitability of the materials and mix proportions, and the efficiency of the mixing, spreading and compacting plant in handling and processing the proposed materials.

Testing of the materials, the crushing strength of the lean concrete and the density of the base shall be carried out during the trial in accordance with Clause 12.05. The average 7-day crushing strength shall correspond to not more than 5 percent air voids.

Batching, Mixing and Transport of Mixed Material

Proportioning and mixing of the lean concrete shall be carried out in as specified for concrete elsewhere except that if batch mixers other than tilting or non-tilting drum mixers are used, the mixing time may be reduced to a value which shall in no circumstances be less than 45 seconds after all the materials including the water entered the pan, trough or other mixing vessel, provided that the Engineer is satisfied as a result of preliminary trials that adequate mixing is achieved with the reduced mixing time. Sufficient mixers shall be employed to ensure that a rate of not less than 20 metres per hour measured longitudinally of completed base can be maintained in order to permit satisfactory compaction of the material. Care shall be taken during tipping from the mixer, transit and spreading to prevent segregation. In particular when continues mixers are used with a receiving hopper below, the mixed materials shall not be allowed to fall direct from the mixer to transport vehicle with the bottom door of the receiving hopper open. The mixed materials shall, where required by the Engineer, be covered during transit and while awaiting tipping to prevent wetting by rain or evaporation of moisture.

Spreading of Mixed Material:

The lean concrete shall be spread by means of an approved box-hopper spreader or by bituminous pavers. If the latter are used and the width of the carriageway is greater than the width which can be laid by one pass of a single paver, the work shall be arranged using, if necessary, two or more in echelon so that a free edge of spread material is not exposed for more than one hour.
Compaction:

Compacting shall be carried out by means of a vibrating roller which applies a dead load of not less than 0.5 tonne through the vibratory roll or by a vibratory compactor approved by the Engineer. The vibrating roller shall, where required by the Engineer, be operated both longitudinally and transversely. This shall be followed by rolling with an 5 - 10 tonne tandem or other approved type of roller. Where directed by the Engineer the rollers shall be lightly wetted. Compacting shall be continued until visible movement of the surface of the layer beneath the roller ceases and until the surface is closed.

5.08 HANDPACKED STONE BASE

Material:

The material for handpacked stone base shall comply with the following: -General requirements:

The rock from which the stones and screenings are to be produced shall comply with the following:

- Aggregate Crushing Value (A.C.V.): Not greater than 40%
- Los Angelos Abrasion Value (L.A.A.): Not greater than 60%
- Sodium Sulphate Soundness (S.S.S.): Loss on 5 cycles to be not More than 12%

Stones:

The stones shall be free from an excess of flat or elongated particles; soft and less durable rock, clays, loam, top soil and other deleterious matter.

The larger stones shall have a maximum dimension slightly greater than the thickness of the required compacted layer and be of a shape acceptable to the Engineer.

The smaller stones shall have a reasonably uniform grading and be of a nominal size suitable, in the opinion of the Engineer, for filling the surface voids of the as placed large stones. The normal size will be of the order of 50 mm.

Screenings

The screenings shall consist of tough durable crushed rock, free from flat elongated, soft or disintegrated pieces and harmful material, such as loam, clay, organic matter, or other deleterious substances and shall be to the Engineers approval.
grading of the screenings shall form a smooth curve and shall be within and approximately parallel to, the following grading limits:

<table>
<thead>
<tr>
<th>B. S. Sieve Size (mm)</th>
<th>Percentage by Weight Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>6.3</td>
<td>85-100</td>
</tr>
<tr>
<td>1</td>
<td>30-50</td>
</tr>
<tr>
<td>0.15</td>
<td>10-30</td>
</tr>
<tr>
<td>0.075</td>
<td>0-20</td>
</tr>
</tbody>
</table>

Sandy soil which may, with the approval of the Engineer, be added to the screenings or used in lieu of the screenings, shall comply with the following requirements:

a) It shall consist mainly of sand sizes and have a reasonably smooth grading;

b) The fraction passing 0.075mm sieve shall be less than the weight passing 2mm sieve.

c) The Plastic Index (P. I.) shall not be greater than 5%

**Placing of stone for handpacked construction:**

On the prepared area, the pitching stone shall first be laid, each individual stone being positioned by hand, closely packed with the greatest dimensions vertical, and the largest and flattest end downwards. The majority of the stones will be slightly higher than the final thickness of layer required. When an area has been covered in this way a second placing of stones of smaller size, keystone, shall be positioned in the spaces between those first placed and shall be wedged home by hammering. The points of pitching stone projecting beyond the required height shall then be knapped, and a third placing of stone shall follow the second and so on until in the opinion of the Engineer the voids are sufficiently filled to permit compaction.

No hand packed stone layer of greater compacted thickness than 230mm shall be laid.

**Compaction and slushing:**

After placement of the stone in the specified manner the material shall be initially compacted with a heavy pneumatic-tyred rollers, weighing not less than 12 tonne and/or approved vibratory roller, and shall continue until the layer is thoroughly keyed, showing virtually no movement under or ahead of the roller.

All rolling shall be longitudinal and shall commence at the outer edges of the road, and progress towards the centre of the road, except that on super-elevated curves, rolling may progress form the lower to the higher edge.
The irregularities that may show up during compaction shall be corrected by loosening the surface and removing or adding material as may be required and recompacting.

After the stone has been rolled and keyed, binder material, where necessary shall be spread dry in thin layers and broomed into the interstices and dry roiling continued with approved vibratory and smooth steel-wheeled rollers until no more binding material will go in. The layer shall then be saturated with water, slushed and compacted with a smooth steel-wheeled roller weighing not less than 12 tonne. This rolling and slushing, with the addition of more binder material where necessary shall continue until all surface voids are filled and there is no visible movement under the roller.

All surplus fines shall be brushed off to expose a closely knit compact mosaic of stones as the finished surface of the layer.

6 CULVERTS AND DRAINAGE WORKS

6.01 SCOPE OF SECTION

The operations specified in this section apply to the installation of drainage works and reinstatement and improvement of the same.

In addition, this Section covers:

- Installation of 450 mm, 600 mm, 900mm or 1200mm diameter pipe culverts

- Desilting and cleaning of existing pipes and outfall drains to make them free flowing.

6.02 EXCAVATION FOR CULVERTS AND DRAINAGE WORKS

Where instructed by the Engineer, the Contractor shall excavate and remove all existing blocked or collapsed culvert pipes of 450 mm, 600 mm and 900mm diameter including concrete surround, bedding, inlet and outlet structure and cut to spoil.

The void left after removal of culvert pipes shall be widened as necessary to accommodate new concrete bedding, pipe and hunching.

The payment of this work shall be per linear metre of pipes removed, and the volume in m$^3$ of inlet/outlet structure removed. The void left by removal of these pipes shall be carefully preserved in order to accommodate replacement with 450 mm, 600 mm or 900 mm diameter pipe culverts as shall be directed by the Engineer.

(a) Removal of Other Existing Drainage Structures
When instructed by the Engineer, the Contractor shall demolish or remove any other structure and payment shall be made on day work basis.

(b) **Excavation for Culverts and Drainage Works**

The Contractor shall carry out all excavations for new culverts and drainage works to the lines, levels, inclinations, and dimensions shown on the drawings or as instructed by the Engineer.

**6.03 EXCAVATION IN HARD MATERIAL**

Hard material is material which can be excavated only after blasting with explosives or barraging and wedging or the use of a mechanical breaker fitted with a rock point in good condition and operated correctly. Boulders of more than 0.2m³ occurring in soft material shall be classified as hard material.

**6.04 BEDDING AND LAYING OF PIPE CULVERTS**

Concrete pipes shall be laid on a 150mm thick concrete bed of class 15/40 and the pipes shall be bedded on a 1:3 cement:sand mortar at least 50mm thick, 150mm wide and extending the full length of the barrel.

**6.05 JOINTING CONCRETE PIPES**

The concrete pipes for the culverts shall have ogee joints and will be jointed by 1:2 cement: sand mortar and provided with fillets on the outside as described in clause 810 of the Standard Specification.

**6.06 Stone Pitching**

Stone pitching to drains, inlets and outlets of culverts to embankments and around structure shall consist of sound unweathered rock approved by the Engineer.

The stone as dressed shall be roughly cubical in shape with minimum dimensions of 150 x 150mm for normal thickness of stone pitching.

The surface to receive the pitching shall be compacted and trimmed to slope and the stone laid, interlocked and rammed into the material to give an even finished surface.

In areas where stone pitching has been damaged, the Contractor shall identify such areas and notify the Engineer for his agreement of the extent of
the Works required and his approval and instructions to proceed with the Works.

7. **CONSTRUCTION OF SURFACINGS**

7.01 **PRECAST CONCRETE BLOCK PAVING**

Precast concrete block paving for use in the wearing course shall be manufactured and laid (subject to the tolerance requirements in this specification in accordance with Kenya Standard KS02 - 827 and as per the manufacturer’s specifications. The precast concrete paving slabs shall be laid on a sand bed and jointed with sand as per the manufacturer’s specifications and to the satisfaction of the Engineer and shall be to a pattern specified on the Drawings.

8. **PRECAST CONCRETE, KERBS, CHANNELS, QUADRANTS, EDGINGS CUT-OFF WALLS, PAVINGS FLAGS AND TRAFFIC SIGNS**

8.01 **PRECAST CONCRETE**

Precast concrete shall be cast in properly made strong moulds true to the shapes required. The moulds shall be lined with hardboard, sheet metal or other approved material.

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

The precast work shall be cast under sheds and shall remain under same for 7 days in the moulds and a further 7 days after removal from the moulds. During the whole of this period the concrete shall be shielded by sacking or other approved material kept wet. It shall then be removed from the sheds and stacked in the open for at least 7 days to season.

All precast work shall be cast in lengths convenient for handling unless otherwise described.

8.02 **PRECAST CONCRETE KERB, CHANNELS AND QUADRANTS**

Precast concrete kerbs, channels, and quadrants shall be as specified in Clause 11.40. All concrete carriageway slabs, kerbs, channels and quadrants shall, where shown on the Drawings, be laid and bedded in a 12mm layer of cement mortar, as specified in Clause 11.07. Dowel bars, as specified in Clause 11.15 and of the
dimensions shown on the Drawings or stated in the Bills of quantities, shall be driven 50mm into the green concrete of the slab after it has been finished, at 375mm centres, and concrete of the appropriate class shall be cast over and around the protecting dowel bars as backing to the kerb, all as shown on the Drawings or as directed by the Engineer.

For other than concrete roads, the concrete kerbs, channels and quadrants shall be laid and bedded on the 12mm layer of 1:3 cement-sand mortar on a foundation or haunch of concrete of the appropriate class constructed as shown on the Drawings or as directed by the Engineer.

All kerbs, channels and quadrants shall be jointed with 1:3 cement-sand mortar. No Joint shall exceed 12mm in width.

Dowelled kerbs used with cut-off walls shall be laid and bedded on a 12mm layer of 1:3 cement-sand mortar. The holes shall be filled with cement-sand mortar in two stages, the last 12mm of depth being added two days after the bulk.

Specially cast circular kerbs and quadrants shall be used on curves where the radius is 20 metres or less. Expansion joints where, shown on the Drawings or directed by the Engineer shall be constructed in line with expansion joints in the carriageway.

All kerbs and quadrants shall be laid true to line and level and any unit found to be more than 3mm out of the line or level at either end shall be lifted and relaid.

**8.03 PRECAST CONCRETE EDGING**

Precast concrete edging shall be as specified in Clause 11.40 and shall be set and jointed as shown on the Drawings or as directed by the Engineer. When completed it shall be true to line and level and any found to be more than 3mm out of the line at either end shall be lifted and relaid. The price inserted in the Bills of Quantities shall include for any necessary excavation and backfilling required in connection with the setting of the edging and the disposal of surplus material.

**8.04 CONCRETE BEDDING AND CONCRETE HAUNCHING FOR PRECAST KERBS, CHANNELS AND QUADRANTS**

Concrete bedding and concrete launching for precast kerbs and quadrants shall be constructed to the dimensions shown on the Drawings or as directed by the Engineer and shall consist of concrete of the appropriate class specified.

**8.05 CUT-OFF WALLS**

Where required, concrete cut-on wafts shall be constructed from concrete of the appropriate class specified and to the dimensions shown on the Drawings. The concrete shall be mixed, sampled, transported, placed, compacted and cured as specified elsewhere.
8.06 PRECAST CONCRETE FLAG PAVING

Precast concrete flags shall be as specified in Clause 11.41 and shall be laid on 50mm concrete of the appropriate class over a 75mm bed of murram as specified. The slabs shall be laid to a regular 150mm or 300mm bond as directed, with joints at right angles to the line of the kerb. The prices for laying paving shall include all cutting whether straight or circular, bedding in with fine sand and grouting with mortar 1:3 cement-sand mortar.

8.07 MURRAM FOOTWAYS

Murram footways shall consist of a 100mm - 150mm of compacted murram layer in accordance with requirements of Clause 11.05 and laid to the levels and falls shown on the Drawings on a well compacted sub-grade.

9. MATERIALS

9.01 CEMENT

Ordinary Portland cement and rapid-hardening Portland cement shall comply with the requirements of British Standard 12: Portland Cement (Ordinary and Rapid-hardening).

Sulphate resisting cement shall comply with the physical requirement of British Standard 12: Portland Cement (Ordinary and Rapid-hardening).

High alumina cement shall comply with the requirements of British Standard 915: High Alumina Cement.

White or coloured cement shall be of approved quality and chemical composition, and shall comply with the physical requirements of British Standard 12: Portland Cement (Ordinary and Rapid-hardening).

Cement shall be delivered in unbroken bags, barrels or by an approved bulk delivery vehicle.

Cement shall be stored in a dry weatherproof shed with a raised wooden floor, or in a silo, and shall be delivered in quantities sufficient to ensure that there is no suspension or interruption of the work of concreting at any time and if in sheds, each consignment shall be kept separate and distinct. Any cement which shall have become injuriously affected by damp or other causes shall at once be removed from the site. Cement should be used in rotation.

The Contractor shall furnish as directed by the Engineer test certificates relating to the cement to be used on the work. Each certificate shall indicate that the sample has been tested and analyzed by an approved laboratory and that it complies in all
respects with the requirements of the appropriate Specification for the particular type of cement.

9.02 AGGREGATES FOR CONCRETE

Aggregates for concrete shall consist of naturally occurring material complying with the requirement of British Standard 882: Concrete Aggregates from Natural Sources.

A certificate as to compliance with the British Standard shall be provided by the supplier of the aggregate. Tests for the determination of impurities in the sand shall be made once daily until the Engineer is satisfied that the specified compressive strength is being regularly obtained, when, with his approval, such tests shall be made once weekly and at other times as directed by the Engineer.

The coarse aggregate, unless otherwise authorised by the Engineer, shall be delivered to the site in separate sizes, (two sizes when the maximum size is 20 mm and three sizes when the maximum size is 38 mm or more).

The Flakiness Index when determined by the sieve method described in British Standard 812 shall not exceed 35 for 65 mm and 38 mm aggregates nor shall it exceed 35 for 20mm and 10mm aggregates.

All aggregates brought upon the site shall be kept free from contact with deleterious matter and in the case of aggregate passing a 5mm sieve they shall have been deposited on site of mixing for not less than 16 hours before further use; aggregates of different sizes shall be stored in different hoppers, or different stacks on a clean hard surface and shall be separated from each other as approved by the Engineer.

9.03 SAND FOR MORTAR

(a) Sand for mortar shall be natural or crushed stone sand and shall be in accordance with British Standard 1198 -1200 where applicable to sands for general purpose mortars.

(b) The source of the sand is to be approved by the Engineer.

(c) At the Works the sand is to be stored on a clean, hard surface.

9.04 STONE DUST

Stone dust for blinding shall be blacktrap screened to the following grading:-

<table>
<thead>
<tr>
<th>Sieve Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passing 10mm sieve</td>
<td>100 %</td>
</tr>
<tr>
<td>Passing No. 4 sieve</td>
<td>85%-100%</td>
</tr>
</tbody>
</table>
9.05 MURRAM

Murram shall be from an approved source quarried-so-as to exclude vegetable matter, loam, top soil or clay and shall comply with, unless otherwise specified in this Specification, the requirements for gravel wearing course of the current Standard Specification for Road and Bridge Construction of the Ministry of Public Works and Housing of Kenya. The California Bearing Ratio (C.B.R.) of the Murram, as determined for a sample compacted to maximum density (as defined under British Standard. 1377) and allowed to soak in water for four days, shall not be less than 30. This C.B.R. is a guide to quality only and compaction in the work will be judged by density.

In the event that murram is not readily available in the immediate vicinity of the Works, the Contractor will be required to provide it and to pay for all haulage. The source of supply shall be approved by the Engineer before any material is brought to site.

9.06 WATER FOR CEMENT TREATED MATERIALS

If water for the work is not available from the public mains, the Engineer's approval must be obtained regarding the source of supply and manner of its use. Water to be used with cement or lime shall be free from salt, oil, alkali, organic matter and other deleterious substances. If the water is required to be tested, this shall be done in accordance with the requirements of British Standard 3148: Tests for Water for Making Concrete.

9.07 CEMENT - SAND MORTAR

Cement - sand mortar shall consist of proportions by volume as specified of Portland cement and natural sand or crushed natural stone or a combination of both as specified in British Standard 1198 - 1200: Building Sands from Natural Sources. The constituent materials shall be accurately gauged and mixed in an approved manner.

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

9.11 CEMENT GROUT

Cement grout shall consist of Portland cement and water mixed in the proportion of one part by volume of cement and one-and-a-half parts by volume of water. The grout shall be used within one hour of mixing.

9.12 CONCRETE BUILDING BLOCKS
Precast concrete building blocks shall be in accordance with British Standard 2028 for Type A blocks from an approved source.

The faces of the blocks shall be smooth, true to shape with sharp arrises and be free from pitting and other surface defects.

**9.13 BUILDING STONE**

Stone used for building shall be the best quality hard local, stone obtained from approved quarries and shall be sound, throughout so as to ring when struck and shall be free from ail defects. Stones shall be dressed into true rectangular blocks with each surface even and at right angles to all adjoining surfaces and equal to samples submitted to and approved by the Engineer.

**9.14 GRANULAR MATERIAL FOR PIPE BEDDINGS**

Granular material for pipe beddings shall consist of well and evenly graded material such as gravel or broken stone, having a grading of 5mm to 19mm, free from fines, readily compactible and free draining. The grading of supplies will be frequently checked.

**9.15 SALT - GLAZED WARE SPIGOT AND SOCKET PIPES AND SPECIALS**

Salt-glazed ware spigot and socket pipes and specials, shall comply with the requirements of British Standard 65: Salt-glazed Ware Pipes. Unless otherwise stated in the Bills of Quantities, they shall be of 'British Standard' quality as defined therein.

**9.16 CONCRETE PIPES AND SPECIALS**

Concrete pipes and specials shall comply with the requirements of British Standards 556 or 4101 as appropriate. Test certificates shall be furnished by the manufactures to certify compliance with this Specification.

**9.17 CONCRETE DRAIN INVERT BLOCKS**

Precast concrete invert blocks shall be manufactured to the detail Drawings supplied from concrete class specified using maximum 12mm size aggregate. If required cube test certificates shall be supplied by the manufacturer.

**9.18 CONCRETE SLABS FOR OPEN DRAINS**
Precast concrete slabs for lining open drains shall be manufactured to the detail Drawings supplied from concrete class specified using maximum 12mm size aggregate. If required, cube test certificates shall be supplied by the manufacturer.

9.19 MANHOLE COVERS AND FRAMES

Manhole covers and frames shall be basically in accordance with the requirements of British Standard 497: Cast Manhole Covers, Road Gulley Gratings and Frames for Drainage Purposes, except that the manhole covers shall be constructed of mild steel, concrete filled, in accordance with detail Drawings.

Foul water sewer manholes shall have triangular Grade 'A' heavy duty covers and frames. Circular manhole covers and frames shall be used on surface water sewer manholes.

9.20 GULLEY GRATINGS AND FRAMES

Gulley gratings and frames shall be basically in accordance with the requirements of British Standard 497, nominal size 500mm x 350mm except that the gulley gratings shall be constructed of mild steel, concrete filled in accordance with the specifications given in the detail Drawings.

Where indicated as being kerb inlet type, the gullies shall conform to the shape and dimensions given on the detail Drawings supplied, but in respect of materials and workmanship conform to British Standard 497.

9.21 PRECAST CONCRETE MANHOLES AND INSPECTION CHAMBERS

Precast concrete manholes and inspection chambers shall comply with the requirements of British Standard 55S: Concrete Cylindrical Pipes and Fittings including Manholes, Inspection Chambers and Street Gullies. Test Certificates shall be furnished by the manufacturers to certify compliance with this Specification.

9.22 PRECAST CONCRETE GULLIES

Precast concrete gullies shall be unreinforced and shall comply with the requirements of British Standard 556: Concrete Cylindrical Pipes and Fittings including Manholes, Inspection Chambers and Street Gullies.

9.23 MANHOLE STEP - IRONS

Step-irons shall be galvanized malleable iron and shall comply with the requirements of British Standard 1247: Malleable Step - irons. Step-irons to build into insitu concrete shall be of general-purpose type and weighing not less than 2.2kg. Those to be built into precast concrete manholes shall be of pre-cast concrete manhole pattern.

9.24 TIMBER
Timber shall be sound, well seasoned and entirely free from worm, beetle, warps, shakes, splits, and all forms of rot and deadwood. Where required, all timber shall be treated with creosote, as specified in British Standard 144: Coal Tar Creosote for the Preservation of Timber, or an alternative approved timber preservative.

9.25 PRECAST CONCRETE KERBS, CHANNELS, EDGINGS AND QUADRANTS

Unless otherwise stated in the bills of quantities precast concrete kerbs, channels and edgings shall comply with the requirements of British Standard 340: Precast Concrete Kerbs, Channels, Edgings and Quadrants. If required, test certificates shall be furnished by the manufacturers and the date of manufacture shall be marked on each unit.

9.26 PAINT

All priming, undercoating and finishing paints shall be in accordance with the British Standard 2521/4: Ready Mixed Oil-based Priming Paints, or British Standard 2525/32: Ready Mixed Oil-based Undercoating and Finishing Paints (Exterior Quality), as appropriate.

10. TESTING OF MATERIALS AND WORKMANSHIP

10.01 EQUIPMENT REQUIRED FOR TESTING ON SITE

Equipment for testing shall be provided by the Contractor, delivered to the Engineer on the site of the Works, kept in good repair throughout the Contract, and regarded as construction plant. The equipment will be as specified by the engineer.

10.02 TESTING OF SOIL

During the progress of the earthworks the Contractor shall provide facilities for, and all assistance required by, the Engineer in carrying out tests, taking samples of the soil and packing these into containers. When required the Contractor shall then send them to an approved laboratory for testing.

10.03 CUBE AND CORE TESTING OF CONCRETE

150mm cubes shall be made, cured and tested all in accordance with British Standard 1881: Methods of Testing Concrete. When required the cubes shall be sent to a testing laboratory approved by the Engineer. All cubes made in compliance with this Clause shall be cast in the presence of the Engineer's representative and their reference numbers shall be submitted to the Engineer in a weekly report.

The Engineer may order cores to be cut, in which case they shall be drilled and tested in accordance with British Standard 1881: Methods of Testing Concrete.

PRIME COAT

MATERIALS FOR PRIME COAT AND TACK COAT.
For Prime coat, the binder shall be a medium-curing cutback MC 30 unless otherwise directed by the Engineer.

The rate of spray of bituminous prime coat refers to the gross volume of the cutback bitumen, that is to the volume of the bitumen plus dilatants.

Prime coat shall be applied to gravel areas that are to receive double surface dressing or bituminous mixes as directed by the Engineer.

The tack coat shall consist of bitumen emulsion KI-60 unless otherwise directed by the Engineer.

The rates of spray of the binder shall be as instructed by the engineer and shall generally be within the range 0.8-1.2 litres/square metre.

**BITUMINOUS MIX BASES, BINDER COURSES AND WEARING COURSES.**

This section covers different types of bituminous mixes for base and surface (wearing and binder courses) and is divided into the following parts:-

- **Part A** General.
- **Part B** Asphalt Concrete for carriageway.

**GENERAL SCOPE OF PART A.**

Part A comprises all the general requirements for bituminous mixes, which apply to part B as well.

**REQUIREMENTS FROM OTHER SECTIONS.**

The following section of this Specification apply to part B of this section and shall be read in conjunction therewith:-

- **Section 2** Materials and testing of materials
- **Section 3** Setting out and tolerances
- **Section 6** Quarries, Borrow Pits, Stockpile and Spoil Areas.
- **Section 15** Bituminous Surface Treatments and Surface Dressing.

**CONSTRUCTION PLANT**

**General.**

The contractor shall submit to the engineer in accordance with section 1 of its Specification, full details of the construction plant he proposes to use and the procedures he proposes to adopt for carrying out the permanent works.

The engineer shall have access at all times to the construction plant for the purposes of inspection. The contractor shall carry out regular calibration checks...
in the presence of the Engineer and shall correct forthwith any faults that are found.

All construction plant used in the mixing, laying and compacting of bituminous mixes shall be of adequate rated capacity, in good working condition, and shall be acceptable to the Engineer. Obsolete or worn out plant will not be allowed on the work.

**Mixing Plant.**

Bituminous material shall be mixed in a plant complying with ASTM Designation D995 and shall be located on the Site unless otherwise agreed by the engineer. It shall be equipped with at least three bins for storage of heated aggregates and a separate bin for filler. All bins shall be recovered to prevent the ingress of moisture.

The plant may be either the batch mix type or the continuous mix type and shall be capable of regulating the composition of the mixture to within the tolerances specified in clause 1614A of this specification.

The bitumen tank shall be capable of maintaining its contents at the specified temperature within a tolerance of 5 degrees celcius and a fixed thermometer easily read from outside the tank. Any bitumen that has been heated above 180 degrees or has suffered carbonization from prolonged heating shall be removed from the plant and disposed of:

**Laying Plant.**

Bituminous materials shall be laid by a self propelled spreader finisher equipped with a hopper, delivery augers and a heated adjustable vibrating screed. It shall be capable of laying bituminous materials with no segregation, dragging, burning or other defects and within the specified level and surface regularity tolerance. Delivery augers shall terminate not more than 200 mm from the edge plates.

**Compaction Plant.**

The Contractor shall provide sufficient rollers of adequate size and weight to achieve the specified compaction. Prior to commencing the laying of bituminous mixes in the permanent works the contractor shall carry out site trials in accordance with Section 2 of this specification to demonstrate the adequacy of his plant and to determine the optimum method of use and sequence of operation of the rollers.

It is important to achieve as high a density as possible at the time of construction and it is expected that vibrating rollers will be required to produce the best results. However, it is essential that thorough pre-construction trials are carried out to ensure that :-
A. The roller is set up to have the optimum amplitude and frequency of vibration for the particular material being laid.

B. That the roller does not cause breakdown of the aggregates particles.

C. That the optimum compaction temperatures are established which allow compaction without causing ripples effects or other distortions of the surfacing.

**PREPARATION OF SURFACE.**

Immediately before placing the bituminous mix in the pavement, the existing surface shall be cleaned of all materials and foreign matter with mechanical brooms or by other approved methods. The debris shall be deposited well clear of the surface to be covered.

Any defect of the surface shall be made good and no bituminous mix shall be laid until the engineer has approved the surface.

A tack coat shall be applied in accordance with section 15 of this Specification. If the engineer considers a tack coat is required prior to laying the bituminous mix or between layers of the bituminous mix, due to solely to the contractor’s method of working, then such tack coat shall be at the contractor’s expense.

**DESIGN AND WORKING MIXES.**

At least two months prior to commencing work using a bituminous mix, the contractor shall, having demonstrated that he can produce aggregates meeting the grading requirements of the Specification, submit samples of each constituent of the mix to the Engineer. The engineer will then carry out lab tests in order to decide upon the proportions of each constituents of the initial design mixes to be used for site trials to be carried out in accordance with Clause 1606A of this Specification.

Should the engineer conclude from the site trials that the mix proportion or aggregate grading are to be changed, the contractor shall submit further samples of the constituents and carry out further site trials as directed by the Engineer.

The Engineer may instruct the alteration of the composition of the -75 micron fraction of the aggregates by the addition or substitution of mineral filler. The Engineer may also instruct the alteration of all or part of the -6.3mm fraction of the aggregates by the addition or substitution of natural sand.

The contractor shall make the necessary adjustments to his plant to enable the revised mix to be produced.
Following laboratory and site trials the engineer will determine the proportions of the working mix and the contractor shall maintain this composition within the tolerances given in Clause 1614A.

Should any changes occur in the nature or source of the constituent materials, the Contractor shall advise the engineer accordingly. The procedure set out above shall be followed in establishing the new mix design.

SITE TRIALS.

Full scale laying and compaction site trials shall be carried out by the contractor on all asphalt pavement materials proposed for the works using the construction plant and methods proposed by the contractor for constructing the works. The trials shall be carried out with the agreement, and in the presence of the Engineer.

The trials shall be carried out to:

A. Test materials, designed in the lab, so that a workable mix that satisfies the specification requirements can be selected.

B. To enable the contractor to demonstrate the suitability of his mixing and compaction equipment to provide and compact the material to the specified density and to confirm that the other specified requirements of the completed asphalt pavement layer can be achieved.

Each trial area shall be at least 100 metres long and to full construction width and depth for the material. It may form part of the works provided it complies with this specification. Any areas that do not comply with this specification shall be removed.

The contractor shall allow in his programme for conducting site trials and for carrying out appropriate tests on them. The trial on any pavement layer shall be undertaken at least 21 days ahead of the contractor proposing to commence full scale work on that layer.

The contractor shall compact each section of trial over the range of compactive effort the contractor is proposing and the following data shall recorded for each level of compactive effort at each site trial:-

i. The composition and grading of the material including the bitumen content and type and grade of bitumen used.

ii. The moisture content of aggregate in the asphalt plant hot bins.

iii. The temperature of the bitumen and aggregate immediately prior to entering the mixer, the temperature of the mix on discharge from the mixer and the temperature of the mix on commencement of laying, on commencement of compaction and on completion of compaction. The temperature of the mixer is to be measured in accordance with BS 598, part 3, Appendix A.
iv. The type, size, mass, width of roll, number of wheels, wheel load, tyre pressure, frequency of vibration and the number of passes of the compaction equipment, as appropriate for the type of roller.

v. The target voids and other target properties of the mix together with the results of the laboratory tests on the mix.

vi. The density and voids achieved.

vii. The compacted thickness of the layer.

viii. Any other relevant information as directed by the engineer.

At least eight sets of tests shall be made by the contractor and the Engineer on each 100 metres of trial for each level of compactive effort and provided all eight sets of results over the range of compactive effort proposed by the contractor meet the specified requirements for the material then the site trial shall be deemed successful. The above data recorded in the trial shall become the agreed basis on which the particular material shall be provided and processed to achieve the specified requirements.

**MIXING OF AGGREGATES AND BITUMEN**

The bitumen shall be heated so that it can be distributed uniformly and care shall be taken not to overheat it. The temperature shall never exceed 170 degrees for 80/100 bitumen.

The aggregates shall be dried and heated so that they are mixed at the following temperatures: -

125-165 degrees when 80/100 bitumen is used.

The dried aggregates shall be combined in the mixer in the amount of each fraction instructed by the engineer and the bitumen shall then be mixed until a complete and uniform coating of the aggregate is obtained.

The mixing time shall be the shortest required to obtain a uniform mix and thorough coating. The wet mixing time shall be determined by the contractor and agreed by the engineer for each plant and for each type of aggregate used. It shall normally not exceed 60 seconds.

**TRANSPORTING THE MIXTURE.**

The bituminous mix shall be kept free of contamination and segregation during transportation. Each load shall be covered with canvas or similar covering to protect it from the weather and dust.

**LAYING THE MIXTURE.**
Immediately after the surface has been prepared and approved, the mixture shall be spread to line and level by the laying plant without segregation and dragging.

The mixture shall be placed in widths of one traffic lane at a time, unless otherwise agreed by the engineer. The compacted thickness of any layer shall be at least 2.5 times the maximum size of the aggregate for wearing course and at least 2 times for binder course. The minimum thickness shall be 25mm. Only on areas where irregularities or unavoidable obstacles make the use of mechanical laying impracticable, may the mixture be spread and compacted by hand.

**COMPACTION**

Immediately after the bituminous mixture has been spread, it shall be thoroughly and uniformly compacted by rolling.

The layer shall be rolled when the mixture is in such a condition that rolling does not cause undue displacement or shoving.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction while the mixture is in a workable condition. The sequence of rolling operation shall be agreed as the Engineer and proved during site trials. Initial rolling with steel tandem or three-wheeled roller shall follow the laying plant as closely as possible. The rollers shall be operated with the drive roll nearest the laying plant, at a slow and uniform speed (not exceeding 5Km/Hr).

Rolling shall normally commence from the outer edge and proceed longitudinally parallel to the centerline, each trip overlapping one half of the roller width. On super elevated curves, rolling shall begin at the low sides and progress to the high side. Where laying is carried out in lanes care must be taken to prevent water entrapment.

Immediate rolling with a pneumatic-tyred or vibratory roller shall follow immediately. Final rolling with a steel-wheeled roller shall be used to eliminate marks from previous rolling.

To prevent adhesion of the mixture to the rollers, the wheels shall be kept lightly moistened with water.
In areas too small for the roller, a vibrating plate compactor or a hand tamper shall be used to achieve the specified compaction.

**FINISHING, JOINTS AND EDGES**

Any mixture that becomes loose and broken, mixed with dirt or foreign matter or is in any way defective, shall be removed and replaced with fresh hot mixture, which shall be compacted to conform to the surrounding area.

Spreading of the mixture shall be continuous as possible. Transverse joints shall be formed by cutting neatly in a straight line across the previous run to expose the full depth of the course. The vertical face so formed shall be painted lightly with hot 80/100 penetration grade bitumen just before the additional mixture is placed against it.

Longitudinal joints shall be rolled directly behind the paving operation. The first lane shall be placed true to line and level and have approximately vertical face. The mixture placed in the abutting lane shall then be tightly crowded against the face of the previously placed lane. The paver shall be positioned to spread material overlapping the joint face by 20-30mm. Before rolling, the excess mixture shall be raked off and discarded.

When the abutting lane is not placed in the same day, or the joint is destroyed by traffic, the edge of the lane shall be cut back as necessary, trimmed to line and painted lightly with 80/100 penetration grade bitumen just before the abutting lane is placed.

Any fresh mixture spread accidentally on the existing work at a joint shall be carefully removed by brooming it back on to the uncompacted work, so as to avoid formation of irregularities at the joint. The finish at joints shall comply with the surface requirements and shall present the same uniformity of finish, texture and destiny as other sections of the work. The edges of the course shall be rolled concurrently with or immediately after the longitudinal joint. In rolling the edges, roller wheels shall extend 50-100 mm beyond the edge.

**SAMPLING AND TESTING OF BITUMINOUS MIXTURE**

The sampling of bituminous mixtures shall be carried out in accordance with AASHTO T168 (ASTM Designation D979).
QUALITY CONTROLLING
During mixing and laying of bituminous mixtures, control tests on the constituents and on the mixed material shall be carried out in accordance with Clause 1612A and section 2 of this Specification.

If the results of any tests show that any of the constituent materials fail to comply with this specification, the contractor shall carry out whatever changes may be necessary to the materials or the source of supply to ensure compliance.

If the results of more than one test in ten on the mixed material show that the material fails to comply with this Specification, laying shall forthwith cease until the reason for the failure has been found and corrected. The Contractor shall remove any faulty material laid and replace it material complying with this Specification all at his own expense.

TOLERANCES
Surfacing courses and base shall be constructed within the geometric tolerances specified in Section 3 of this Specification.

The Contractor shall maintain the composition of the mixture as determined from the laboratory and site trials within the following tolerances, per single test: -

<table>
<thead>
<tr>
<th>Composition</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bitumen Content</td>
<td>0.3% (by total weight of total mix)</td>
</tr>
<tr>
<td>Passing 10mm sieve and larger sieves</td>
<td>6% (by total weight of dry aggregate including mineral filler)</td>
</tr>
<tr>
<td>Passing sieves between 10mm and 1.0mm sieves</td>
<td>4% (by total weight of dry aggregate including mineral filler)</td>
</tr>
<tr>
<td>Passing sieves between 1.0mm and 0.075mm sieve</td>
<td>3% (by total weight of dry aggregate including mineral filler)</td>
</tr>
<tr>
<td>Passing 0.075mm sieve</td>
<td>2% (by total weight of dry aggregate including mineral filler)</td>
</tr>
</tbody>
</table>

The average amount of bitumen in any length of any layer, calculated as the product of bitumen contents obtained from single tests and the weight of mixture represented by each test, shall not be less than the amount ordered.

The final average overall width of the upper surface of a bituminous mix layer measured at six equidistant points over a length of 100m shall be at least equal to
the width specified. At no point shall the distance between the centreline of the road and the edge of the upper surface of a bituminous mix layer be narrower than that specified by more than 13mm.

MEASUREMENT AND PAYMENT
No separate measurement and payment shall be made for complying with the requirements of Clauses 1601A to 1614A inclusive and the Contractor shall be deemed to have allowed his rates in parts B and C of Sections 16 of this Specification for the costs of complying with the requirements of part A of Section 16 of this Specification.

ASPHALT CONCRETE FOR SURFACING

DEFINITION

Asphalt concrete means a thoroughly controlled, hot-mixed, hot-laid, plant mixture of well-graded dried aggregate and penetration of bitumen, which, when compacted forms a dense material.

A distinction is drawn between asphalt concrete Type I (High Stability) and asphalt concrete type II (Flexible). The asphalt concrete type to be used is Type I.

MATERIALS FOR ASPHALT CONCRETE TYPE I

a. **Type of bituminous material.**  
The type of material to be used on severe sites will be made of the continuously graded type similar to Asphalt Concrete or Close Graded Macadam. It is essential that these materials are sealed with a single or double surface dressing or a Cape seal.

b. **Penetration Grade Bitumen**  
Bitumen shall be 80/100 penetration grade since material is being laid at an altitude of more than 2,500m.

**Aggregate**  
Coarse aggregate (retained on a 6.3mm sieve) shall consist of crushed stone free from clay, silt, organic matter and other deleterious substances. The aggregate class will be specified in the Special Specification and it shall comply with the requirements given in the table below. The grading for 0/20 mm for carriageway and 0/14 gradation for shoulders for binder course is as specified below:
### REQUIREMENTS FOR COARSE AGGREGATE

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>0/20</th>
<th>0/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>20</td>
<td>90-100</td>
<td>100</td>
</tr>
<tr>
<td>14</td>
<td>75-95</td>
<td>90-100</td>
</tr>
<tr>
<td>10</td>
<td>60-82</td>
<td>70-90</td>
</tr>
<tr>
<td>6.3</td>
<td>47-68</td>
<td>52-75</td>
</tr>
<tr>
<td>4</td>
<td>37-57</td>
<td>40-60</td>
</tr>
<tr>
<td>2</td>
<td>25-43</td>
<td>30-45</td>
</tr>
<tr>
<td>1</td>
<td>18-32</td>
<td>20-35</td>
</tr>
<tr>
<td>0.425</td>
<td>11-22</td>
<td>12-24</td>
</tr>
<tr>
<td>0.300</td>
<td>9-17</td>
<td>10-20</td>
</tr>
<tr>
<td>0.150</td>
<td>5-12</td>
<td>6-14</td>
</tr>
<tr>
<td>0.075</td>
<td>3-7</td>
<td>4-8</td>
</tr>
</tbody>
</table>

**Coarse Aggregate (Retained on a 6.3mm sieve)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Maximum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAA</td>
<td>30</td>
</tr>
<tr>
<td>ACV</td>
<td>25</td>
</tr>
<tr>
<td>SSS</td>
<td>12</td>
</tr>
<tr>
<td>FI</td>
<td>25</td>
</tr>
</tbody>
</table>

Fine aggregate (passing a 6.3mm sieve) shall be free from clay, silt, organic and other deleterious matter and shall be non-plastic. Unless otherwise specified in the Special Specification it shall consist of entirely crushed rock produced from stone having a Los Angeles Abrasion of not more than 40. The Sand Equivalent of the fine aggregate shall not be less than 40 and the SSS not more than 12.

a. **Mineral Filler**

   Mineral Filler shall consist of ordinary Portland cement.
GRADING REQUIREMENTS

To arrive at a suitable design it is necessary to investigate a number of gradings so that a workable mix which also retains a minimum of 3% voids at refusal density is identified.

The largest particle size used should not be more than 25mm so that the requirements of the Marshall test method can be compiled with.

Although the complete range of nominal maximum particle size shown is in the Tables, the total thickness of material laid should not be more than 75mm.

REQUIREMENTS FOR ASPHALT CONCRETE TYPE I

The mixture shall comply with the requirements given in the table as specified in the Specification. In addition, minimum Marshall Stability for 2×75 blows shall be 9kN and maximum 18kN at a compaction to refusal shall have 3% VIM.

The proportion, by weight of total mixture, of bitumen shall be 5.0-6.5% for 0/14mm and 4.5-6.5% for 0/20 gradation. This shall be termed as the normal binder content. The binder content of the working mix will be instructed by the Engineer following laboratory and site trials.

In order to determine the suitability of a coarse aggregate source a Marshall test programme shall be carried out. It will be advantageous to use the crushed rock, which is known from past experience to give good results in this test procedure. A grading conforming to the type Type I Binder Course detailed in the table.

Having established the suitability of the aggregate source of several grading shall be tested in the laboratory, including that used for the Marshall test, to establish relationships between bitumen content and VIM at refusal destiny. For each mix, samples will be made up to a range of bitumen contents and compacted to refusal using a gyratory compactor and a vibratory hammer in accordance with the procedure described in BS 598 (Part 104 : 1989), with one revision. It should first be confirmed that compaction on one face of the sample gives the same refusal densities when the same compaction cycle is applied to both faces of the same sample. The procedure which gives the highest density must be used.
From the bitumen content-VIM relationship it will be possible to identify a bitumen content which corresponds to a VIM of 3-7%. If it is considered that the workability of the mix may be difficult then compaction trials should be undertaken. Two or more trials are advisable.

The mixes identified for compaction trials should be manufactured to the laboratory design bitumen content and two other bitumen contents of +0.5% and +1% additional bitumen. Cores will be cut to determine the density of the compacted material, having completed this the core will then be reheated to 145+/- 5°C in the appropriate mould and compared to refusal in the vibrating hammer test.

To be acceptable the core cut from the compaction trial must have a density equivalent to at least 95% of the refusal density.

The compaction trials will identify a workable mix which can be made to a bitumen content which gives 3% VIM at refusal density.

**MIXING AND LAYING HEAVY DUTY ASPHALT**

The temperature of the bitumen and aggregates when mixed shall be 110+/-3°C above the softening point of the bitumen.

Compaction should commence as soon as the mix can support the roller without undue displacement of the material and completed before the temperature of the mix falls below 90°C.

The minimum thickness of individual layers should be as follows:-

a. For the 37.5mm mix 65mm
b. For the 25.0mm mix 60mm
c. For the 19.0mm mix 50mm
d. For the 12.5mm mix 40mm

**COMPACTION**

Rolling shall be continued until the voids measured in the completed layer are in accordance with the requirement for a minimum density of 98% of Marshall optimum, or, a minimum value of 95% of refusal density (no value less than 93%) as appropriate.
MEASUREMENT AND PAYMENT

a. Item: Asphalt Concrete Type I
   Unit: M(cubed) of Asphalt Concrete Used

Asphalt concrete shall be measured by the cubic metre compacted on the road calculated as the product of the length instructed to be laid and the compacted cross-sectional area shown on the Drawings or instructed by the Engineer,

The rate for asphalt concrete shall include for the cost of providing, transporting, laying and compacting the mix with the normal binder content and complying with the requirements of Parts A and B Section 16 of this Specification.
SECTION VII: DRAWINGS
### BILLS OF QUANTITIES

#### Bill of Quantities

<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-50-026</td>
<td>Prime Cost Sum of Kshs. 300,000 for Engineer's miscellaneous accounts to be spent as directed by the Resident Engineer</td>
<td>PC/PC SUM</td>
<td>-</td>
<td>-</td>
<td>300,000</td>
</tr>
<tr>
<td>01-50-027</td>
<td>Extra-over Item 01-50-026 for Contractor's overhead and profit</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-60-002</td>
<td>Clearance on completion</td>
<td>Lump Sum</td>
<td>-</td>
<td></td>
<td>20,000</td>
</tr>
<tr>
<td>01-60-003</td>
<td>Insurance and Bonds</td>
<td>Lump Sum</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-60-005</td>
<td>Provide and erect project signboards as directed by the Engineer</td>
<td>no.</td>
<td>1</td>
<td>50000</td>
<td>50,000</td>
</tr>
<tr>
<td>01-80-010</td>
<td>Prime Cost sum of Kshs. 200,000 for purchase of Material testing reagents and consumables and payment for specialised quality control testing</td>
<td>PC/PC SUM</td>
<td>-</td>
<td></td>
<td>200,000</td>
</tr>
<tr>
<td>01-80-011</td>
<td>Extra-over item 01-80-010 for contractor's overhead and profit</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C/F to next page
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-80-028</td>
<td>Prime Cost Sum of Kshs. 300,000 for off-road Environmental mitigation measures as directed by the Resident Engineer</td>
<td>PC SUM</td>
<td>-</td>
<td>300000</td>
<td>300,000</td>
</tr>
<tr>
<td>01-80-029</td>
<td>Extra-over Item 01-80-028 for Contractor's overhead and profit</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-80-030</td>
<td>Allow for attendance upon the Resident Engineer as directed by the Engineer in accordance with clause 137 of the standard specification</td>
<td>PC SUM</td>
<td>300000</td>
<td>300,000</td>
<td></td>
</tr>
<tr>
<td>01-80-031</td>
<td>Extra-over Item 01-80-030 for Contractor's overhead and profit</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-80-040</td>
<td>Allow prime cost sum of Ksh 50,000 for Resident Engineer’s airtime charges</td>
<td>PC SUM</td>
<td>-</td>
<td></td>
<td>50,000</td>
</tr>
<tr>
<td>01-80-041</td>
<td>Extra-over Item 01-80-040 for Contractor's overhead and profit</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-80-042</td>
<td>Provide, and maintain Engineer's Survey Equipments as listed in Appendix C. Total Carried over from Appendix C</td>
<td>Lump Sum</td>
<td>-</td>
<td>100000</td>
<td>100,000</td>
</tr>
<tr>
<td>01-80-043</td>
<td>Allow prime cost sum of Ksh 100,000 for payment of overtime to Resident Engineer's Staff</td>
<td>PC SUM</td>
<td>-</td>
<td></td>
<td>100,000</td>
</tr>
<tr>
<td>01-80-044</td>
<td>Extra-over Item 01-80-043 for Contractor's overhead and profit</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bill 1: Total Carried forward to Summary:**
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-50-001</td>
<td>Setting out of horizontal alignment</td>
<td>m</td>
<td>800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>rate Ksh</td>
<td>total Ksh</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------------</td>
<td>------</td>
<td>-----</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>04-50-003</td>
<td>Bush clearing (Heavy)</td>
<td>m²</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04-50-004</td>
<td>Bush clearing (Light)</td>
<td>m²</td>
<td>400</td>
<td></td>
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<tr>
<td>04-50-005</td>
<td>Pruning tree branches</td>
<td>Prov. Sum</td>
<td>-</td>
<td></td>
<td>50,000</td>
</tr>
<tr>
<td>04-50-006</td>
<td>Trees and stumps removal (200-450mm girth)</td>
<td>No.</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04-50-007</td>
<td>Trees and stumps removal (&gt;450mm girth)</td>
<td>No.</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04-50-008</td>
<td>Rock/boulder removal</td>
<td>Prov. Sum</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04-50-009</td>
<td>Stripping and grubbing</td>
<td>m²</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bill 4: Total Carried forward to Summary:
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>05-50-002</td>
<td>Side drain excavation (Soft material)</td>
<td>m³</td>
<td>800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-50-003</td>
<td>Side drain excavation (Hard material)</td>
<td>m³</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-50-016</td>
<td>Scarify, water mix and compact existing ground to min. 95% MDD (AASHTO T99) to a depth not exceeding 150mm</td>
<td>m³</td>
<td>750</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-50-015</td>
<td>Backslope/ Slope Maintenance</td>
<td>m²</td>
<td>1500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bill 5: Total Carried forward to Summary:
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>07-50-002</td>
<td>Excavation for minor drainage structures</td>
<td>m³</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07-50-004</td>
<td>Excavation of foundations for Structures</td>
<td>m³</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07-50-005</td>
<td>Load and cart away excavated materials</td>
<td>m³</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07-50-006</td>
<td>Backfilling of excavated material</td>
<td>m³</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07-60-001</td>
<td>Excavate for Gabions as specified or as directed by the Engineer.</td>
<td>m³</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07-60-002</td>
<td>Provide and place gabion boxes as specified or as directed by the Engineer.</td>
<td>m²</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07-60-003</td>
<td>Provide and place rockfill to gabions</td>
<td>m³</td>
<td>60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bill 7: Total Carried forward to Summary:
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-50-002</td>
<td>Ditch cleaning (manual) - Partially Silted</td>
<td>m</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-60-003</td>
<td>Culvert Cleaning - Partially blocked - 600mm</td>
<td>m</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Supply and Install concrete pipe culverts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-60-025</td>
<td>600mm and surround</td>
<td>m</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-60-027</td>
<td>900mm and surround</td>
<td>m</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Minor Drainage Structures - Concrete</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-70-001</td>
<td>Stone pitching including grouting with mortar (ratio 1:3) as directed by the engineer</td>
<td>m²</td>
<td>850</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-70-006</td>
<td>Scour check - concrete (class 20/20)</td>
<td>No.</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-60-037</td>
<td>Provide and place A142 fabric mesh reinforcement</td>
<td>m²</td>
<td>550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-60-036</td>
<td>Provide, place and compact class 20/25 concrete to line the drainage as directed by the engineer</td>
<td>m³</td>
<td>50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bill 8: Total Carried forward to**

**Summary:**
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>09-50-004</td>
<td>Traffic control</td>
<td>Month</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bill 9: Total Carried forward to Summary:

<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>rate Ksh</td>
<td>total Ksh</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>------</td>
<td>-----</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>12-50-002</td>
<td>Excavate, transport, spread and compact 150 mm thick natural gravel for sub base to 95% MDD (AASHTO T180) or as directed by the Engineer</td>
<td>m³</td>
<td>850</td>
<td>12-50-002</td>
<td>175,500</td>
</tr>
<tr>
<td>12-50-003</td>
<td>Excavate, transport, spread and compact to 95% MDD (AASHTO T180) 100mm thick Base gravel layer or as directed by the Engineer</td>
<td>m³</td>
<td>600</td>
<td>12-50-003</td>
<td>120,000</td>
</tr>
<tr>
<td>12-50-005</td>
<td>Restoration of quarries and borrow pits</td>
<td>Prov.</td>
<td>sum</td>
<td>-</td>
<td>50,000</td>
</tr>
</tbody>
</table>

Bill 12: Total Carried forward to Summary:
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-50-002</td>
<td>Provide, transport to site and spread cement on natural gravel material for base as specified and as directed by the Engineer at the rate of 30-60kg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tonnes</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14-50-003</td>
<td>Mix and Process natural material with improvement agent for pavement layer as instructed by the Engineer or specified</td>
<td>m³</td>
<td>600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14-50-004</td>
<td>Curing of cement treated base layer</td>
<td>m²</td>
<td>6,000</td>
<td></td>
<td></td>
</tr>
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</table>

**Bill 14: Total Carried forward to Summary:**
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate Ksh</th>
<th>Total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-50-001</td>
<td>Prepare surface to receive treatment, provide and spray mc-30 cutback bitumen at a rate of 0.8-1.2 lts/m² as prime coat</td>
<td>m²</td>
<td>6000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-50-002</td>
<td>Prepare primed surfaces, provide 80/100 heated penetration grade bitumen at a spray rate of 1.0 - 1.2 lts/m² as binder for first seal</td>
<td>Litres</td>
<td>6500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-60-005</td>
<td>Provide, spread and roll 14/20 mm precoated chippings at a spread rate of 70-90 m²/m³ for first seal</td>
<td>M³</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-60-003</td>
<td>Prepare primed surfaces, provide 80/100 heated penetration grade bitumen at a spray rate of 1.0 - 1.2 lts/m² as binder for first seal</td>
<td>Litres</td>
<td>6000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-60-004</td>
<td>Provide, spread and roll 6/10 mm precoated chippings at a spread rate of 110-130 m²/m³ for second seal</td>
<td>M³</td>
<td>65</td>
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</table>

**Bill 15: Total Carried forward to Summary:**
## Bill of Quantities

### Concrete Work

<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-60-001</td>
<td>Provide, place and compact the following classes of concrete as specified</td>
<td>m³</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-60-002</td>
<td>Class 15/20 concrete</td>
<td>m³</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-60-003</td>
<td>Class 25/20 concrete</td>
<td>m³</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Formwork

<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-60-004</td>
<td>Provide, erect and afterwards dismantle and remove all the formwork as specified by the Engineer.</td>
<td>m²</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-60-005</td>
<td>Culvert and approach slab</td>
<td>m²</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-60-006</td>
<td>Headwalls</td>
<td>m²</td>
<td>100</td>
<td></td>
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</tr>
<tr>
<td>17-60-007</td>
<td>Formwork Class F1 Finish</td>
<td>m²</td>
<td>20</td>
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</table>

### Reinforcement

<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-80-004</td>
<td>Provide, bend and fix into positions high yield steel bars to BS4461 the following steel reinforcement as directed and as shown on the drawings.</td>
<td>Kg</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-80-005</td>
<td>Reinforcement bars of high yield strength to BS 4461, size 20mm and above.</td>
<td>Kg</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-80-006</td>
<td>Reinforcement bars of high yield strength to BS 4461, size 12mm and below.</td>
<td>Kg</td>
<td>100</td>
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### Summary:

**Bill 17: Total Carried forward to**

109
<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-50-001</td>
<td>Traffic signs maintenance</td>
<td>No.</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>20-50-004</td>
<td>Kilometer marker posts</td>
<td>No.</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-50-005</td>
<td>Erection of traffic signs (reflective)</td>
<td>No.</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-50-010</td>
<td>Provide and place new flex-beam guardrails complete with steel flex-beam</td>
<td>m</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>guardrail posts, spacers, nut, bolts and fittings as directed by Engineer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-50-011</td>
<td>Roadmarking, thermoplastic paint , 100mm wide</td>
<td>m²</td>
<td>250</td>
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Bill 20: Total Carried forward to Summary:
<table>
<thead>
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<th>Qty</th>
<th>rate Ksh</th>
<th>total Ksh</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-50-001(a)</td>
<td>HIV/AIDS awareness campaign</td>
<td>month</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-50-001(b)</td>
<td>HIV/AIDS prevention campaign</td>
<td>month</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-50-003</td>
<td>Health and safety measures on the Site</td>
<td>Lump Sum</td>
<td>-</td>
<td>100000</td>
<td>100000</td>
</tr>
</tbody>
</table>

Bill 25: Total Carried forward to Summary:
### SUMMARY PAGE

<table>
<thead>
<tr>
<th>item No.</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General</td>
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</tr>
<tr>
<td>3</td>
<td>Setting Out</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Site Clearance and Topsoil Stripping</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Earthworks</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Excavation and Filling for Structures</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Culvert and Drainage Works</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Passage of Traffic</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Natural Material Subbase and Base</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Cement Treated Base</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Bituminous Surface Treatments and Surface Dressings</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Concrete works</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Road Furniture</td>
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</tr>
<tr>
<td>25</td>
<td>HIV/AIDS Awareness &amp; Prevention Campaign</td>
<td></td>
</tr>
</tbody>
</table>

| A       | **Sub Total 1**                                            |        |
| B       | CONTIGENCIES(5% OF SUBTOTAL 2)                             |        |
| C       | **Sub Total 2**                                            |        |
| D       | 16% VAT                                                    |        |
| E       | **TOTAL**                                                  |        |

AMOUNT IN WORDS: ...........................................................................................................................................

........................................................................................................................................................................

........................................................................................................................................................................

DATE.............................................. SIGN/STAMP.................................................................
SECTION IX: STANDARD FORMS

LIST OF STANDARD FORMS

(i) Form of Invitation for Tenders
(ii) Form of Tender
(iii) Appendix to Form of Tender
(iv) Letter of Acceptance
(v) Form of Agreement
(vi) Form of Tender Security
(vii) Performance Bank Guarantee (unconditional)
(viii) Bank Guarantee for Advance Payment
(ix) Tender Questionnaire
(x) Confidential Business Questionnaire
(xi) Statement of Foreign Currency Requirement
(xii) Schedule of Materials; Basic Prices
(xiii) Schedule of Labour; Basic Prices
(xiv) Schedule of Plant and Equipment
(xv) Details of Sub-Contractors
(xvi) Certificate of Tenderer's Site visit
(xvii) Form of Written Power of Attorney
(xviii) Key Personnel
(xix) Completed Civil Works
(xx) Schedule of Ongoing Projects
(xxi) Other Supplementary Information
(xxii) Declaration Form
FORM OF INVITATION FOR TENDERS

_______________________[date]

To: ___________________________ [name of Contractor]
__________________________ [address]

Dear Sirs:

Reference:______________________________________________[Contract Name]

You have been prequalified to tender for the above project.

We hereby invite you and other prequalified tenderers to submit a tender for the execution and completion of the above Contract.

A complete set of tender documents may be purchased by you from ____

________________________________________________________________________[mailing address, cable/telex/facsimile numbers].

Upon payment of a non-refundable fee of Kshs __________________________

All tenders must be accompanied by ________________number of copies of the same and a security in the form and amount specified in the tendering documents, and must be delivered to

________________________________________________________________________[address and location]

at or before _______________________(time and date). Tenders will be opened immediately thereafter, in the presence of tenderers’ representatives who choose to attend.

Please confirm receipt of this letter immediately in writing by cable/facsimile or telex.

Yours faithfully,

_____________________________________ Authorised Signature

_____________________________________ Name and Title

FORM OF TENDER

TO: ____________________________ [Name of Employer] __________ [Name of Contract]
Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to construct, install and complete such Works and remedy any defects therein for the sum of Kshs.___________________________[Amount in figures]Kenya Shillings_________________________[Amount in words]

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager’s notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.

3. We agree to abide by this tender until _____________[Insert date], and it shall remain binding upon us and may be accepted at any time before that date.

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

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

Dated this ________________ day of _______20________________

Signature __________________in the capacity of___________________
duly authorized to sign tenders for and on behalf of
_____________________________________________[Name of Employer]
of__________________________________________[Address of Employer]

Witness; Name______________________________________

Address______________________________________________

Signature______________________________________________

Date_______________________________________________

APPENDIX TO FORM OF TENDER
(This appendix forms part of the tender)
<table>
<thead>
<tr>
<th>CONDITIONS OF CONTRACT</th>
<th>CLAUSE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tender Security (Bank Guarantee only)</td>
<td></td>
<td>Kshs 150,000.00</td>
</tr>
<tr>
<td>Amount of Performance Security (Unconditional Bank Guarantee)</td>
<td>10.1</td>
<td>5% of Tender Sum in the form of Unconditional Bank Guarantee</td>
</tr>
<tr>
<td>Program to be submitted</td>
<td>14.1</td>
<td>Not later than <em>14</em> days after issuance of Order to Commence</td>
</tr>
<tr>
<td>Cash flow estimate to be submitted</td>
<td>14.3</td>
<td>Not later than <em>14</em> days after issuance of Order to Commence</td>
</tr>
<tr>
<td>Minimum amount of Third Party Insurance</td>
<td>23.2</td>
<td>Kshs.1,000,000.00</td>
</tr>
<tr>
<td>Period for commencement, from the Engineer’s order to commence</td>
<td>41.1</td>
<td><em><strong>14</strong></em> days</td>
</tr>
<tr>
<td>Time for completion</td>
<td>43.1</td>
<td>2 months.</td>
</tr>
<tr>
<td>Amount of liquidated damages</td>
<td>47.1</td>
<td>Kshs. 150,000 per Week</td>
</tr>
<tr>
<td>Limit of liquidated damages</td>
<td>47.1</td>
<td><em>1</em> % of Contract Value</td>
</tr>
<tr>
<td>Defect Liability period</td>
<td>49.1</td>
<td>2 Months</td>
</tr>
<tr>
<td>Percentage of Retention</td>
<td>60.5</td>
<td><em>5%</em> of Interim Payment Certificate</td>
</tr>
<tr>
<td>Limit of Retention Money</td>
<td>60.5</td>
<td><em>10%</em> % of Contract Price</td>
</tr>
<tr>
<td>Minimum amount of interim certificates</td>
<td>60.2</td>
<td>Contract value/Time for completion in months</td>
</tr>
<tr>
<td>Time within which payment to be made after Interim Payment Certificate signed by Engineer</td>
<td>60.8</td>
<td>___30___days</td>
</tr>
<tr>
<td>Time within which payment to be made after Final Payment Certificate signed by Engineer</td>
<td>60.8</td>
<td>___60___days</td>
</tr>
<tr>
<td>Appointer of Arbitrator</td>
<td>67(3)</td>
<td>Chief Justice of The Republic of Kenya</td>
</tr>
<tr>
<td>Notice to Employer and Engineer</td>
<td>68.2</td>
<td>The Employers address is: Embu County Government P.O. Box 36... Embu The Engineer’s County Engineer Ministry of Infrastructure..., P.O. Box 36...... Embu</td>
</tr>
</tbody>
</table>

Signature of Tender………………………………… Date……………………

LETTER OF ACCEPTANCE
[letterhead paper of the Employer]

________________________[date]
To: _______________________

[address of the Contractor]

Dear Sir,

This is to notify you that your Tender dated ____________________________ for the execution of ____________________________

[name of the Contract and identification number, as given in the Tender documents] for the Contract Price of Kshs. __________________________

[amount in figures][Kenya Shillings ____________________________(amount in words)] in accordance with the Instructions to Tenderers is hereby accepted.

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

Authorized Signature …………………………………………………………………

Name and Title of Signatory ……………………………………………………………

Attachment : Agreement
THIS AGREEMENT, made the ________________ day of _______ 20 ______

between________________________________________________of[or whose registered
office is situated at]_____________________________________
(hereinafter called “the Employer”) of the one part AND
________________________________________________________of[or whose registered
office is situated at]_________________________________________
(hereinafter called “the Contractor”) of the other part.

WHEREAS THE Employer is desirous that the Contractor executes
(name and identification number of Contract ) (hereinafter called “the Works”) located at__________________[Place/location of the Works]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 Contract Price of Kshs__________________[Amount in figures], Kenya Shillings__________________[Amount in words].

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 Acceptance

   (ii) Form of Tender

   (iii) Conditions of Contract Part I

   (iv) Conditions of Contract Part II 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 in conformity in all respects with 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 sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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

The common Seal of ________________________________

Was hereunto affixed in the presence of ________________________________

Signed Sealed, and Delivered by the said ________________________________

Binding Signature of Employer ________________________________

Binding Signature of Contractor ________________________________

In the presence of (i) Name ________________________________

Address ________________________________

Signature ________________________________

[ii] Name ________________________________

Address ________________________________

Signature ________________________________
FORM OF TENDER SECURITY

WHEREAS ...........................................................................(hereinafter called “the Tenderer”) has submitted his tender dated ................................ for the construction of ........................................................................................................

.................................. (name of Contract)

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 of .................20.............

THE CONDITIONS of this obligation are:

1. If after tender opening the tenderer withdraws his tender during the period of tender validity specified in the instructions to tenderers
   Or

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

   (a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or
   (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;
   (c) Rejects a correction or an arithmetic error in the tender.

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 him 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.

___________________________ [signature of the Bank]

___________________ [witness]  [seal]

(Amend accordingly if provided by the Insurance Company)
PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)

To: _________________________ (Name of Employer) _________ (Date)
    _________________________ (Address of Employer)

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 ________________________________

(Amend accordingly if provided by Insurance Company)
BANK GUARANTEE FOR ADVANCE PAYMENT

To: __________________________ [name of Employer] ________(Date)

________________________[address of Employer]

Gentlemen,

Ref: __________________________ [name of Contract]

In accordance with the provisions of the Conditions of Contract of the above-mentioned Contract, We, __________________________ [name and Address of Contractor] (hereinafter called “the Contractor”) shall deposit with __________________________ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Contract in an amount of Kshs.________ [amount of Guarantee in figures] Kenya Shillings________________________ [amount of Guarantee in words].

We, ___________ [bank or financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to __________________________ [name of Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding Kshs________________________ [amount of Guarantee in figures] Kenya Shillings________________________ [amount of Guarantee in words], such amount to be reduced periodically by the amounts recovered by you from the proceeds of the Contract.

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

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

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until __________________________ [name of Employer] receives full payment of the same amount from the Contract.

Yours faithfully,

Signature and Seal __________________________________________________

Name of the Bank or financial institution ______________________________
Address ____________________________________________________________________________________________

Date ______________________________________________________________________________________________

Witness:  Name:  ____________________________________________________________________________________

Address: ____________________________________________________________________________________________

Signature: __________________________________________________________________________________________

Date: ____________________________________________________________________________________________

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 (unless an agent has been appointed below)

.................................................................................................................................................................

3. Telephone number(s) of tenderer

.................................................................................................................................................................

4. Telex address of tenderer

.................................................................................................................................................................

5. Name 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)

.................................................................................................................................................................

___________________  

Signature of Tenderer

Make copy and deliver to: __________________________ (Name of Employer)
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 2 (d) 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..............................

Nature of Business................................................................

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

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

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:

<table>
<thead>
<tr>
<th>Name in full</th>
<th>Nationality</th>
<th>Citizenship Details</th>
<th>Shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Part 2(c) – Registered Company:

Private or public........................................................
State the nominal and issued capital of the Company:

Nominal Kshs............................................................................................................

Issued Kshs..............................................................................................................

Give details of all directors as follows:


1. ....................................................................................................................................

2. ....................................................................................................................................

3. ....................................................................................................................................

4. ....................................................................................................................................

........................................................................................................................................

**Part 2(d) – Interest in the Firm:**

Is there any person / persons in ............. ............ **(Name of Employer)** who has interest in this firm? Yes/No................................. **(Delete as necessary)**

I certify that the information given above is correct.

................................. ................................. .................................

**(Title) (Signature) (Date)**

* Attach proof of citizenship
STATEMENT OF FOREIGN CURRENCY REQUIREMENTS

(See Clause 60[5] of the Conditions of Contract)

In the event of our Tender for the execution of ____________________________
{name of Contract} being accepted, we would require in accordance with Clause 21 of the Conditions of Contract, which is attached hereto, the following percentage:

(Figures)………………………… (Words)…………………………………

of the Contract Sum, (Less Fluctuations) to be paid in foreign currency.

Currency in which foreign exchange element is required:

…………………………………………………………………………………

Date: The .......... Day of ............... 20.............

Enter 0% (zero percent) if no payment will be made in foreign currency.

Maximum foreign currency requirement shall be _____________(percent) of the Contract Sum, less Fluctuations.

________________________________
(Signature of Tenderer)
**SCHEDULE OF MATERIALS-BASIC PRICES**  
(Ref: Clause 70 of Conditions of Contract)

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>UNIT</th>
<th>ORIGIN AND PRICE</th>
<th>TRANSPORTATION COST FROM SOURCE OF ORIGIN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>COUNTRY OF ORIGIN</td>
<td>SUPPLIER</td>
</tr>
<tr>
<td>Cement</td>
<td>Mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lime</td>
<td>Mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sand</td>
<td>Mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggregate</td>
<td>Mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diesel</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Petrol</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Petrol</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerosene</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural steel</td>
<td>Mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gabion Mesh</td>
<td>M2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinforcement Steel</td>
<td>Mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosives</td>
<td>Kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil and Lubricants</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen Emulsion A3</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen Emulsion A4</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen Emulsion K1</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen Emulsion K3</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen 80/100</td>
<td>Kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen MC 30</td>
<td>ML</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen MC 70</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitumen MC 3000</td>
<td>L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonium nitrate for blasting</td>
<td>Kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I certify that the above information is correct.

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

The prices inserted above shall be those prevailing 30 days before the submission of Tenders and shall be quoted in Kenya Shillings using the exchange rates specified in the Appendix to Form of Tender.
Prices of imported materials to be quoted CIF Mombasa or Nairobi as appropriate depending on whether materials are imported by the tenderer directly or through a local agent.

Transportation costs for imported materials to be quoted from Mombasa or Nairobi as appropriate to ___________ (Contract Site) depending on whether materials are imported directly by the tenderer or through a local agent.
SCHEDULE OF LABOUR: - BASIC RATES  
(Reference: Clause 70 of Conditions of Contract)

<table>
<thead>
<tr>
<th>LABOUR CATEGORY</th>
<th>UNIT (MONTH/SHIFT/HOUR)</th>
<th>RATES</th>
</tr>
</thead>
</table>

Categories to be generally in accordance with those used by the Kenya Building Construction and Engineering and Allied Trades Workers’ Union.
DETAILS OF SUB-CONTRACTORS

If the Tenderer wishes to sublet any portions of the Works under any heading, he must give below details of the sub-contractors he intends to employ for each portion.

Failure to comply with this requirement may invalidate the tender.

(1) Portion of Works to be sublet:

………………………………

[i] Full name of Sub-contractor and address of head office:

………………………………
………………………………
………………………………

(ii) Sub-contractor’s experience of similar works carried out in the last 3 years with Contract value:

………………………………
………………………………
………………………………

(2) Portion of Works to be sublet:

………………………………

(i) Full name of sub-contractor and address of head office:

………………………………
………………………………
………………………………

(ii) Sub-contractor’s experience of similar works carried out in the last 3 years with contract value:

………………………………
………………………………
………………………………

[Signature of Tenderer] Date
CERTIFICATE OF TENDERER’S VISIT TO SITE

This is to certify that

[Name/s]…………………………………………………………………………………………

……………………………………………………………………………………………………

Being the authorized representative/Agent of [Name of Tenderer]
……………………………………………………………………………………………………

……………………………………………………………………………………………………

participated in the organized inspection visit of the site of the works for the (Name of Contract: ……………………………………………………………………………………)
……………………………………………………………………………………………………

……………………………………………………………………………………………………

Signed…………………………………………………………………………………………

(Employer’s Representative)
……………………………………………………………………………………………………

……………………………………………………………………………………………………

NOTE: This form is to be completed whether the site visit is made at the time of the organized site or privately organized.
FORM OF WRITTEN POWER-OF-ATTORNEY

The Tenderer consisting of a joint venture shall state here below the name and address of his representative who is authorized to receive on his behalf correspondence in connection with the Tender.

.................................................................
(Name of Tenderer’s Representative in block letters)

.................................................................
(Address of Tenderer’s Representative)

.................................................................
(Signature of Tenderer’s Representative)
### KEY PERSONNEL

<table>
<thead>
<tr>
<th>DESIGNATION</th>
<th>NAME</th>
<th>NATIONALITY</th>
<th>SUMMARY OF QUALIFICATIONS AND EXPERIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Headquarters:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Director</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
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<tr>
<td>4.</td>
<td></td>
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<tr>
<td>5.</td>
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<td></td>
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<tr>
<td>etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Site Office:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Site Superintendent</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I certify that the above information is correct.

……………………………..………………..………………..
(Title) (Signature) (Date)
### SCHEDULE OF COMPLETED CIVIL WORKS CARRIED OUT BY THE TENDERER IN THE LAST EIGHT YEARS

<table>
<thead>
<tr>
<th>DESCRIPTION OF WORKS AND CLIENT</th>
<th>TOTAL VALUE OF WORKS (KSHS)</th>
<th>CONTRACT PERIOD (YEARS)</th>
<th>YEAR COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

*Value in Kshs using Central Bank of Kenya mean exchange rate at a reference date 30 days before date of tender opening.*
## SCHEDULE OF ONGOING PROJECTS

<table>
<thead>
<tr>
<th>DESCRIPTION OF WORK AND CLIENT</th>
<th>CONTRACT PERIOD</th>
<th>DATE OF COMMENCEMENT</th>
<th>DATE OF COMPLETION</th>
<th>TOTAL VALUE OF WORKS (KSHS.)</th>
<th>PERCENTAGE COMPLETED TO DATE</th>
</tr>
</thead>
</table>

I certify that the above Civil Works are being carried out by ourselves and that the above information is correct.

.......................... .......................... ..........................
(Title) (Signature) (Date)
OTHER SUPPLEMENTARY INFORMATION

1. Financial reports for the last five years, balance sheets, profit and loss statements, auditors’ reports etc. List them below and attach copies.

........................................................................................................
........................................................................................................
........................................................................................................

2. Evidence of access to financial resources to meet the qualification requirements. Cash in hand, lines of credit etc. List below and attach copies of supporting documents

........................................................................................................
........................................................................................................
........................................................................................................

3. Name, address, telephone, telex, fax numbers of the Tenderer’s Bankers who may provide reference if contacted by the Employer.

........................................................................................................
........................................................................................................
........................................................................................................

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

<table>
<thead>
<tr>
<th>OTHER PARTY (IES)</th>
<th>CAUSE OF DISPUTE</th>
<th>AMOUNT INVOLVED (KSHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I certify that the above information is correct.

........................................... ...........................................

...........................................

Title .................................. Signature  Date
DECLARATION FORM

To _____________________________

______________________________

The tenderer i.e. (name and address)____________________________

declare the following:

a) Has not been debarred from participating in public procurement.

b) Has not been involved in and will not be involved in corrupt and fraudulent practices regarding public procurement.

___________________  _______________  ____________
Title                  Signature            Date

(To be signed by authorized representative and officially stamped)
LETTER OF NOTIFICATION OF AWARD

Address of Procuring Entity

To:_________________

_________________

_________________

RE: Tender No.______________

Tender Name______________

This is to notify that the contract/s stated below under the above mentioned tender have been awarded to you.

______________________________________________________________

1. Please acknowledge receipt of this letter of notification signifying your acceptance.

2. The contract/contracts shall be signed by the parties within 30 days of the date of this letter but not earlier than 14 days from the date of the letter.

3. You may contact the officer(s) whose particulars appear below on the subject matter of this letter of notification of award.

(FULL PARTICULARS)__________________________________________

______________________________________________________________

SIGNED FOR ACCOUNTING OFFICER