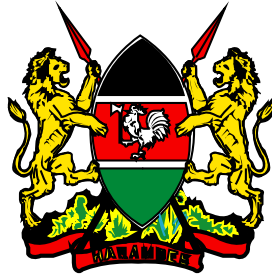


# REPUBLIC OF KENYA



## COUNTY GOVERNMENT OF KIAMBU JUJA SUBCOUNTY

### PROPOSED CONSTRUCTION OF KENYATTA ROAD- RIURIRO BRIDGE

#### TENDER DOCUMENT:

- ◆ FORM OF BID
- ◆ APPENDIX TO FORM OF BID
- ◆ FORM OF BID SECURITY
- ◆ INSTRUCTIONS TO BIDDERS
- ◆ CONDITIONS OF CONTRACT
- ◆ SCHEDULES OF SUPPLEMENTARY INFORMATION
- ◆ QUALIFICATION CRITERIA
- ◆ FORM OF AGREEMENT
- ◆ FORM OF PERFORMANCE SECURITY
- ◆ STANDARD SPECIFICATIONS
- ◆ SPECIAL SPECIFICATIONS
- ◆ BILLS OF QUANTITIES
- ◆ DRAWINGS

JANUARY 2017

CHIEF OFFICER -  
ROADS, TRANSPORT, PUBLIC WORKS  
& UTILITIES  
COUNTY GOVERNMENT OF KIAMBU  
P.O BOX 2344-00900  
KIAMBU, KENYA.

DIRECTOR ROADS, TRANSPORT, PUBLIC  
WORKS & UTILITIES  
COUNTY GOVERNMENT OF KIAMBU  
P.O BOX 2344-00900  
KIAMBU, KENYA

TENDER DOCUMENT FOR PROPOSED CONSTRUCTION OF KENYATTA ROAD-  
RIURIRO BRIDGE

---

**TABLE OF CONTENTS**

<b>Section 1:</b> Form of Bid	3
<b>Section 2:</b> Appendix to Form of Bid	6
<b>Section 3:</b> Form of Bid Security.	8
<b>Section 4:</b> Instructions to Bidders	11
<b>Section 5A:</b> Conditions of Contract Part I:General Conditions of Contract	25
<b>Section 5B:</b> Conditions of Contract Part II:(Conditions of Particular Application)	26
<b>Section 6:</b> Schedules of Supplementary Information	47
<b>Section 7:</b> Form of Agreement	61
<b>Section 8:</b> Form of Performance Bank Guarantee (Unconditional)	64
<b>Section 9:</b> Standard Specifications	66
<b>Section 10:</b> Special Specifications	68
<b>Section 11:</b> Bills of Quantities	91

**SECTION 1: FORM OF BID**

**FORM OF BID**

(NOTE: The Appendix forms part of the Bid. Bidders are required to fill all the blank spaces in this form of Bid and Appendix)

**NAME OF CONTRACT: PROPOSED CONSTRUCTION OF KENYATTA ROAD-RIURIRO BRIDGE**

TO: Chief Officer -  
Roads, Transport, Public Works & Utilities  
County Government of Kiambu  
P.O Box 2344-00900  
KIAMBU, KENYA  
Sir,

- 1. Having examined the Conditions of Contract, Specifications, Bill of Quantities, Drawings and Addenda No.s .....for the execution of the above named works we, the undersigned, offer to construct and install such works and remedy any defects therein in conformity with the said Bills of Quantities, Conditions of Contract, Specifications, Drawings and Addenda for the sum of

(Insert amount in words)

.....  
.....

(Insert amount in figures).....

As specified in the Appendix to Bid or such other sums as may be ascertained in accordance with the said Conditions.

- 2. We undertake, if our bid is accepted, to commence the works within twenty-eight (28) days of receipt of the Engineer’s order to commence, and to complete and deliver the whole of the works comprised in the contract within the time stated in the Appendix to Bid.
- 3. If our bid is accepted we will, when required, obtain the guarantee of a Bank or other sureties (to be approved by you) to be jointly and severally bound with us in a sum not exceeding 5% of the above named sum for the due performance of the contract under the terms of a Bond to be approved by you.
- 4. We agree to abide by this bid for the period of one twenty (120) days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- 5. We understand that you are not bound to accept the lowest or any bid you may receive.
- 6. On the basis of our previous experience we are fully experienced and competent in the type of work included in this tender and we have adequate financial resources to carry out the works described within the period for completion. We are in a position to fulfil the contract for which we have tendered.

Dated this ..... Day of ..... 20 .....

Signature.....in the capacity of .....

Duly authorized to sign bids on behalf of (Name of Tenderer) .....

.....

(Address of Tenderer).....

(Name of Witness).....

(Signature of Witness).....

(Address of Witness).....

(Occupation of Witness).....

**SECTION 2: APPENDIX TO FORM OF BID**

## APPENDIX TO FORM OF BID

(This appendix forms part of the bid)

CONDITIONS OF CONTRACT	CLAUSE	AMOUNT
Bid Security (Bank Guarantee Only)		Kshs 50,000.00
Amount of Performance Security (Unconditional Bank Guarantee)	10.1	5 per cent of Tender Sum in the form of Unconditional Bank Guarantee
Program to be submitted	14.1	Not later than 21 (twenty one) days after issuance of Order to Commence
Cash flow estimate to be submitted	14.3	Not later than 21 (twenty one) days after issuance of Order to Commence
Minimum amount of Third Party Insurance	23.2	Kshs. 1,000,000
Period for commencement, from Engineer's order to commence	41.1	28 days
Time for completion	43.1	6 (Six) months
Amount of liquidated damages	47.1	Kshs 5,000 per day
Limit of liquidated damages	47.1	10% of Contract Value
Defects Liability period	49.1	6 (Six) months
Percentage of Retention	60.5	10% of Interim Payment Certificate
Limit of Retention Money	60.5	10% of Contract Value
Minimum amount of interim certificates	60.2	Kshs 500,000
Time within which payment to be made after Interim Payment Certificate signed by Engineer	60.8	90 days
Time within which payment to be made after Final Payment Certificate signed by Engineer	60.8	90 days
Appointer of Arbitrator / Adjudicator	67(3)	Chief Justice of the Republic of Kenya
Notice to Employer and Engineer	68.2	The Employers address is:  The Chief Officer - Roads, Transport, Public Works & Utilities County Government of Kiambu P.O Box 2344-00900 KIAMBU, KENYA.

Signature of Tenderer..... Date .....

**SECTION 3: FORM OF BID SECURITY**



**TENDER BANK GUARANTEE**

Note: The bidder shall complete only this form of Bank guarantee. No other Form of Bid Bond or any other forms of security will be accepted. Bidders who fail to comply with this requirement will be disqualified.

WHEREAS [*Name of bidder*].

.....  
.....

(herein after called “the Bidder”) has submitted his bid dated .....

For the **PROPOSED CONSTRUCTION OF KENYATTA ROAD-RIURIRO BRIDGE**  
....., **hereinafter called “the bid”**

KNOW ALL MEN by these presents that we [*Name of Bank*]

.....  
.....

of [*Name of Country*]

.....

having our registered offices at

.....

(hereinafter called the Bank) are bound unto the The Fund Manager CDFC Roysambu (hereinafter called “the Employer”) in the sum of (in words Kshs)

.....

.....

(In figures Kshs) .....

for which payment will be well and truly 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 the bidder withdraws his Bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder refuses to accept the correction of errors in his bid; or
3. If the Bidder having been notified of the acceptance of his bid by the Employer during the period of Bid Validity

- i.) Fails or refuses to execute the Form of Agreement in accordance with the Instructions to Tenderers when required or
- ii.) Fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders.

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 any of the above conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including twenty-eight (28) days after the date of expiration of the bid validity, as stated in the Instructions to Bidders.

At the request of the Employer the Bid validity period may be extended by mutual agreement between the Employer and the Bidder and we undertake to extend the validity of this surety accordingly without you having to inform us of such an extension of the Bid validity period if within this period the Bidder has been notified of the acceptance of his Bid. This Surety shall remain valid up to the time the Contract Agreement has been executed.

**SIGNATURE AND SEAL OF THE BANK**

.....

**NAME OF SIGNATORY**

.....DATE.....

**NAME OF THE WITNESS** .....

**SIGNATURE OF THE WITNESS** .....

**DATE** .....

**ADDRESS OF THE WITNESS** .....

## **SECTION 4: INSTRUCTIONS TO BIDDERS**

## **SECTION 4A: INSTRUCTIONS TO BIDDERS**

### **Table Of Contents**

A.	GENERAL .....	13
1	Scope of bid.....	13
2	Source of funds.....	13
3	Eligible bidders.....	13
4	Qualification of the bidder .....	13
5	One bid per bidder.....	13
6	Cost of Bidding .....	14
7	Site Visit.....	14
B.	BIDDING DOCUMENTS .....	14
8	Contents of Bidding Documents .....	14
9	Clarification of Bidding Documents .....	15
10	Amendment of Bidding Documents.....	15
C.	PREPARATION OF BIDS .....	15
11	Language of Bid .....	15
12	Documents Comprising the Bid .....	15
13	Bid Prices .....	16
14	Currencies of bid and payment.....	16
15	Bid Validity .....	16
16	Bid Security.....	16
17	No Alternative Offers.....	17
18	Pre-bid meeting .....	17
19	Format and Signing of Bids.....	18
D.	SUBMISSION OF BIDS.....	18
20	Sealing and Marking of Bids.....	18
21	Deadline for Submission of Bids.....	19
22	Late bids .....	19
23	Modification, substitution and Withdrawal of Bids .....	19
E.	BID OPENING AND EVALUATION .....	19
24	Bid Opening .....	19
25	Process to be confidential.....	20
26	Clarification of bids and contacting of the employer .....	20
27	Examination of bids and determination of responsiveness .....	20
28	Correction of errors .....	21
29	Evaluation and comparison of bids .....	21
30	Preference for domestic bidders.....	22
F.	AWARD OF CONTRACT .....	22
31	Award.....	22
32	Employer's right to accept any bid and to reject any or all bids.....	22
33	Notification of award.....	22
34	Signing of agreement.....	22
35	Performance security.....	22
36	Contract effectiveness .....	24

## **CONDITIONS OF TENDER AND INSTRUCTIONS TO BIDDERS**

### **A. GENERAL**

#### **1 SCOPE OF BID**

- 1.1 The employer, as defined in the Conditions of Contract Part II hereinafter “the Employer” wishes to receive bids for the construction of works as described in Section 1, clause 102 of the Special Specifications –“Location and extent of the Works”)
- 1.2 The successful bidder will be expected to complete the Works within the period stated in the Appendix to Bid from the date of commencement of the Works.
- 1.3 Throughout these bidding documents, the terms bid and tender and their derivatives (bidder/tenderer, bid/tendered, bidding/tendering etc) are synonymous, and day means calendar day. Singular also means plural.

#### **2 SOURCE OF FUNDS**

- 2.1 The source of funding is the County Government of Kiambu

#### **3 ELIGIBLE BIDDERS**

- 3.1 This invitation to bid is open to all eligible bidders.
- 3.2 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.

#### **4 QUALIFICATION OF THE BIDDER**

- 4.1 Bidders shall as part of their bid:
  - (a) Submit a written power of attorney authorizing the signatory of the bid to commit the bidder; and
  - (b) Update any information submitted with their bids and update in any case the information indicated in the schedules and continue to meet the minimum threshold criteria set out in the bid documents.
- 4.2 As a minimum, bidders shall update the following information:
  - (a) Evidence of access to lines of credit and availability of other financial resources
  - (b) Financial predictions for the current year and the two subsequent years, including the effect of known commitments
  - (c) Work commitments
  - (d) Current litigation information; and
  - (e) Availability of critical equipment

Bidders shall also submit proposals of work methods and schedule in sufficient detail to demonstrate the adequacy of the bidders proposals to meet the technical specifications and the completion time referred to in Clause 1.2 above.

#### **5 ONE BID PER BIDDER**

- 5.1 Each bidder shall submit only one bid. A bidder who submits or participates in more than one bid will be disqualified.

## **6 COST OF BIDDING**

- 6.1 The bidder shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

## **7 SITE VISIT**

- 7.1 The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for himself all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the site shall be at the bidder's own expense.
- 7.2 The bidder and any of his personnel or agents will be granted permission by the Employer to enter its premises and lands for the purpose of such inspection, but only on the express condition that the bidder, its personnel and agents, will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, 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.
- 7.3 The Employer will conduct a Site Visit concurrently with the pre-bid meeting referred to in Clause 18, attendance for which is mandatory for all bidders. Failure to attend the site visit by any bidder will lead to disqualification of his/her bid.
- 7.4 The bidder's representative should be technically qualified with at least a diploma in civil engineering. He must also be one of the key persons listed in the schedule of key personnel.

## **B. BIDDING DOCUMENTS**

### **8 CONTENTS OF BIDDING DOCUMENTS**

- 8.1 The set of documents comprising the tender includes the following together with any addenda issued in accordance with Clause 10:
- (a) Invitation to Bid
  - (b) Instructions to bidders
  - (c) Conditions of Contract - Part I
  - (d) Conditions of Contract - Part II
  - (e) Standard Specifications
  - (f) Special Specifications
  - (g) Form of Bid, Appendix to Form of Bid and Bid Security
  - (h) Bills of Quantities
  - (i) Schedules of Supplementary information
  - (j) Form of Contract Agreement
  - (k) Form of Performance Security
  - (l) Drawings
  - (m) Post Qualification Questionnaire
  - (n) Tender addenda (tender notices)

- 8.2 The bidder is expected to examine carefully all instructions, conditions, forms, terms, specifications and drawings in the bidding documents. Failure to comply with the requirements of bid submission will be at the bidder's own risk. Bids that are not substantially responsive to the requirements of the bidding documents will be rejected.

## **9 CLARIFICATION OF BIDDING DOCUMENTS**

- 9.1 The prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable (hereinafter the term cable is deemed to include telex and facsimile) at the Employer's mailing address indicated in the Bidding Data.
- 9.2 The Employer will respond in writing to any request for clarification that he receives earlier than 7 days prior to the deadline for the submission of bids. Copies of the Employer's response to queries raised by bidders (including an explanation of the query but without identifying the sources of the inquiry) will be sent to all prospective bidders who will have purchased the bidding documents.

## **10 AMENDMENT OF BIDDING DOCUMENTS**

- 10.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by issuing subsequent Addenda.
- 10.2 The Addendum thus issued shall be part of the bidding documents pursuant to Sub-Clause 9.1 and shall be communicated in writing or cable to all purchasers of the bidding documents. Prospective bidders shall promptly acknowledge receipt of each Addendum in writing or by cable to the Employer.
- 10.3 In order to afford prospective bidders reasonable time in which to take an Addendum into account in preparing their bids, the Employer may, at his discretion, extend the deadline for submission of bid in accordance with clause 21.

## **C. PREPARATION OF BIDS**

### **11 LANGUAGE OF BID**

- 11.1 The bid prepared by the bidder and all correspondences and documents relating to the bid exchanged by the bidder and the Employer shall be written in the English Language. Supporting documents and printed literature furnished by the bidder 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 bid, the English language shall prevail.

### **12 DOCUMENTS COMPRISING THE BID**

- 12.1 The bid to be prepared by the bidder shall comprise:
- (a) Duly filled-in the Form of Bid and Appendix to form of bid;
  - (b) Bid security;

- (c) Priced Bills of Quantities;
- (d) Schedules of information and
- (e) Qualification Criteria
- (f) Any other materials required to be completed and submitted in accordance with the Instructions to Bidders embodied in these bidding documents.

12.2 These Forms, Bills of Quantities and Schedules provided in these bidding documents shall be used without exception (subject to extensions of the Schedules in the same format).

### **13 BID PRICES**

- 13.1 Unless explicitly stated otherwise in the bidding documents, the contract shall be for the whole works as described in Sub-Clause 1.1, based on the basic unit rates and prices in the Bill of Quantities submitted by the bidder.
- 13.2 The bidder shall fill in rates and prices for all items of Works described in the Bills of Quantities, whether quantities are stated or not.
- 13.3 All duties, taxes (including VAT) and other levies payable by the Contractor under the Contract, or for any other cause as of the date 7 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total Bid Price submitted by the bidder.
- 13.4 Unless otherwise provided in the Bidding Data and Conditions of Particular Application the rates and prices quoted by the bidder are subject to adjustment during the performance of the contract in accordance with the provisions of Clause 70 of the Conditions of Contract.

### **14 CURRENCIES OF BID AND PAYMENT**

- 14.1 Bids shall be priced in Kenya Shillings.

### **15 BID VALIDITY**

- 15.1 The bid shall remain valid and open for acceptance for a period of 120 days from the specified date of bid opening specified in Clause 21.
- 15.2 In exceptional circumstances prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required nor permitted to modify his bid, but will be required to extend the validity of his bid security for the period of the extension, and in compliance with Clause 16 in all respects.

### **16 BID SECURITY**

- 16.1 The bidder shall furnish, as part of his bid, a bid security in the amount KShs. 50,000.
- 16.2 The bid security shall be in the form of unconditional bank guarantee from a reputable bank selected by the bidder and located in Kenya. The format of the bank guarantee shall be in accordance with bid security included in Section 1. The bid security shall remain valid for a



period of 28 days beyond the original validity period for the bid, and beyond any period of extension subsequently requested under Sub-Clause 15.2.

- 16.3 Any bid not accompanied by an acceptable bid security will be rejected by the Employer as non-responsive.
- 16.4 The bid securities of unsuccessful bidders will be discharged/ returned as promptly as possible but not later than 28 days after the expiration of the period of bid security validity.
- 16.5 The bid security of the successful bidder will be discharged upon the bidder signing the Contract Agreement and furnishing the required performance security.
- 16.6 The bid security may be forfeited:
- (a) If a bidder withdraws his bid, except as provided in Sub-Clause 23.2.
  - (b) If the bidder does not accept the correction of any errors, pursuant to Sub-Clause 28.2 or
  - (c) In the case of a successful bidder, if he fails within the specified time limit to:
    - (i) Sign the Contract Agreement or
    - (ii) Furnish the necessary performance security

## **17 NO ALTERNATIVE OFFERS**

- 17.1 The bidder shall submit one offer, which complies fully with the requirements of the bidding documents.
- 17.2 The bid submitted shall be solely on behalf of the bidder. A bidder who submits or participates in more than one bid will be disqualified.
- 17.3 A price or rate shall be entered in indelible ink against every item in the Bills of Quantities with the exception of items which already have Prime Cost or Provisional sums affixed thereto. The bidders are reminded that no “nil” or “included” rates or “lump-sum” discounts will be accepted. The rates for various items should include discounts if any. Bidders who fail to comply will be disqualified.

## **18 PRE-BID MEETING**

- 18.1 The bidders designated representative who must be technically qualified person is invited to attend a pre-bid meeting, which will take place at the venue and time in the letter of Invitation to Bid. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 18.2 The bidder is requested as far as possible to submit any questions in writing or by cable, to reach the Employer not later than one week 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 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 bidding documents. Any modification of the bidding documents listed in Sub-Clause 8.1, which may become

necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 or through the minutes of the pre-bid meeting.

- 18.3 Non-attendance at the pre-tender meeting by a tenderer will be a cause for disqualification of his tender.

## **19 FORMAT AND SIGNING OF BIDS**

- 19.1 The bidder shall prepare one original of the documents comprising the bid as described in Clause 12 of these Instructions to Bidders, bound with the section containing the Form of Bid and Appendix to Bid, and clearly marked “ORIGINAL”. In addition, the bidder shall submit two copies of the bid clearly marked “COPIES”. In the event of discrepancy between them, the original shall prevail.
- 19.2 The original and copies of the bid shall be typed or written in indelible ink (in the case of copies, photocopies are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the bidder pursuant to Sub-Clause 4.1(a) or 4.3(c) as the case may be. The person or persons signing the bid shall initial all pages of the bid where entries or amendments have been made.
- 19.3 The bid shall be without alterations, omissions or conditions except as necessary to correct errors made by the bidder, in which case such corrections shall be initialled by the person or persons signing the bid.

## **D. SUBMISSION OF BIDS**

## **20 SEALING AND MARKING OF BIDS**

- 20.1 The bidder shall seal the original and each copy of the bid in separate envelopes duly marking the envelopes “ORIGINAL” and “COPY”. The envelopes shall then be sealed in an outer separate envelope.
- 20.2 The inner and outer envelopes shall;
- (i) Addressed to the Employer at the address provided in the Appendix to Form of Bid and submitted to:

COUNTY SECRETARY,

COUNTY GOVERNMENT OF KIAMBU,

P.O.BOX 2344-00900

KIAMBU, KENYA

And deposited in the tender box located at the entrance of the Roads Transport Public Works and Utilities (RTPW&U) not later than the time and date specified in the letter of invitation to bid.

Bear the name and identification number of the contract. In addition to the identification required in sub-Clause 20.2, the inner envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared “late” pursuant to Clause 22.1, and for matching purposes under Clause 23.

- 20.3 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 bid. If the outer envelope discloses the bidder's identity, the Employer will not guarantee the anonymity of the bid submission, but this shall not constitute grounds for rejection of the bid.

## **21 DEADLINE FOR SUBMISSION OF BIDS**

- 21.1 Bids must be received by the Employer at the address specified in Sub Clause 21.2 not later than the time and date specified in the letter of invitation to bid.
- 21.2 The Employer may, at his discretion, extend the deadline for the submission of bids through the issue of an Addendum in accordance with Clause 10 in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline shall thereafter be subject to the new deadline as extended.

## **22 LATE BIDS**

- 22.1 Any bid received by the Employer after the deadline for submission of bids prescribed in Clause 21 will be returned unopened to the bidder.

## **23 MODIFICATION, SUBSTITUTION AND WITHDRAWAL OF BIDS**

- 23.1 The bidder may modify, substitute or withdraw his bid after bid submission, provided that written notice of modification or withdrawal is received by the Employer prior to the prescribed deadline for submission of bids.
- 23.2 The bidder's modification, substitution or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause 20, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL" as appropriate.
- 23.3 No bid may be modified subsequent to the deadline for submission of bids, except in accordance with Sub-Clause 28.2.
- 23.4 Any withdrawal of a bid during the interval between the deadline for submission of bids and expiration of the period of bid validity specified in Clause 16 may result in the forfeiture of the bid security pursuant to Sub-Clause 16.6.

## **E. BID OPENING AND EVALUATION**

### **24 BID OPENING**

- 24.1 The Employer will open the bids, including withdrawals and modifications made pursuant to Clause 23, in the presence of bidders' designated representatives who choose to attend, at the time, date, and location stipulated in the letter of invitation. The bidders' representatives who are present shall sign a register evidencing their attendance.
- 24.2 Envelopes marked "WITHDRAWAL" and "SUBSTITUTION" shall be opened first and the name of the bidder shall be read out. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 23 shall not be opened.

- 24.3 The bidder's name, the Bid Prices, including any bid modifications and withdrawals, the presence (or absence) of bid security, and any such details as the Employer may consider appropriate, will be announced by the Employer at the opening. Subsequently, all envelopes marked "MODIFICATION" shall be opened and the submissions therein read out in appropriate detail. No bid shall be rejected at bid opening except for late bids pursuant to Clause 22.
- 24.4 The Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with Sub-Clause 24.3.
- 24.5 Bids not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.

## **25 PROCESS TO BE CONFIDENTIAL**

- 1.1 Information relating to the examination, evaluation and comparison of bids, and recommendations for the award of contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of the bidder's bid.

## **26 CLARIFICATION OF BIDS AND CONTACTING OF THE EMPLOYER**

- 26.1 To assist in the examination, evaluation, and comparison of bids, the Employer may, at its discretion, ask any bidder for clarification of its bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause 28.
- 26.2 Subject to Sub-Clause 26.1, no bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.
- 26.3 Any effort by the bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the bidder's bid.

## **27 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS**

Prior to the detailed evaluation of bids, the Employer will determine whether each bid (a) has been properly signed; (b) is accompanied by the required securities; (c) is substantially responsive to the requirements of the bidding documents; and (d) provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant to Sub-Clause 28.2. Furthermore, the bidder shall, if required, provide substantiation that the Employer may require, pursuant to Sub-clause 28.5

- 27.1 A substantially responsive bid is one that conforms to all the terms, conditions, and specifications of the bidding documents without material deviation or reservation and has a

valid tender bank guarantee. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the works; (b) which limits in any substantial way, inconsistent with the bidding documents, the Employer's rights or the bidder's obligations under the contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

27.2 If a bid is not substantially responsive, it will be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

## **28 CORRECTION OF ERRORS**

28.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

(a) Where there is a discrepancy between the amounts in figures and in words, the amount in words as indicated in the Form of Bid will govern; and

(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 line item total will govern and the unit rate will be adjusted accordingly in such a way that the Tender Sum remains unaltered.

28.2 Any error by the Bidder in pricing or extending the Bills of Quantities or carrying forward to the summary or Tender Sum, shall be corrected in such a way that the Tender Sum remains unaltered and the Bidder shall within seven (7) days after issuance of the written notice by the Engineer, or such further time as the Engineer may allow, correct his tender in such a manner as may be agreed or directed by the Engineer failing which the tender may be absolutely rejected and the Bid Security forfeited in accordance with Sub-Clause 16.6

## **29 EVALUATION AND COMPARISON OF BIDS**

29.1 The Employer will evaluate and compare only the bids determined to be substantially responsive in accordance with Clauses 27 and 28.

29.2 If the bid, which results in the lowest Evaluated Bid Price is seriously unbalanced or front loaded in relation to the Engineer's estimate of the items of work to be performed under the contract, the Employer may require the bidder to produce detailed price analyses for any or all items of the Bills of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, taking into consideration the schedule of estimated contract payments, the Employer may require that the amount of the Performance Security set forth in Clause 35 be increased at the expense of the bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the contract.

### **30 PREFERENCE FOR DOMESTIC BIDDERS**

This will not be applicable for this Project.

### **F. AWARD OF CONTRACT**

#### **31 AWARD**

31.1 Subject to Clause 32, the Employer will award the contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest Evaluated Bid Price pursuant to Clause 29, provided that such bidder has been determined to be (a) eligible in accordance with the provisions of Sub-Clause 3.1, and (b) qualified in accordance with the provisions of Clause 4.

#### **32 EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS**

32.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.

#### **33 NOTIFICATION OF AWARD**

33.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing or by cable confirmed by registered letter that its bid has been accepted. This letter (hereinafter and in the Conditions of Contract called "Letter of Acceptance") shall specify the sum, which the Employer will pay the Contractor in consideration of the execution and completion of the works and the remedying of any defects therein by the Contractor as prescribed by the contract (hereinafter and in the Conditions of Contract called "the Contract Price").

#### **34 SIGNING OF AGREEMENT**

34.1 At the same time that the Employer notifies the successful bidder that its bid has been accepted, the Employer will send the bidder the Agreement in the form provided in the bidding documents, incorporating all agreements between the parties.

34.2 Within 21 days of receipt of the Agreement, the successful bidder shall sign the Form of Agreement and return it to the Employer, together with the required performance security.

34.3 Upon fulfilment of Sub-Clause 35.2, the Employer will promptly notify the other bidders that their bids have been unsuccessful and their bid security will be returned as promptly as possible, in accordance with Clause 16.4.

#### **35 PERFORMANCE SECURITY**

35.1 Within 21 days of receipt of the Letter of Acceptance from the Employer, the successful bidder shall furnish to the Employer a performance security in the form stipulated in the Conditions of contract. The form of performance security provided in Section 8 of the bidding documents shall be used.

35.2 The successful bidder shall provide a performance security in the form of an Unconditional Bank Guarantee from a reputable bank located in Kenya.

**36 CONTRACT EFFECTIVENESS**

36.1 The Contract will be effective only upon signature of the Agreement between the Contractor and the Employer.

## **SECTION 5: CONDITIONS OF CONTRACT**



**SECTION 5A CONDITIONS OF CONTRACT PART I:**

**GENERAL CONDITIONS OF CONTRACT**

The Conditions of Contract Part 1 – General Conditions shall be those forming Part 1 of the Conditions of Contract for works of Civil Engineering Construction Fourth Edition 1987, reprinted in 1992 with further amendments, prepared by the Federation Internationale des Ingenieurs Conseils (FIDIC)

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 5B: CONDITIONS OF CONTRACT PART II:  
(CONDITIONS OF PARTICULAR APPLICATION)**

The following Conditions of Particular Application shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The Particular Condition is preceded by the corresponding clause number of the General Conditions to which it relates.

CONTENTS

Subclause 1.1 – Definitions .....	28
Subclause 2.1 - Engineer’s Duties and Authority.....	28
Subclause 5.2 – Priority of Contract Documents.....	28
Subclause 10 - Performance Security .....	29
Subclause 10.2 - Validity of Performance Security .....	29
Subclause 10. 4- Cost of Performance Security.....	29
Subclause 11. 1- Inspection of Site.....	29
Subclause 11.2 Access to Data .....	29
Subclause 14.3- Cash Flow Estimate.....	30
Subclause 15.1- Contractor’s Superintendence .....	31
Subclause 15.2- Language Ability and Qualifications of Contractor’s Authorised Agent.....	31
Subclause 16.2- Engineer at Liberty to Object .....	31
Subclause 16.3- Qualification and Language Ability of Superintending Staff.....	31
Subclause 16.4 – Employment of Local Personnel.....	32
Subclause 19.1- Safety, Security and Protection of the Environment .....	32
Subclause 20.4 - Employers Risks.....	32
Subclause 21.1 - Insurance of Works and Contractor's Equipment.....	32
Subclause 21.2 – Scope of Cover.....	33
Subclause 21.4 - Exclusions .....	33
Subclause 23.2 – Minimum Amount of Insurance.....	33
Subclause 25.1 – Evidence and Terms of Insurance.....	33
Subclause 25.6 – Insurance Notices.....	33
Subclause 25.7 – Notification to Insurers .....	33
Subclause 28.2 – Royalties .....	34
Subclause 29.1 – Interference With Traffic .....	34
Subclause 29.2 – Reinstatement and Compensation for Damages to Persons and Property .....	34
Subclause 34.2 – Conditions of Employment of Labour .....	34
Subclause 34.3 – Fair Wages .....	34
Subclause 34.4 – Breach of Fair Wages Clause.....	35
Subclause 34.6 – Compensation For Injury .....	36
Subclause 34.7 – Labour Standards .....	36
Subclause 35.2 – Records of Safety and Health .....	36
Subclause 35.3 – Reporting of Accidents .....	36
Subclause 41.1 – Commencement of Works .....	36
Subclause 43.1 – Time for Completion .....	36
Subclause 44.1 – Extension of Time for Completion .....	37
Subclause 45.1 – Restriction on Working Hours.....	37
Subclause 47.2 – Reduction of Liquidated Damages.....	37
Subclause 52.1 – Valuation and Variations .....	37
Subclause 52.4 – Dayworks.....	28

Subclause 54.1 – Contractors Equipment, Temporary Works and Materials .....	28
Subclause 55.2 – Omissions of Quantities .....	28
Subclause 58.4 – Provisional Items .....	28
Subclause 60.1 – Monthly Statements .....	38
Subclause 60.2 Monthly Payments .....	39
Subclause 60.3 – Payment of Retention Money .....	39
Subclause 60.4– Correction of Certificates.....	39
Subclause 60.5– Statement at Completion.....	39
Subclause 60.6 – Final Statement .....	40
Subclause 60.7– Discharge .....	40
Subclause 60.08 – Final Payment Certificate .....	40
Subclause 60.9– Cessation of Employers Liability.....	40
Subclause 60.10 – Time for Payment .....	40
Subclause 60.11 Materials for Permanent Works .....	41
Subclause 60.12 – Currency of Payment .....	41
Subclause 60.13: - Retention Money .....	41
Subclause 60.14 – Advance Payment .....	42
Subclause 67.3 – Arbitration.....	42
Subclause 68.2 – Notices to Employer and Engineer .....	42
Clause 70 Changes In Cost and Legislation.....	42
Sub-Clause 70.1 Price Adjustment .....	42
Sub-Clause 70.2 Other Changes In Cost.....	42
Sub-Clause 70.3 Adjustment Formulae .....	42
Sub-Clause 70.4 Sources of Indices And Weightings .....	43
Sub-Clause 70.5 Base, Current, And Provisional Indices.....	43
Sub-Clause 70.6 Adjustment After Completion .....	44
Sub-Clause 70.7 Weightings.....	44
Sub-Clause 70.8 Subsequent Legislation.....	44
Subclause 70.9 – Sub-Contract .....	44
Subclause 70.10 – Nominated Sub-Contractors.....	44
Subclause 70.11 – Date of Tender Pricing.....	45
Subclause 70.12 – Prime Cost .....	45
Subclause 70.13 – Change of Supplier .....	45
Subclause 70.14 – Contractors Head Office Expenses .....	45
Subclause 70.15 – Currency of Payments Under Clause 70.....	45
Subclause 70.16 – Cost of Preparing Variation of Price Claims .....	45
Clause 72 – Rates of Exchange Cost .....	45
Clause 73 – Bribery And Collusion .....	45
Clause 74: - Contract Confidential.....	46
Clause 77 – Claims for Idle Time .....	46

## SUB CLAUSE 1.1 – DEFINITIONS

Amend this sub-clause as follows:

(a Amend this sub-clause as follows:

(i) The “Employer” is County Government of Kiambu, represented by The Chief Officer, Roads, Transport, Public Works & Utilities.

The “Engineer” is The Chief Officer, Roads, Transport, Public Works & Utilities.

(i) Insert in line 2 after the Bills Of Quantities”, the following, “the rates entered by the Contractor (whether or not such rate be employed in computation of the Contract Price),”

Amend subparagraph (b) (v) of Sub clause 1.1 by adding the following words at the end:

The word “BID” is synonymous with “bid” and the word “Appendix to BID” with “Appendix to Bid” and the word “BID documents” with “bidding documents”.

Add the following at the end of this sub clause:

h. “Materials” means materials and other things intended to form or forming part of the Permanent Works. SubClause 2.1 - Engineer’s Duties AND AUTHORITY

With reference to SubClause 2.1 (b), the following shall also apply: The Engineer shall obtain the specific approval of the Employer before taking any of the following actions specified in Part 1:

- (a) Consenting to the subletting of any part of the works under Clause 4;
- (b) Certifying additional cost determined under Clause 12;
- (c) Determining an extension of time under Clause 44;
- (d) Issuing a variation under Clause 51, except:
- (e) Fixing rates or prices under Clause 52

SubClause 5.1 - Language and Law

The Contract document shall be drawn up in the ENGLISH LANGUAGE. Communication between the Contractor and the Engineer’s Representative shall be in this given language.

(b) The Laws applicable to this Contract shall be the Laws of the Republic of Kenya.

## SUBCLAUSE 5.2 – PRIORITY OF CONTRACT DOCUMENTS

Delete the documents listed 1-6 and substitute:

The Contract Agreement (if completed)

The Letter of Acceptance;

The Bid and Appendix to Bid;

The Conditions of Contract Part I;

The Conditions of Contract Part II;

The Special Specifications;

The Standard Specification for Road and Bridge Construction, 1986;

The Drawings;

The priced Bills of Quantities

Other documents as listed in the Appendix to form of Bid

#### SUBCLAUSE 10 - PERFORMANCE SECURITY

Replace the text of Subclause 10.1 with the following:

“The Contractor shall provide security for his proper performance of the Contract within 28 days after receipt of the Letter of Acceptance. The Performance Security shall be in the form of a bank guarantee as stipulated by the Employer in the Appendix to Bid. *The Performance Security shall be issued by a bank incorporated in Kenya.* The Contractor shall notify the Engineer when providing the Performance Security to the Employer.

“Without limitation to the provisions of the preceding paragraph, whenever the Engineer determines an addition to the Contract Price as a result of a change in cost, the Contractor, at the Engineers written request, shall promptly increase the value of the Performance Security by an equal percentage.

#### SUBCLAUSE 10.2 - VALIDITY OF PERFORMANCE SECURITY

The Performance Security shall be valid until a date 28 days after the date of issue of the Taking Over Certificate i.e. to be released at Substantial Completion. The security shall be returned to the Contractor within 14 days of expiration.

#### SUBClause 10.3 - claims under performance security

Delete the entire sub-clause 10.3.

#### SUBCLAUSE 10.4 - COST OF PERFORMANCE SECURITY

The cost of complying with the requirements of this clause shall be borne by the Contractor.

#### SUBCLAUSE 11.1 - INSPECTION OF SITE

In line 17 after “affect his tender” add

“and the Contractor shall be deemed to have based his tender on all the aforementioned”

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.

#### SUBCLAUSE 11.2 ACCESS TO DATA

Data made available by the Employer in accordance with Clause 11.1 shall be deemed to include data listed elsewhere in the Contract as open for inspection at the address stipulated in the Appendix to Bid.

#### SUBCLAUSE 14.1 PROGRAM TO BE SUBMITTED

The time within which the program shall be submitted shall be as specified in the Appendix to the Form of Bid.

This detailed program shall be based upon the program submitted by the Contractor as part of his tender, where this was required, and shall in no material manner deviate from the said program.

The program shall be in the form of a Critical Path Method Network (CPM Network) showing the order of procedure and a description of the construction methods and arrangements by which the Contractor proposes to carry out the works. It should also be supplemented by a time-bar chart of the same program. The program shall be coordinated with climatic, groundwater and other conditions to provide for completion of the works in the order and by the time specified. The program shall be revised at three-month intervals and should include a chart of the principle quantities of work forecast for execution monthly.

The Contractor shall submit to the Engineer not later than the day or date mentioned in the Appendix to the Form of Bid, a general description of his proposed arrangements and methods for the execution of the Works, including temporary offices, buildings, access roads, construction plant and its intended production output, working shift arrangements, labour strength, skilled and unskilled, supervision arrangements, power supply arrangements, supply of materials including a materials utilization program, stone crushing, aggregate production and storage, cement handling, concrete mixing and handling, methods of excavation, dealing with water, testing methods and facilities.

During the execution of the works, the Contractor shall submit to the Engineer full and detailed particulars of any proposed amendments to the arrangements and methods submitted in accordance with the foregoing.

If details of the Contractors proposals for Temporary Works are required by the Engineer for his own information the Contractor shall submit such details within fourteen days of being requested to do so.

The various operations pertaining to the works shall be carried out in such a progressive sequence as will achieve a continuous and consecutive output of fully completed roadworks inclusive of all bridge works and culverts within the time limits specified in the Contract. Generally the Contractor shall start at one end of the road and progress continuously towards the other without leaving any isolated section or sections of uncompleted road provided always that the site of the works has been acquired in its entirety and the encumbrances and services thereon removed.

The Contractor shall allow in his programme for the following public holidays per calendar year during which the Contractor shall not be permitted to work.

New Years Day (1<sup>st</sup> January)

- Good Friday
- Easter Monday
- Labour day (1<sup>st</sup> May)
- Madaraka Day (1<sup>st</sup> June)
- Idd Ul Fitr
- Mashujaa day (20<sup>th</sup> October)
- Jamhuri day (12<sup>th</sup> December)
- Christmas Day (25<sup>th</sup> December)
- Boxing day (26<sup>th</sup> December)

The Contractor shall 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 upon which he shall not be permitted to work.

#### **SUBCLAUSE 14.3- CASH FLOW ESTIMATE**

The time within which the detailed cash flow estimate shall be submitted shall be as specified in the Appendix to the Form of Bid.

#### **SUBCLAUSE 15.1- CONTRACTOR'S SUPERINTENDENCE**

Add the following at the end of the first paragraph of subclause 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.”

Add the following Sub-clause 15.2

#### **SUBCLAUSE 15.2- LANGUAGE ABILITY AND QUALIFICATIONS OF CONTRACTOR'S AUTHORISED AGENT**

The Contractor's Agent or Representative on the site shall be a Registered Engineer as 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 and write English fluently.

The Contractor's Agent or Representative shall have at least 10 years experience as an Engineer.

#### **SUBCLAUSE 16.2- ENGINEER AT LIBERTY TO OBJECT**

At the end of this Clause add

“by a competent substitute approved by the Engineer and at the Contractors own expense.”

Add the following Sub-Clauses 16.3 and 16.4:

#### **SUBCLAUSE 16.3- QUALIFICATION AND LANGUAGE ABILITY OF SUPERINTENDING STAFF**

The Contractor's superintending staff shall meet the following minimum qualifications:

- a) Should have a working knowledge of English or Kiswahili. Should any of the superintending staff not be able to meet this condition, the Contractor shall propose to the Engineer arrangements for provision of a sufficient number of interpreters of approved qualifications. The Engineer, at his discretion, may amend, approve or reject such arrangements or reject deployment of superintending staff not meeting the language requirements. The Engineer may at any time during the duration of the Contract amend any approved arrangements made for interpreters, which shall be implemented at the Contractors expense.
- b) Must have the following certificates from the Kenya Polytechnic or equivalent institutions approved by the Engineer
  - Senior Foremen – Higher National Diploma
  - Surveyor – Higher National Diploma
  - Survey Assistant – Ordinary Diploma
  - Other Foremen – Ordinary Diploma
- c) Must have the following minimum experience:
  - Senior Foremen – 10 years
  - Surveyor – 5 years
  - Survey Assistant – 5 years
  - Other Foremen – 5 years

Qualifications as above shall be subject to verification and approval on site by the Engineer or his representative on site before commencement of the said works.

#### **SUBCLAUSE 16.4 – EMPLOYMENT OF LOCAL PERSONNEL**

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

#### **SUBCLAUSE 19.1- SAFETY, SECURITY AND PROTECTION OF THE ENVIRONMENT**

Add Sub-Clause-paragraph (d) of Sub-Clause 19 as follows:

Notwithstanding the Contractor's obligation under Sub-Clause-paragraph (a), (b) and 9(c ) of Sub-Clause 19.1 of the Conditions Of Contract, the Contractor shall observe the following measures with a view to reducing or elimination adverse environmental effects by the site works:

- All quarries and borrow pits shall be filled and landscaped to their original state after extraction of construction material
- 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 are not limited to grassing and planting of trees
- 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
- 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
- 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.

#### **SUBCLAUSE 20.4 - EMPLOYERS RISKS**

Delete Sub-Clause (h) and substitute with;

(h) Any operation of the forces of nature (insofar as it occurs on site) which an experienced contractor:

- (i) could not have reasonably foreseen, or
- (ii) could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:

(A) prevent loss or damage to physical property from occurring by taking appropriate measures or

(B) insure against such loss or damage

#### **SUBCLAUSE 21.1 - INSURANCE OF WORKS AND CONTRACTOR'S EQUIPMENT**

Add the following words at the end of Sub-paragraph (a) and immediately before the last word of Sub-paragraph (b) of Sub-Clause 21.1:

“It being understood that such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred”



Delete the first sentence of this Clause and replace with the following:

“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.”

#### SUBCLAUSE 21.2 – SCOPE OF COVER

Amend sub-paragraph (a) of Sub-Clause 21.2 as follows:

Delete words “from the start of work at the site” and substitute the words “from the first working day after the Commencement Date”

Add the following as Sub-Clause (c) under Sub-Clause 21.2 (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.

#### SUBCLAUSE 21.4 - EXCLUSIONS

Amend Sub-Clause 21.4 to read as follows:

“There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by the risks listed under Sub-Clause 20.4 sub-paragraph (a) (i) to(iv) of the Conditions of Particular Application.”

#### SUBCLAUSE 23.2 – MINIMUM AMOUNT OF INSURANCE

Add the following at the end of this Clause:

“.. with no limits to the number of occurrences”.

#### SUBCLAUSE 25.1 – EVIDENCE AND TERMS OF INSURANCE

Amend Sub-Clause 25.1 as follows:

Insert the words “as soon as practicable after the respective insurances have been taken out but in any case” before the words “prior to the start of work at the site”

Add the following Sub-Clauses 25.6, 25.7

#### SUBCLAUSE 25.6 – INSURANCE NOTICES

Each policy of insurance effected by the Contractor for purposes 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. This shall not be more than thirty (30) days before that date and the policy shall remain in force until thirty (30) days after the giving of such notice.

#### SUBCLAUSE 25.7 – NOTIFICATION TO INSURERS

It shall be the responsibility of the Contractor to notify insurers under any of the insurance referred to in the preceding clauses 21, 23 and 24 on any matter or event which by the terms of such insurance are required to be so notified. 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.

#### **SUBCLAUSE 28.2 – ROYALTIES**

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

“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.”

#### **SUBCLAUSE 29.1 – INTERFERENCE WITH TRAFFIC**

Supplement Sub-Clause 29.1 by adding the following sentence at the end:

“The Contractor will be permitted to use existing public roads for access to the site. The Contractor shall pay vehicle license tax and road maintenance duty in accordance with relevant regulations and shall obtain any necessary permits or licenses from relevant authorities for transporting his equipment.”

Add the following subclause 29.2:

#### **SUBCLAUSE 29.2 – REINSTATEMENT AND COMPENSATION FOR DAMAGES TO PERSONS AND PROPERTY**

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 as specified and 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 which shall become due to the Contractor.

The Contractor shall refer to the Employer without delay all claims which may be considered to fall within the provisions of Clause 22.1.

Add the following Sub-Clause 34.2 to 34.8

#### **SUBCLAUSE 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.

#### **SUBCLAUSE 34.3 – FAIR WAGES**

The Contractor shall, in respect of all persons employed anywhere by him in the execution of the Contract, and further in respect of all persons employed by him otherwise than in the execution of the Contract in every factory, Workshop or place occupied or used by him for the execution of the Contract, observe and fulfil the following conditions:

- a) The Contractor shall pay rates of wages, observe hours of labour and provide conditions of labour, housing, amenities and facilities not less favourable than those required by the Regulation of Wages (Building and Construction Industry) Order 2003, and subsequent

amendments thereto, or in any wage scales, hours of work or conditions agreed by the Ministry of Labour or other Government Department in consultation with the appropriate wage fixing authority and generally recognized by other employees in the district whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

- b) In the absence of any rates of wages, hours or conditions of labour so established the Contractor shall pay rates of wages and observe hours and conditions of labour which are not less favourable than the general level of wages, hours and conditions observed by other Employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.
- c) Where the absence of established rates of wages, hours and conditions of labour or the dissimilarity of the general circumstances in the trade of 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) and (b) above the Contractor in fixing the rates of wages, hours and conditions of labour of his employees shall be guided by the advice 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 in English of the time worked by, and the wages paid to, his employees. The Contractor shall furnish to the Engineer or Employer, if called upon to do so, such particulars of the rates, wages and conditions of labour as the Employer or Engineer may direct.
- f) The Contractor shall at all times during the continuance of the contract display, for the information of his employees in every factory, workshop or place occupied or used by him for the execution of the Contract, a copy of this clause together with a notice setting out the general rates of wages, hours and conditions of labour of his employees.
- g) The Contractor shall be responsible for the observance of this clause by sub-Contractors employed in the execution of the works.

#### **SUBCLAUSE 34.4 – BREACH OF FAIR WAGES CLAUSE**

Any Contractor or Sub-Contractor who is found to be in breach of Fair Wages Clause shall cease to be approved as a Contractor or Sub-Contractor for such period as the Permanent Secretary for the Ministry of Roads and Public Works may determine.

Should a claim be made to the Employer alleging the Contractor's default in payment of Fair Wages of any workman employed on the Contract and if proof thereof satisfactory to the Employer is furnished by the Labour Authority, 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.

#### **SUBCLAUSE 34.5 – RECRUITMENT OF UNSKILLED LABOUR**

Any additional unskilled labour which is required by the Contractor for the works and which is not in his employment at the time of the acceptance of the Tender shall be recruited by the

Contractor from the Labour Exchange or Exchange or Exchanges nearest to the site or sites of the work.

#### **SUBCLAUSE 34.6 – COMPENSATION FOR INJURY**

The Contractor shall in accordance with the Workmen’s Compensation Act of the Laws of Kenya and any other regulations in force from time to time 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 Subcontractor.

#### **SUBCLAUSE 34.7 – LABOUR STANDARDS**

The Contractor shall comply with the existing local labour laws, regulations and labour standards. The Contractor shall formulate and enforce an adequate safety program with respect to all work under his contract, whether performed by the Contractor or subcontractor. The Contractor has assurance from the Employer of cooperation where the implementation of these safety measures requires joint cooperation.

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

Add the following Sub-Clause 35.2 and 35.3.

#### **SUBCLAUSE 35.2 – RECORDS OF SAFETY AND HEALTH**

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.

#### **SUBCLAUSE 35.3 – REPORTING OF ACCIDENTS**

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 whenever the Laws of Kenya require such a report.

#### **SUBCLAUSE 41.1 – COMMENCEMENT OF WORKS**

Amend Sub-Clause 41.1 as follows:

Delete the words “as soon as is reasonably possible” in the first sentence and replace with “within the period stated in the Appendix to Bid”.

#### **SUBCLAUSE 43.1 – TIME FOR COMPLETION**

Amend Sub-Clause 43.1 as follows:

Delete the words “within the time” to “such extended time” and substitute “by the date or dates stated or implied in Clause 14 of these Conditions of Particular Application.

#### **SUBCLAUSE 44.1 – EXTENSION OF TIME FOR COMPLETION**

Add at the end of Sub-Clause 44.1 the following:

“Neither rains falling within the rainy seasons as occurs in Kenya 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.”

#### **SUBCLAUSE 45.1 – RESTRICTION ON WORKING HOURS**

Add at the end of Sub-Clause 45.1 the following:

“If the Contractor requests permission to work by night as well as by day, then if the Engineer shall grant such permission the Contractor shall not be entitled to any additional payments 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 will be required to provide, for any work carried out at 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.”

#### **SUBCLAUSE 47.2 – REDUCTION OF LIQUIDATED DAMAGES**

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

“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.

The Employer shall pay no bonus for early completion of the Works to the Contractor.

The sum stated in the Appendix to Bid as liquidated damages shall be increased by a sum equivalent to any additional amount payable by the Employer to the Contractor under clause 70.1 in respect of an increase in costs in such a 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.”

#### **SUBCLAUSE 52.1 – VALUATION AND VARIATIONS**

Add new Clause 52.2(c )

No change in the unit rates or prices quoted shall be considered for items included in the schedule of daywork rates, or Provisional Sums and items, or for any item in the BOQ.

Modification to Clause 52(3)

#### **SUBCLAUSE 52.4 – DAYWORKS**

Add the following at the end of Sub-Clause 52.4:

The work so ordered shall immediately become part of the works under the contract. The Contractor shall, as soon as practicable after receiving the Daywork order from the Engineer

undertake the necessary steps for due execution such work. Prior to commencement of any work to be done on a Daywork basis, the Contractor shall give an advance notice to the Engineer stating the exact time of such commencement.

#### SUBCLAUSE 54.1 – CONTRACTORS EQUIPMENT, TEMPORARY WORKS AND MATERIALS

: EXCLUSIVE USE FOR THE WORKS

Amend Sub-Clause 54.1 as follows:

Line 5:add “written” between “the” and “consent”.

Delete Sub-Clauses 54.2 and 54.5.

#### SUBCLAUSE 55.2 – OMMISIONS OF QUANTITIES

Items of Works 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.

Add the following Sub-Clause 58.4:

#### SUBCLAUSE 58.4 – PROVISIONAL ITEMS

Provisional items shall be read as Provisional Sums and shall be operated as such in accordance with Sub-Clauses 58.1 to 58.3.

Clause 60 of the General Conditions is deleted and substituted with the following:-

#### SUBCLAUSE 60.1 – MONTHLY STATEMENTS

The Contractor shall submit a statement to the Engineer at the end of each month, in a tabulated form approved by the Engineer, showing the amounts to which the Contractor considers himself to be entitled. The statement shall include the following items, as applicable;

- a) the value of the Permanent Work executed up to the end of previous month
- b) such an amount (not exceeding 75 percent of the value) as the Engineer may consider proper on account of materials for permanent work delivered by the Contractor in the site
- c) such amount as the Engineer may consider fair and reasonable for any Temporary Works for which separate amounts are provided in the Bills of Quantities
- d) adjustments under Clause 70
- e) any amount to be withheld under retention provisions of Clause 60.5
- f) any other sum to which the Contractor may be entitled under the Contract

If the Engineer disagrees with or cannot verify any part of the statement , the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes and corrections in the statement as may be directed by the Engineer. In cases where there is difference in opinion as to the value of any item, the Engineer’s view shall prevail.

#### **SUBCLAUSE 60.2 INTERIM PAYMENT CERTIFICATE**

The Contractor shall forward to the Engineer an Interim Payment Certificate based on the statement as corrected above and, should it be necessary in the Engineers opinion, shall promptly make any further amendments and corrections to the Interim Payment Certificate.

The Engineer shall not unreasonably withhold certifying an Interim Payment Certificate and in case of likely delay in establishing the value of an item, such item may be set aside and the remainder certified for payment.

Within 30 days after receipt of the Interim Payment Certificate and subject to the Contractor having made such further amendments and corrections as the Engineer may require, the Engineer will forward to the Employer the certified Interim Payment Certificate, provided that the Engineer shall not be bound to certify any payment under this Clause if the net amount thereof, after all retentions and deductions, would be less than the minimum amount of Interim Payment Certificate's stated in the Appendix to Form of Bid. However in such a case, the uncertified amount will be added to the next interim payment, and the cumulative unpaid certified amount will be compared to the minimum amount of interim payment.

#### **SUBCLAUSE 60.3 – PAYMENT OF RETENTION MONEY**

Upon expiration of the Defects Liability Period for the works, the full amount of the Retention Money shall be certified by the Engineer for payment to the Contractor.

Provided that in the event of different Defects Liability Periods being applicable to different Sections of the Permanent Works pursuant to Clause 48, the expression “expiration of the Defects Liability Period “ shall, for the purpose of this subclause, be deemed to mean the expiration of the latest of such periods.

Provided also that if at such time, there remain to be executed by the Contractor any work instructed, pursuant to Clause 49 and 50, in respect of the works, the Engineer shall be entitled to withhold certification until completion of any such work or so much of the balance of the Retention money as shall in the opinion of the Engineer , represents the cost of the remaining work to be executed.

#### **SUBCLAUSE 60.4– CORRECTION OF CERTIFICATES**

The Engineer may in any Interim Payment Certificate make any correction or modification to any previous Interim Payment Certificate signed by him and shall have authority, if any work is not being carried out to his satisfaction to omit or reduce the value of such work in any Interim Payment Certificate.

#### **SUBCLAUSE 60.5– STATEMENT AT COMPLETION**

Not later than 84 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;

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

- (a) Any further sums which the Contractor considers to be due; and
- (b) An estimate of amounts that 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 and submit a Certificate at Completion to be processed as in SubClause 60.2.

#### **SUBCLAUSE 60.6 – FINAL STATEMENT**

Not later than 56 days after the issue of the Defects Liability Certificate pursuant to Sub-Clause 62.1, 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;

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

(c) 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.

#### **SUBCLAUSE 60.7– 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 60.13 has been made and the Performance Security referred to in Sub-Clause 10.1 has been returned to the Contractor.

#### **SUBCLAUSE 60.08 – FINAL PAYMENT CERTIFICATE**

Upon acceptance of the Final Statement as given in Sub-Clause 60.11, 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.

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

#### **SUBCLAUSE 60.9– CESSATION OF EMPLOYERS LIABILITY**

Unless the Contractor notifies the Engineer of his objection to the Final Certificate within fourteen (14) 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 but excluding any variations and claims previously made in writing.

#### **SUBCLAUSE 60.10 – TIME FOR PAYMENT**

The amount due to the Contractor under any Interim Payment Certificate or Final Payment Certificate issued pursuant to this Clause or to any other term of the Contract, shall, subject to Clause 47, be paid by the Employer to the Contractor as follows:

- (a) In the case of Interim Payment Certificate, within the time stated in the Appendix to Form of Bid, after the Engineer has signed the Interim Payment Certificate.
- (b) In the case of the Final Payment Certificate pursuant to Clause 60.13, within the time stated in the Appendix to Form of Bid, after the Engineer has signed the Final Payment Certificate.
- (C) In the event of the failure of the Employer to make payment within the times stated, the Employer shall make payment to the Contractor of simple interest at a rate equal to three



percentage points above the averaged Lending Rate as issued by the Central Bank of Kenya. The provisions of this sub-clause are without prejudice to the Contractor's entitlements under Clause 69 or otherwise.

#### **SUBCLAUSE 60.11 MATERIALS FOR PERMANENT WORKS**

With respect to materials brought by the Contractor to the site for incorporation into the permanent works, the Contractor shall,

- (a) Receive a credit in the month in which these materials are brought to site,
- (b) Be charged a debit in the month in which these materials are incorporated in the permanent works.

Both such credit and debit to be determined by the Engineer in accordance with the following provisions;

- (a) No credit shall be given unless the following conditions shall have been met to the Engineer's satisfaction:
  - (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 plant 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.
- (b) The amount to be credited to the Contractor shall be 75% of the Contractor's reasonable cost of the materials delivered to site, as determined by the Engineer after review of the documents listed in subparagraphs (a) (iv) above;
- (c) The amount to be debited to the Contractor for any materials incorporated into the works shall be equivalent to the credit previously granted to the Contractor for such materials pursuant to Clause (b) above as determined by the Engineer.

#### **SUBCLAUSE 60.12 – CURRENCY OF PAYMENT**

The Contract Price shall be designated in Kenyan Currency. All work performed by the Contractor under the Contract shall be valued in Kenya Shillings using the rates and prices entered in the Bills of Quantities together with such other increases to the Contract Price, except for variation of price payments in accordance with Clause 70.1.

#### **SUBCLAUSE 60.13: - RETENTION MONEY**

A retention amounting to the percentage stipulated in the Appendix to Bid shall be made by the Engineer in the first and following Interim Payment Certificates until the amount retained shall reach the "Limit of Retention Money" named in the Appendix to Form of Tender.

Bank retention Guarantees to be allowed in lieu of cash retentions

#### SUBCLAUSE 60.14 – ADVANCE PAYMENT

No advance will be allowed under this Contract.

#### SUBCLAUSE 67.3 – ARBITRATION

Delete all the words from line 6 onwards beginning with the words "unless otherwise" up to line 8 ending with the words "... under such rules", and substitute with the following:

"by an arbitrator to be agreed upon between the parties or failing agreement to be nominated on the application of either party by the appointee designated in the form of Tender for the purpose and any such referee shall be deemed to be a submission to arbitration within the meaning of the Arbitration Laws of the Republic of Kenya.

#### SUBCLAUSE 68.2 – NOTICES TO EMPLOYER AND ENGINEER

Delete in Sub-Clause 68.2 (a) the words "nominated for that purpose in part II of these conditions".

#### CLAUSE 69 – DEFAULT OF EMPLOYER

Delete in Sub-Clause 69.1 (a) the words ("28 days") and insert the words "ninety (90) days".  
Delete in Sub-Clause 69.4 line 4 the words ("28 days") and insert the words " sixty (60) days".  
Delete in Sub-Clause 69.1 (d) the words "for unforeseen reasons, due to economic dislocation".  
In Sub-Clauses 69.1, 69.4, 69.5 substitute "Sub-Clause 60.8" for "Sub-Clause 60.5".

#### CLAUSE 70 CHANGES IN COST AND LEGISLATION

Delete Clause 70 in its entirety, and substitute:

##### SUB-CLAUSE 70.1 PRICE ADJUSTMENT

The amounts payable to the Contractor, in various currencies pursuant to Sub-Clause 60.1, shall be adjusted in respect of the rise or fall in the cost of labor, Contractor's Equipment, Plant, materials, and other inputs to the Works, by applying to such amounts the formulae prescribed in this clause.

##### SUB-CLAUSE 70.2 OTHER CHANGES IN COST

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

##### SUB-CLAUSE 70.3 ADJUSTMENT FORMULAE

The adjustment to the Interim Payment Certificates in respect of changes in cost and legislation shall be determined from separate formulae for each of the currencies of payment and each of the types of construction work to be performed and Plant to be supplied. The formulae will be of the following general type:

$$pn = A + b \frac{Ln}{Lo} + c \frac{Mn}{Mo} + d \frac{En}{Eo} + etc.$$

Where:

$pn$  is a price adjustment factor to be applied to the amount in each specific currency for the payment of the work carried out in the subject month, determined in accordance with Paragraph 60.1 (d), and with Paragraphs 60.1 (e) and (f), where such variations and day works are not otherwise subject to adjustment;

$A$  is a constant, specified in the Appendix to Bid, representing the nonadjustable portion in contractual payments;

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

$L_n, M_n, E_n$ , etc., are the current cost indices or reference prices of the cost elements in the specific currency of origin for month “ $n$ ,” determined pursuant to Sub-Clause 70.5, applicable to each cost element; and

$L_o, M_o, E_o$ , etc., are the base cost indices or reference prices corresponding to the above cost elements at the date specified in Sub-Clause 70.5.

If a price adjustment factor is applied to payments made in a currency other than the currency of the source of the index for a particular indexed input, a correction factor  $Z_o/Z_n$  will be applied to the respective component factor of  $pn$  for the formula of the relevant currency.

$Z_o$  is the number of units of currency of the country of the index, equivalent to one unit of the currency of payment on the date of the base index, and

$Z_n$  is the corresponding number of such currency units on the date of the current index.

#### **SUB-CLAUSE 70.4 SOURCES OF INDICES AND WEIGHTINGS**

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

#### **SUB-CLAUSE 70.5 BASE, CURRENT, AND PROVISIONAL INDICES**

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

#### **SUB-CLAUSE 70.6 ADJUSTMENT AFTER COMPLETION**

If the Contractor fails to complete the Works within the time for completion prescribed under Clause 43, adjustment of prices thereafter until the date of completion of the Works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices, whichever is more favourable to the Employer, provided that if an extension of time is granted pursuant to Clause 44, the above provision shall apply only to adjustments made after the expiry of such extension of time.

#### **SUB-CLAUSE 70.7 WEIGHTINGS**

The weightings for each of the factors of cost given in the Appendix to Bid shall be adjusted if, in the opinion of the Engineer, they have been rendered unreasonable, unbalanced, or inapplicable as a result of varied or additional work already executed or instructed under Clause 51 or for any other reason.

#### **SUB-CLAUSE 70.8 SUBSEQUENT LEGISLATION**

If, after the date 28 days prior to the latest date for submission of bids for the Contract, there occur in the country in which the Works are being or are to be executed changes to any National or State Statute, Ordinance, Decree, or other Law or any regulation or by-law of any local or other duly constituted authority, or the introduction of any such State Statute, Ordinance, Decree, Law, regulation, or by-law that causes additional or reduced cost to the Contractor, other than under the preceding sub-clauses of this clause, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be added to or deducted from the Contract Price and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same shall already have taken into account in the indexing of any inputs to the Price Adjustment Formulae in accordance with the provisions of Sub-Clauses 70.1 to 70.7.

#### **SUBCLAUSE 70.9 – SUB-CONTRACT**

- (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;
- (b) 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.

#### **SUBCLAUSE 70.10 – NOMINATED SUB-CONTRACTORS**

This clause shall not apply in respect of work executed by any nominated sub-Contractor (fluctuation in relation to nominated sub-Contractors shall be dealt with under provisions in relation thereto which may be included in the appropriate sub-contract or contract of sale).

#### **SUBCLAUSE 70.11 – DATE OF TENDER PRICING**

The expression "the date of tender pricing" as used in this Clause means the date 30 days prior to the final date for submission of Tenders as determined by the Employer in the Tender documents.

#### **SUBCLAUSE 70.12 – PRIME COST**

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 as discussed above.

#### **SUBCLAUSE 70.13 – CHANGE OF SUPPLIER**

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

#### **SUBCLAUSE 70.14 – CONTRACTORS HEAD OFFICE EXPENSES**

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

#### **SUBCLAUSE 70.15 – CURRENCY OF PAYMENTS UNDER CLAUSE 70**

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

#### **SUBCLAUSE 70.16 – COST OF PREPARING VARIATION OF PRICE CLAIMS**

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

#### **CLAUSE 72 – RATES OF EXCHANGE COST**

Delete clause 72 in its entirety and substitute the following:

The currency of Tender and payment is Kenya Shillings and rates of exchange requirements are not applicable.

#### **CLAUSE 73 – BRIBERY AND COLLUSION**

Add new Clause 73.1:

“The Contractor shall not:

- (a) Offer or give or agree to give to any person in the service of the Government of Kenya any gift or consideration or any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract to which the Government of Kenya is a party or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract for the Government of Kenya.
- (b) Enter into this or any other contract with the Government of Kenya in connection with which commission has been paid or agreed to be paid by or on his behalf or to his knowledge, unless before the contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the Employer.

Any breach of this condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) or the commission of any

offense by the Contractor or by anyone employed by him or acting on his behalf in relation to this or any other contract to which the Government of Kenya is a party shall entitle the Employer to determine the Contract (See Condition 63 hereof) and/ or to recover from the Contractor the amount or value of any such gift, consideration or commission.

Any dispute or difference of opinion arising in respect of either the interpretation, effect or application of this condition or of the amount recoverable hereunder by the Employer from the Contractor shall be decided by the Employer, whose decision shall be final and conclusive.

#### CLAUSE 74: - CONTRACT CONFIDENTIAL

Add new Clause 74.1:

The Contractor shall treat the details of this Contract as Private and Confidential and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere (save in so far as may be necessary for the purpose thereof) without the previous consent in writing of the Government. If any dispute arises as to the necessity of any publication or disclosures for the purposes of this Contract the same shall be referred to the decision of the Engineer mentioned in the said Conditions of Contract whose award shall be final.

#### CLAUSE 77 – CLAIMS FOR IDLE TIME

Delete Clause 69.4(b) of General Conditions of Contract Part I insert ----- "the amount of such cost which shall be added to Contract Price shall exclude any cost due to idle time for equipment, plants and labour etc".

**SECTION 6: SCHEDULES OF SUPPLEMENTARY INFORMATION**

**SECTION 6: SCHEDULES OF SUPPLEMENTARY INFORMATION**

SCHEDULE 1: CONFIDENTIAL BUSINESS QUESTIONNAIRE ..... 49

SCHEDULE 2: FORM OF WRITTEN POWER OF ATTORNEY..... 52

SCHEDULE 3: CERTIFICATE OF BIDDER’S VISIT TO SITE..... 53

SCHEDULE 4: SCHEDULE OF BASIC RATES ..... 54

SCHEDULE 5: MAJOR ITEMS OF CONSTRUCTION PLANT AND EQUIPMENT..... 55

SCHEDULE 6: KEY PERSONNEL ..... 56

SCHEDULE 7: SCHEDULE OF ROADWORKS CARRIED OUT BY THE TENDERER IN  
THE LAST FIVE YEARS ..... 57

SCHEDULE 8: SCHEDULE OF ONGOING PROJECTS ..... 58

SCHEDULE 9: SCHEDULE OF LOCAL LABOUR BASIC RATES..... 59

SCHEDULE 10: OTHER SUPPLEMENTARY INFORMATION ..... 60



**SCHEDULE 1: CONFIDENTIAL BUSINESS QUESTIONNAIRE**

This Confidential Business Questionnaire of the County Government of Kiambu shall be completed by the Bidder.

**REPUBLIC OF KENYA**

**CONFIDENTIAL BUSINESS QUESTIONNAIRE**

You are requested to give the particulars indicated in Part 1 and either Part 2(a), 2(b) or 2(c) 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

.....

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 one time:

Kshs.....

Name of your bankers.....

Branch.....

**Part 2(a) - Sole Proprietor:**

Your name in full

.....

Age.....

Nationality .....Country of origin .....

\*Citizenship details .....

**Part 2(b) - Partnership:**

Give details of partners as follows:

Name	Nationality	Citizenship Details*	Shares
1.			
2.			
3.			

.....

2.

.....

3.

.....  
4.

.....  
5.  
.....

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:

Name	Nationality	Citizenship Details*	Shares
------	-------------	----------------------	--------

1.  
.....

2.  
.....

3.  
.....

4.  
.....

5.  
.....

Part 2(d)- Interest in the Firm:

Is there any person / persons in the Department of Roads and Transport ,Public Works and Utilities who has interest in this firm? Yes /No\*\*

.....  
Date

.....  
Signature of Tenderer

\* Attach proof of citizenship  
(Compulsory)

\*\* Delete as necessary

**SCHEDULE 2: FORM OF WRITTEN POWER OF ATTORNEY**

The Bidder shall state here below the name(s) and address of his representative(s) who is/are authorized to receive on his behalf correspondence in connection with the Bid.

.....

(Name of Bidder's Representative in block letters)

.....

(Address of Bidder's Representative)

.....

(Signature of Bidder's Representative)

Alternate:

.....

(Name of Bidder's Representative in block letters)

.....

(Address of Bidder's Representative)

.....

(Signature of Bidder's Representative)

\*To be filled by all Bidders.

**SCHEDULE 3: CERTIFICATE OF BIDDER’S VISIT TO SITE**

This is to certify that

[Name/s].....

.....

Being the authorized representative/Agent of [Name of bidder]

.....

...

.....

...

participated in the organised inspection visit of the site of the works for

the **CONSTRUCTION OF KENYATTA ROAD-RIURIRO BRIDGE**, held on

.....day of .....20.....

Signed.....

(Employer’s Representative)

.....  
(Name of Employer’s Representative)

.....  
(Designation)

NOTE: This form is to be completed at the time of the organized site visit.

**SCHEDULE 4: SCHEDULE OF BASIC RATES OF MATERIALS**

(Ref: Conditions of Contract Part II, Clause 70)

Bidders shall complete the blank section of this schedule only, and shall make no alterations to any item nor insert any additional materials. The prices inserted shall be those prevailing 30 days before submission of Bids and shall be quoted in Kenya shillings using the exchange rates specified in the Bidding Data. The prices shall be supported by bona fide quotations for use as provided in Clause 70.

ITEM NO	DESCRIPTION	COUNTRY OF ORIGIN	NAME OF SUPPLIER	UNIT	RATE	
					KSHS.	CTS
1	Petrol, Regular Grade			Litre		
2.	Petrol, Premium/ super Grade			Litre		
3.	Automotive Diesel Fuel			Litre		
4.	Lubricants			Kg		
5.	Cement			Tonne		
6.	Flex beam Guardrail			Metre		
7	Gabion Mesh			M <sup>2</sup>		
8.	Reinforcing Steel			Tonne		

.....  
(Signature of Tenderer)

.....  
(Date)

**SCHEDULE 5: MAJOR ITEMS OF CONSTRUCTION PLANT AND EQUIPMENT**

Date of Arrival on Project (Days after commence)	
Power Rating	
Owned/ Leased/ Imported	
Source	
Estimated CIF Mombasa Value (If to be Imported)	
Capacity t or m cu	
New or Used	
Year of Manufacture	
No. of each	
Description Type, Model, Make	

The Tenderer shall enter in this schedule all major items of plant and equipment which he proposes to bring to site. Only reliable plant in good working order and suitable for the work required of it shall be shown on this Schedule.

I certify that the above information is correct.

.....

.....

(Signature of Tenderer)

(Date)

**SCHEDULE 6: KEY PERSONNEL**

DESIGNATION	NAME	NATIONALITY	SUMMARY OF QUALIFICATIONS AND EXPERIENCE
<b>Headquarters</b>  Partner/Director or other key staff (give designation)			
<b>Site Office</b>  Site Agent  Deputy Site Agent.  Supervising Engineer  Construction supervisors   <b>Other key staff</b>			

**Note:** The Tenderer shall list in this schedule the key personnel he will employ from the Contractor’s headquarters and from the Contractor’s site office to direct and execute the work together with their qualifications, experience, position held and nationality in accordance with Clause 15.2 and 16.3 of the Conditions of Contract Part II (where required, use separate sheets to add extra data for column 4).

Attach the CV’s of the key personnel.

I certify that the above information is correct.

.....  
(Signature of Tenderer)

.....  
(Date)



**SCHEDULE 7: SCHEDULE OF ROADWORKS CARRIED OUT BY THE TENDERER IN THE LAST FIVE YEARS**

DESCRIPTION OF WORKS	VALUE OF WORKS (KSHS) *	YEAR COMPLETED

I certify that the above works were successfully carried out by this tenderer.

.....  
(Signature of Tenderer)

.....  
(Date)

\* Value in KShs using Central Bank of Kenya mean exchange rate at a reference date 7 days before date of tender opening.

**SCHEDULE 8: SCHEDULE OF ONGOING PROJECTS**

DESCRIPTION	DATE OF COMMENCEMENT	DATE OF COMPLETION	VALUE OF WORKS (KSHS)	VALUE COMPLETED UP TO DATE %	PHYSICALLY COMPLETED UP TO DATE %

I certify that the above works are being carried out by me and that the above information is correct.

.....  
(Signature of Tenderer)

.....  
(Date)

**SCHEDULE 9: SCHEDULE OF LOCAL LABOUR BASIC RATES**

The rates inserted in this schedule will be those used in determining changes in cost of local labour as provided in Clause 70.1 of the Conditions of Contract Part 2.

LABOUR CATEGORY	MONTH/SHIFT/HOUR	UNIT	RATE SHS

NOTE: Categories to be generally in accordance with those used by the Kenya Building Construction Engineering and Allied Trade Workers Union

I certify that the above information is correct.

.....  
Date

.....  
Signature of Bidder

**SCHEDULE 10: OTHER SUPPLEMENTARY INFORMATION**

1. Financial reports for the last three 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 Bidders Bankers who may provide reference if contacted by the Contracting Authority.

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

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

OTHER PARTY (IES)	CAUSE OF DISPUTE	AMOUNT INVOLVED (KSHS)

I certify that the above information is correct.

.....  
 Date

.....  
 Signature of Bidder

**SECTION 7: FORM OF AGREEMENT**

**SECTION 7: FORM OF AGREEMENT**

THIS AGREEMENT is made on the ..... day of ..... 20 ..... between the Government of Kenya of P. O. Box 5277-00605, Nairobi, Kenya hereinafter called "the Employer" of the one part and ..... hereinafter called "the Contractor" of the other part.

WHEREAS the Employer is desirous that certain works should be executed, viz. **PROPOSED CONSTRUCTION OF KENYATTA ROAD-RIURIRO BRIDGE** and has accepted a Bid by the Contractor for the execution completion and maintenance of such works NOW THIS AGREEMENT WITNESSETH as follows:

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.

The following document shall be deemed to form and be read and construed as part of this Agreement, viz.:

- The said Tender dated .....
- The Conditions of Contract
- The Standard and Special Specification
- The Priced Bill of Quantities
- The Letter of Acceptance
- Schedules of Supplementary Information
- The Drawings
- Other documents as may be agreed and listed

All aforesaid documents are hereinafter referred to as "The Contract".

In consideration of the payment to be made by the Employer to the Contractor, the Contractor hereby covenants with the Employer to execute, complete and maintain the works in conformity in all respects with the provisions of the Contract.

The Employer hereby covenants to pay the Contractor in consideration of the execution, completion and maintenance of the works the Contract Price at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused their respective common seals to be hereto affixed (or have hereunto set their respective hands and seals) on the day and year first above written.

SIGNED, SEALED AND DELIVERED

By the said Employer.....  
(Chief Officer RTPW &U)  
For and on behalf of the said Employer

In the presence of.....  
(Name and Designation of Witness)

.....  
(Signature of Witness)

.....  
(Address of witness)

Countersigned by.....

In the presence of.....  
(Name and Designation of Witness)

.....  
(Signature of Witness)

.....  
(Address Of witness)

By the said Contractor.....

In the presence of.....  
(Name and Designation of Witness)

.....  
(Signature of Witness)

.....  
(Address of witness)

**SECTION 8: FORM OF PERFORMANCE BANK GUARANTEE  
(UNCONDITIONAL)**



**SECTION 8: FORM OF PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)**

To  
Chief Officer

WHEREAS ..... (Hereinafter called “the Contractor”) has undertaken in pursuance of Contract No .....Dated ..... to execute the PROPOSED CONSTRUCTION OF KENYATTA ROAD-RIURIRO BRIDGEE ..... (**Hereinafter called the “Contract”**)

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 in the Appendix to Form of Bid 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 in figures)

Kshs.....

..... (amount in words)

and we undertake to payment to you, upon your first written demand and without cavil or argument, any sum or sums within and up to the limits as aforesaid without your needing to prove or show grounds or reasons for the sum specified therein.

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

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract Documents which may be made between you 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

This Guarantee shall be valid until 28 days after issuing of the Defects Liability Certificate.

SIGNATURE AND SEAL OF GUARANTOR .....

Name of Signatory.....

Name of bank.....

Address.....

Date .....

**SECTION 9: STANDARD SPECIFICATIONS**

**SECTION 9: STANDARD SPECIFICATIONS**

1. Standard Specifications refers to the Standard Specifications for Road and Bridge Construction, 1986 Edition published by the “Ministry of Transport and Communications”
2. Concrete Works Standard Manual BS8110.
3. Bridge Design and Construction Manual BS5400.

**SECTION 10: SPECIAL SPECIFICATIONS**

**SECTION 10: SPECIAL SPECIFICATIONS**

**TABLE OF CONTENTS**

SECTION 1 - GENERAL..... 70

101 SPECIAL SPECIFICATIONS..... 70

102 EXTENT OF CONTRACT..... 71

a). Introduction..... 71

b). Design Proposal ..... 71

A bridge of 10m spans, 7m wide, 2 pedestrian walkways 1.5m each width and 3m height is proposed.71

c). Design Standard and Specification ..... 71

The following are material/construction specifications ..... 71

- Concrete characteristic strength – 25N/mm<sup>2</sup> ..... 71
- Reinforcement steel characteristic strength – 460N/mm<sup>2</sup> ..... 71
- Concrete finish – class F2 Formwork finish..... 71
- Concrete cover to steel – 30mm ..... 71

104 PROGRAMME OF EXECUTION OF THE WORKS ..... 72

105 ORDER OF EXECUTION OF WORKS ..... 72

107 TAKING OVER CERTIFICATE ..... 72

109 NOTICE OF OPERATIONS ..... 72

117 HEALTH, SAFETY AND ACCIDENTS ..... 73

121 DIVERSION OF SERVICES..... 73

123 LIAISON WITH GOVERNMENT AND POLICE OFFICIALS ..... 73

124 LAND FOR ALL CAMPS SITES AND FOR THE CONTRACTOR'S OWN PURPOSES,  
INCLUDING TEMPORARY WORKS..... 73

128 STORAGE OF MATERIALS..... 74

129 **TEST CERTIFICATES**..... 74

131 SIGNBOARDS ..... 74

132 MAIN OFFICE..... 74

133 ENGINEERS OFFICE ..... 74

The contractor may be instructed by the Engineer under the said Clause to make payments of receipted accounts for such items such as laboratory equipment and reagents or the Engineer may direct the Contractor to purchase the above. The Contractor will, on provision of receipts, be paid under item 1.01 plus a percentage profit under item 1.02, of the Bills of Quantities for laboratory equipment and survey equipment..... 75

137 ATTENDANCE UPON THE ENGINEER AND HIS STAFF..... 75

138 VEHICLES AND DRIVERS FOR THE ENGINEER AND HIS STAFF AND METHOD OF  
PAYMENT..... 75

139 RECEIPTED ACCOUNTS ..... 75

140 HOUSING ACCOMODATION FOR THE RESIDENT ENGINEER AND HIS STAFF, OFFICE  
AND LABORATORY INCLUDING FURNITURE..... 75

143 ENVIRONMENTAL PROTECTION..... 75

SECTION 4 - SITE CLEARANCE AND TOP SOIL STRIPPING ..... 77

401 SITE CLEARANCE..... 77

402 REMOVAL OF TOPSOIL..... 77

403 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS ..... 77

SECTION 5 - EARTHWORKS..... 77

504 PREPARATION PRIOR TO FORMING EMBANKMENT..... 77

505 CONSTRUCTION OF EMBANKMENTS ..... 77

508 COMPACTION OF EARTHWORKS..... 78

511 BORROW PITS ..... 78

517 MEASUREMENT AND PAYMENT..... 79

SECTION 6 - QUARRIES, BORROW PITS, STOCKPILES ..... 79

AND SPOIL AREAS..... 79

601 GENERAL ..... 79

602	THE PRELIMINARY MATERIALS REPORT .....	79
	SECTION 7 - EXCAVATION AND FILLING FOR STRUCTURES .....	80
703	EXCAVATION OF FOUNDATIONS FOR STRUCTURES .....	80
707	BACKFILLING FOR STRUCTURES .....	80
709	EXCAVATION FOR RIVER TRAINING AND NEW WATER COURSES .....	80
710	STONE PITCHING.....	80
711	GABIONS .....	81
712	RIP-RAP PROTECTION WORK.....	81
	SECTION 9 - PASSAGE OF TRAFFIC .....	82
	SECTION 17 - CONCRETE WORKS .....	84
1703 (C)	FORMWORK FOR CONCRETE.....	84
2001	ROAD RESERVE BOUNDARY POSTS .....	89
2004	PERMANENT ROAD SIGNS.....	89
2006	GUARDRAILS .....	89

**SECTION 1 - GENERAL**

**101 SPECIAL SPECIFICATIONS.**

Special specification is supplementary to the Standard Specifications and the two must be read in conjunction. In any case where there appears to be conflict between the two then the Special Specifications will take precedence.

**EXTENT OF CONTRACT**

**a). Introduction**

**b). Design Proposal**

A bridge of 10m spans, 7m wide, 2 pedestrian walkways 1.5m each width and 3m height is proposed.

**c). Design Standard and Specification**

The following are material/construction specifications

- Concrete characteristic strength –  $25\text{N/mm}^2$
- Reinforcement steel characteristic strength –  $460\text{N/mm}^2$
- Concrete finish – class F2 Formwork finish
- Concrete cover to steel – 30mm

**104 PROGRAMME OF EXECUTION OF THE WORKS**

The contractor shall provide the works programme, required under clause 14 of the Conditions of Contract, within 21 days of receipt of the Engineer's Order to commence work.

The programme shall be co-ordinated with climatic and other conditions to provide for the completion of the works in the order and by the time specified.

The Contractor shall carry out the contract in accordance with the programme agreed with the Engineer, but he shall in no manner be relieved by the Engineer's approval of the programme, of his obligation to complete the works in the prescribed order and by the prescribed completion date and he shall from time to time review his progress and make such amendments to his rate of execution of the works as may be necessary to fulfil his obligations.

**105 ORDER OF EXECUTION OF WORKS**

In addition to Clause 105 of the Standard Specification the Contractor shall carry out the Works such that a continuous and consecutive output of fully completed work is achieved.

**107 TAKING OVER CERTIFICATE**

Taking over Certificate will be issued under Clause 48 of the Conditions of Contract upon substantial completion.

**109 NOTICE OF OPERATIONS**

Add the following sub- Clause.

Notification Terms

It shall be the Contractor's responsibility to notify the Engineer when any item of works scheduled are completed and ready for approval, and the contractor shall give sufficient notice to allow control test to be performed.

Explosive and Blasting

- (a) The requirements of the Laws of Kenya governing explosives and other requirements and regulations of Government of Kenya and other authorities shall be complied with.
- (b) No explosives of any kind shall be used without prior written consent of the Engineer.
- (c) The Contractor shall be solely responsible for the provision, handling, storage and transporting of all explosives, ancillary materials and all other items of related kind whatsoever required for blasting.



**117 HEALTH, SAFETY AND ACCIDENTS**

Add to subclause 19.1 the following:

In addition to providing, equipping and maintaining adequate first aid stations throughout the works in accordance with the laws of Kenya, the contractor shall provide and maintain on site during the duration of the Contract, a fully equipped dispensary. This shall be with a qualified Clinical Officer / Nurse who shall offer the necessary medical advice on HIV and related diseases to the Engineer's and Contractor's Site staff. The Contractor shall allow for this in the rates and be responsible for all site welfare arrangements at his own cost.

**121 DIVERSION OF SERVICES**

- (a) The Contractor shall acquaint himself with the location of all existing services such as telephone lines, electricity cables, water pipes, sewers etc., before execution of any works that may affect the services. The cost of determining the location of the existing services together with making good or repairing of any damage caused all to the satisfaction of the Engineer shall be included in the tender rates.
- (b) Subject to the agreement with the Engineer, the Contractor shall be responsible for removal of alteration and relocation of existing services.
- (c) The Contractor shall indemnify the Employer against claims originating from damage to existing services or works.

**123 LIAISON WITH GOVERNMENT AND POLICE OFFICIALS**

The Contractor shall keep in close touch with the Police and the other Government officials of the area regarding their requirements in the control of traffic or other matters, and shall provide all assistance or facilities, which may be required by such officials in the execution of their duties.

**124 LAND FOR ALL CAMPS SITES AND FOR THE CONTRACTOR'S OWN PURPOSES, INCLUDING TEMPORARY WORKS.**

Notwithstanding Clause 124 of the Standard Specification all requirements of land for temporary works and construction purposes shall be to the approval of the Engineer but the Contractor will make all necessary arrangements with the property owners concerned and pay all charges arising there from. On or before completion of the Contract, the Contractor shall remove all temporary works and shall restore all such land to the condition in which it was immediately prior to the occupation thereof as far as is reasonable and practicable. No separate payment will be made to the Contractor on account of these items and the Contractor must make due allowance for them in his rates.

Notwithstanding Clause 120 of the Standard Specifications, the Contractor shall be required to appoint a competent surveyor, who will liaise with the Engineer on matters related to the demarcation of the existing road reserve, site measurements, removal and reinstatement of existing services.

**128 STORAGE OF MATERIALS**

All materials shall be stored on Site in a manner approved by the Engineer and the Contractor shall carefully protect from the weather all work and materials which may be affected thereby.

**129 TEST CERTIFICATES**

When instructed by the Engineer the Contractor shall submit certificates of test from the suppliers of materials and goods required in connection with the works as the Engineer may require.

Such certificates shall certify that the materials or goods concerned have been tested in accordance with the requirements of the specifications and shall give the results of all the tests carried out. The Contractor shall provide adequate means of identifying the materials and goods delivered to the site with the corresponding certificates.

**131 SIGNBOARDS**

The Contractor shall provide and erect four (2) publicity signboards on the site as directed. The Engineer shall, as shown in the Drawings, direct the minimum dimensions of the boards. The boards shall be prepared, primed and painted cream and lettered in black. The boards shall be of stout construction, resistant to the effects of weather.

**132 MAIN OFFICE**

The office of the “Employer” is located in Ruiru

**133 ENGINEERS OFFICE**

The office of the “Engineer” is located at Ruiru

The contractor is expected to take up two rooms of 3 x 3.5 x 3.5M site construction office and leave one for the Engineer’s Representative. He should provide lockable table and 2 chairs for the Engineer’s office.

All furniture and equipment bought under the contract shall revert to the Employer. For the furniture, the contractor shall be paid for these on provision under items 1.02.

**134 ENGINEER'S LABORATORY AND SURVEY EQUIPMENT**

The contractor may be instructed by the Engineer under the said Clause to make payments of receipted accounts for such items such as laboratory equipment and reagents or the Engineer may direct the Contractor to purchase the above. The Contractor will, on provision of receipts, be paid under item 1.01 plus a percentage profit under item 1.02, of the Bills of Quantities for laboratory equipment and survey equipment.

**137 ATTENDANCE UPON THE ENGINEER AND HIS STAFF**

The Contractor shall pay (including all overtime) and house all attendant staff to fulfil the requirements of Clause 137 of the Standard Specification. The number of staff required for these duties shall be as follows: 1 No. Office attendant. Payments shall be as shown in Bill No. 1.01 and 1.02.

**138 VEHICLES AND DRIVERS FOR THE ENGINEER AND HIS STAFF AND METHOD OF PAYMENT**

- a) The Contractor shall when instructed to do so provide POL and maintain in good working condition for the exclusive use of the Engineer and his staff throughout the contract period.

Payments shall be made under item 1.01 and 1.02 of the Bills of Quantities.

**139 RECEIPTED ACCOUNTS**

The Contractor may be instructed by the Engineer to make payments of general miscellaneous accounts for such items as stationary, stores and equipment and miscellaneous supervision personnel and claims or the Engineer may direct the Contractor to purchase or pay for the above. The estimate of these accounts is of the order of, but not limited to KShs. 100,000. The Contractor will be paid on a prime cost basis plus a percentage for overheads and profits under Bills of Quantities No.1.03 and 1.04.

**140 HOUSING ACCOMODATION FOR THE RESIDENT ENGINEER AND HIS STAFF, OFFICE AND LABORATORY INCLUDING FURNITURE**

**140.1 HOUSING AND ACCOMODATION FOR THE ENGINEER'S SENIOR STAFF**

The Contractor shall provide or rent (night out allowances) for the Engineer's representative which should be reimbursed by the Employer through items 1.01 and 1.02.

**143 ENVIRONMENTAL PROTECTION**

The Contractor shall ensure so far as is reasonably practicable and to the satisfaction of the Engineer; that the impact of the construction on the environment

shall be kept to a minimum and that appropriate measures are taken to mitigate any adverse effects during the construction.

- (a) After extraction of materials, all borrows pits shall be backfilled to the satisfaction of the Engineer. In particular borrow pits near the project road shall be backfilled in such a way that no water collects in them.
- (b) Spilling of bitumen, fuels and oils shall be cleared up.
- (c) No pollutants shall be allowed into the river. The contractor shall ensure that high standard of cleanliness is maintained in and around the project site.

**SECTION 2 - MATERIALS AND TESTING OF MATERIALS**

All materials testing shall be in accordance with section 2 of the Standard Specifications.

**SECTION 4 - SITE CLEARANCE AND TOP SOIL STRIPPING**

**401 SITE CLEARANCE**

Site Clearance shall be carried out as directed by the Engineer.

**402 REMOVAL OF TOPSOIL**

Topsoil shall include up to 200mm depth of any unsuitable material encountered in existing or newly constructed drains, drainage channels, and accesses.

**403 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS**

When instructed by the Engineer, the Contractor shall demolish or remove structure and payment for this shall be made on day works basis.

**SECTION 5 - EARTHWORKS**

**504 PREPARATION PRIOR TO FORMING EMBANKMENT**

Where benching is required for existing pavement to accommodate earthworks subgrade or subbase for widening the road, the rate for compaction of existing ground shall be deemed to cover this activity.

Excavation in the pavement of the existing road shall be kept dry. In the event of water penetrating the underlying layer, construction of the subsequent layers shall be postponed until the underlying layers are dry enough to accommodate the construction plant without deforming or otherwise showing distress.

Step construction shall be carried out per layer at the joint where excavating both vertically and perpendicular to the direction of the travel. The step shall be 500mm perpendicular to the direction of the travel and 150mm vertical unless otherwise instructed by the Engineer.

Special care shall be taken when compacting the new material at the joint ensuring that specified density is achieved.

**505 CONSTRUCTION OF EMBANKMENTS**

Only material approved by the Engineer shall be used for fill in embankments. Material with high swelling characteristics or high organic matter content and any other undesirable material shall not be used, unless specifically directed by the Engineer. Unsuitable material shall include:

All material containing more than 5% by weight organic matter (such as topsoil, material from swamps, mud, logs, stumps and other perishable material)

All material with a swell of more than 3% (such as black cotton soil)

All clay of plasticity index exceeding 50

All material having moisture content greater than 105% of optimum moisture content (Standard Compaction)

**Subgrade:** Shall mean upper 400mm of earthworks either in-situ or in fill and subgrade shall be provided for as part of earthworks operation and payment shall be made as “fill”. The material for subgrade shall have a CBR of not less than 8% measured after a 4-day soak in a laboratory mix compacted to a dry density of 100% MDD (AASHTO T99) and a swell of less than 1%.

**Embankment repair:** Where directed by the Engineer, any localised filling in soft, hard or natural; selected material requirements shall be executed in accordance with Clause 505.

## **508                    COMPACTION OF EARTHWORKS**

At locations adjacent to structures, all fill above ground level up to the underside of the subgrade shall be compacted to density of 105% MDD (AASHTO T.99). In case of fill around box culverts this should be carried out for the full width of the fill and for a length bounded by the vertical plane passing through the ends of the wing walls.

Notwithstanding the provision of clause 503 of the standard Specification, Compaction of subgrade material (i.e. material immediately below formation) in cut areas shall not be carried out by the contractor in areas where the formation is formed in hard material, unless specific instructions to the contrary are issued by the Engineer.

Where improved subgrade material shall be required, this shall be compacted and finished to the same standards and tolerances as those required for normal subgrade and clauses in the specifications applying to normal subgrade shall also apply.

## **511                    BORROW PITS**

The first part of the Standard Specification is amended as follows:-

Fill material which is required in addition to that provided by excavation shall be obtained from borrow pits to be located and provided by the Contractor but to the approval of the Engineer contrary to what has been stated.

**517 MEASUREMENT AND PAYMENT**

Standard specification refers.

**SECTION 6 - QUARRIES, BORROW PITS, STOCKPILES  
AND SPOIL AREAS**

**601 GENERAL**

Notwithstanding any indications to the contrary in the Standard specification the Engineer will not make available to the Contractor any land for quarries, borrow pits, stockpiles and spoil areas, except for those areas in road reserves specifically approved by him.

The contractor will be entirely responsible for locating suitable sources of materials complying with the Standard and Special Specifications, and for the procurement, Wining, haulage to site of these materials and all costs involved therein. Similarly the contractor will be responsible for the provision and costs involved in providing suitable areas for stockpiling materials and spoil dumps. Should there be suitable sites for spoil dumps or stockpiles within the road reserve forming the site of the works the Contractor may utilise these subject to the approval of the Engineer.

No additional payment will be made to the Contractor to cover costs arising from the requirements for this Clause and the Contractor must include these costs in the rates inserted into the Bills of Quantities.

**602 THE PRELIMINARY MATERIALS REPORT**

The information on possible material sites is given for the general guidance of bidders. Bidders are however advised to conduct their own investigation as the information contained therein is neither guaranteed nor warranted.

## **SECTION 7 - EXCAVATION AND FILLING FOR STRUCTURES**

### **703 EXCAVATION OF FOUNDATIONS FOR STRUCTURES**

Unless otherwise instructed by the Engineer, all excavated surfaces in material other than hard material, on which foundations for structures shall be placed, shall be compacted to 100% MDD (AASHTO T.99) immediately before structures are constructed.

Paragraph 4, last line: - Replace "95%" with "100%".

### **707 BACKFILLING FOR STRUCTURES**

Unless otherwise instructed by the Engineer, all backfilling material shall be compacted to a minimum of 100% MDD (AASHTO T.99).

### **709 EXCAVATION FOR RIVER TRAINING AND NEW WATER COURSES**

Payments for river training and establishment of new watercourses shall only be made where such work constitute permanent works. Works done for road deviation or other temporary works shall not qualify for payment.

### **710 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. Stone Pitching Repair and Reconstruction shall be carried out in accordance with Clause 710 of the Standard Specifications.

The Works shall involve removal of the damaged stone pitching and reconstruction of the said areas in accordance with Clause 710 of the Standard Specifications by use of the sound salvaged material together with any necessary additional material where all such materials shall comply with Section 7 of the Standard Specifications.



**711 GABIONS**

Where instructed by the Engineer the Contractor will install gabions as protection works to washout areas or bridge Piers and or Abutments. Gabions shall be constructed in accordance with Clause 711 of the Standard Specification.

In cases where existing gabions have been damaged, the Contractor shall identify them and notify the Engineer for his agreement of the extent of the Work required and his approval and instructions to proceed with the Works.

**712 RIP-RAP PROTECTION WORK**

Quarry waste or similar approved material shall be used to backfill scoured and eroded side, outfall and cut-off drains. The material shall be compacted to form a flat or curved surface preparatory to stone pitching of drainage channels, existing and new scour checks as directed by the Engineer.

The surface to receive the pitching shall be compacted and trimmed to slope and the stone hand laid, interlocked and rammed into the material to give an even finished surface. The interstices of the Pitching shall be rammed with in-situ material. The in-situ material immediately behind the pitching shall be compacted to minimum density of 100% MDD compaction (AASHTO T.99)

## **SECTION 9 - PASSAGE OF TRAFFIC**

### **901 SCOPE OF THE SECTION**

The contractor shall so arrange his work to ensure the safe passage of the traffic at all times and if necessary construct and maintain an adequate diversion for traffic complete with all the necessary road traffic signs.

The contractor shall provide to the satisfaction of the Engineer adequate warning signs, temporary restriction signs, advance warning signs, barriers, temporary bumps and any other device and personnel equipped with two way radios to ensure the safe passage of traffic through the works.

When carrying out the works the contractor shall have full regard for the safety of all road users.

The contractor shall also provide sign posts and maintain to the satisfaction of the Engineer all deviations necessary to complete the works. The contractor should allow for the costs of complying with the requirements of this clause in his rates.

The contractor will be deemed to have inspected the site and satisfied himself as to the adequacy of his bid for these works and no additional payments will be made to the contractor for any expenditure on traffic control or the provision of deviations. The Employer shall not be liable for inadequate prior investigations of this nature by the contractor.

### **903 MAINTENANCE OF EXISTING ROAD AHEAD OF THE WORKS**

The contractor shall maintain the existing bridge and its approaches to ensure smooth flow of traffic.

### **906 PASSAGE OF TRAFFIC THROUGH THE WORKS**

The contractor shall not allow any traffic through the works during construction. Necessary signs should be provided to ensure proper direction to the motorist is provided.

Any damage caused by passing traffic through the works shall be made good at the contractor's own cost.

### **907 SIGNS, BARRIERS AND LIGHTS**

Contractor shall provide signs, barriers and lights as shown in the drawing in Book of Drawings at the locations where the traffic is being carried off the existing road to the deviation and back again to existing road. The contractor shall provide ramps and carry out any other measures as instructed by the Engineer to safely carry traffic from the road to deviation.

Contrary to what has been specified in this clause the road signs provided shall be fully reflectorised and in conformity with clause 9.1 of the “Manual for Traffic Signs in Kenya Part II”.

**909 ASSISTANCE TO PUBLIC AND DEVIATION OF PUBLIC TRAFFIC**

In addition to provision of clause 909, the contractor shall maintain close liaison with the relevant authorities to clear any breakdown or accident vehicles from the deviations and the main road, in order to maintain smooth and safe flow of the traffic.

**912 MEASUREMENT AND PAYMENT**

No provision is provided. The motorist should utilise the existing Bailey Bridge.

## **SECTION 17 - CONCRETE WORKS**

### **1703 (C) FORMWORK FOR CONCRETE**

This work shall consist of all temporary moulds for forming the concrete for bridge foundations, piers, abutments, beams and decks and culvert walls and slabs. Unless otherwise directed by the Engineer all formworks shall be removed on completion of construction.

#### **Materials**

Forms shall be made of wood or metal and shall conform to the shape, lines and dimensions shown on the Drawings.

All timber shall be free from holes, loose material, knots, cracks, splits and warps or other defects affecting the strength or appearance of the finished structure.

Release Agents – Release agents shall be either neat oils containing a surface activating agent, cream emulsions, or chemical agents to be approved by the Engineer.

#### **Construction Method**

##### **(i) Formworks**

Formworks shall be designed to carry the maximum loads that may be imposed, and so be rigidly constructed as to prevent deformation due to load, drying and wetting, vibration and other causes. After forms have been set in correct location, they shall be inspected and approved by the Engineer before the concrete is placed.

If requested, the contractor shall submit to the Engineer working drawings of the forms and also, if requested, calculations to certify the rigidity of the forms.

Unless otherwise described in the Contract, all form joints for exposed surfaces of concrete shall form a regular pattern with horizontal and vertical lines continuous throughout each structure and all construction joints shall coincide with these horizontal and vertical lines. 75mm diameter galvanised steel pipes for weep holes shall be arranged as shown on the Drawings.

Unless otherwise specified, formwork shall be designed to form chamfers at all external corners whether or not such chamfers are shown on the Drawings to prevent cracks and other damage from arising.

The inside surface of forms shall be cleaned and coated with a releasing agent to prevent adhesion of the concrete. Release agents shall be applied strictly in accordance with the manufacturer's detailed instructions. The release agent shall be applied to the formwork prior to erection.

Release agent must not come into contact with reinforcement. Immediately before concrete is placed, the forms shall be thoroughly cleaned and freed from sawdust, shavings, dust, mud or other debris by hosing with water. Temporary openings shall be provided in the forms to drain away the water and rubbish.

**(ii) Scaffolding**

All scaffolding required to support the forms shall be designed and constructed to provide necessary rigidity and support the loads without appreciable deflection or deformation.

Details, plans and structural and flexural calculations for scaffolding shall be submitted to the Engineer for approval, but in no case shall the contractor be relieved of his responsibility for the results obtained by use of these plans, etc.

**(iii) Removal of formwork**

The time at which the formwork should be removed shall be the Contractor's responsibility but the forms shall not be removed until the concrete strength has reached 25N/mm<sup>2</sup>.

**Measurement and Payment**

Payment shall be made according to Section 8 of the Standard Specification of Roads and Bridges Construction.

**1703(D) CONCRETE WORKS FOR CULVERTS AND BRIDGES**

This work shall consist of furnishing, mixing, delivering and placing of the concrete for the construction of bridge foundations, piers, abutments, beams and decks and culvert walls and slabs, in accordance with these Specifications and in conformity with the requirements shown on the Drawings.

Concrete class 25/20 shall be used for culvert walls and slabs and bridge foundations, piers and beams. Concrete class 30/20 shall be used for bridge deck.

**(a) Concrete Materials**

- i) **Cement:** Cement shall be of Portland type and shall conform to the requirements of KS 1725:2001 or equivalent.

The contractor shall select only one type or brand of cement or others. Changing of type or brand of cement will not be permitted without a new mix design approved by the Engineer. All cement is subject to the Engineer's approval, however, approval of cement by the Engineer shall not relieve the Contractor of the responsibility to furnish concrete of the specified compressive strength.

Conveyance of cement by jute bags shall not be permitted. Storage in the Contractor's silo or storehouse shall not exceed more than two (2) months, and age of cement after manufacture at mill shall not exceed more than

four (4) months. The Contractor shall submit to the Engineer for his approval the result of quality certificate done prepared by the manufacturer.

Whenever it is found out that cement have been stored too long, moist, or caked, the cement shall be rejected and removed from the project.

**(b) Aggregates**

Fine and coarse aggregates must be clean, hard, strong and durable, and free from absorbed chemicals, clay coating, or materials in amounts that could affect hydration, bonding, strength and durability of concrete.

Grading of aggregates shall conform to the following requirements:

**(i) Grading of Fine Aggregates**

Sieve Size	Percentage by Weight Passing
10 mm	100
5 mm	89-100
2.5 mm	60-100
1.2 mm	30-100
0.6 mm	15- 54
0.3 mm	5- 40
0.15 mm	0 - 15

**(ii) Grading of Coarse Aggregates**

Size of Coarse Aggregate	Amounts finer than each standard sieve percentage by weight						
	40	30	25	20	15	10	5
2.5	100	-	-	90-100	-	30-69	0-10
	-						

Other requirements for aggregates are as follows:

**(iii) Fine Aggregates**

- Fitness Modulus, AASHTO M-6 : 2.3 – 3.1
- Sodium Sulphate Soundness, AASHTO T104 : Max. 10% loss
- Content of Friable Particles AASHTO 112 : Max 1% by weight
- Sand Equivalent, AASHTO T176 : Min. 75

**(iv) Coarse Aggregate**

- Soft Fragment and shale, AASHTO M80 : Max. 5% by weight
- Thin and elongated Pieces, AASHTO M80 : Max. 15%

**(v) Water**

All sources of water to be used with cement shall be approved by the Engineer. Water shall be free from injurious quantities of oil, alkali, vegetable matter and salt as determined by the Engineer.

**(vi) Admixture**

Only admixture, which have been tested and approved in the site laboratory through trial mixing for design proportion shall be used. Before selection of admixture, the Contractor shall submit to the Engineer the specific information or guarantees prepared by the admixture supplier. The contractor shall not exclude the admixture from concrete proportions.

**(c) Concrete Class 25/20**

Concrete class 25/20 shall be used for culvert walls and slabs. The requirements of these Concrete class 25/20 are provided as follows unless otherwise the Engineer will designate any alteration.

<b>Requirement</b>	<b>Class 25/20</b>
Design compressive strength (28 Days)	25N/mm <sup>2</sup>
Maximum size of coarse aggregates	20mm
Maximum water/cement ratio	45% with slump of 80mm

**(d) Proportioning Concrete**

The Contractor shall consult with the Engineer as to mix proportions at least thirty (30) days prior to beginning the concrete work. The actual mix proportions of cement, aggregates, water and admixture shall be determined by the Contractor under supervision of the Engineer in the site laboratory.

The Contractor shall prepare the design proportions which has 120% of the strength requirement specified for the designated class of concrete.

No class of concrete shall be prepared or placed until the Engineer has approved its job-mix proportions.

**(e) Concrete Work**

**(i) Batching**

Batching shall be done by weight with accuracy of:

- Cement : ½ percent
- Aggregate : ½ percent
- Water and Admixture : 1 percent.

Equipment should be capable of measuring quantities within these tolerances for the smartest batch regularly used, as well as for larger batches.

The accuracy of batching equipment should be checked every month in the presence of the Engineer and adjusted when necessary.

**(ii) Mixing and delivery**

Slump of mixed concrete shall be checked and approved at an accuracy of +25mm against designated slump in these specifications.

**(iii) Concrete in hot weather**

No concrete shall be placed when the ambient air temperature is expected to exceed thirty three degrees celsius (33<sup>0</sup>c) during placement operations.

**(iv) Concreting at night**

No concrete shall be mixed, placed or finished when natural light is insufficient, unless an adequate approved artificial lighting system is operated, such night work is subject to approval by the engineer.

**(v) Placing**

In preparation of the placing of concrete, the interior space of forms shall be cleaned and approved by the engineer prior to placing concrete. All temporary members except tie bars to support forms shall be removed entirely from the forms and not buried in the concrete. The use of open and vertical chute shall not be permitted unless otherwise directed by the engineer.

The Contractor shall provide a sufficient number of vibrators to properly compact each batch immediately after it is placed in the forms.

**(f) Measurement and Payment**

Measurements for the Concrete class 25/20 of culvert walls and slabs shall be made in cubic metres for the walls and slabs actually constructed, measured from their dimensions shown on the Drawings. Payment for the Concrete Works (Class 25/20) of culvert walls and slabs shall be the full compensation for furnishing all materials of the concrete mixing, delivering, placing and curing the concrete, equipment and tools, labour, formwork and other incidentals necessary for the completion of the work in accordance with the Drawings and these Specifications and as directed by the Engineer.



## **SECTION 20 - ROAD FURNITURE**

### **2001 ROAD RESERVE BOUNDARY POSTS**

Road reserve boundary posts shall be provided as directed by the Engineer and in compliance with Standard Specification clause 2001. They shall be placed at 50m. Intervals along the boundary of the road reserve.

### **2004 PERMANENT ROAD SIGNS**

Permanent Road Signs shall be provided as directed by the Engineer and in compliance with the requirements of the "Manual for Traffic Signs in Kenya" Part II and standard Specification clause 2004.

### **2006 GUARDRAILS**

Contrary to the Standard Specification, guardrail posts shall be concrete 200 mm diameter set vertically at least 1.2m into the shoulder as directed by the Engineer. Spacer blocks shall also be made of concrete.

Beams for guardrails shall be "Armco Flexbeam" or similar obtained from a manufacturer approved by the Engineer.

### **2011 MEASUREMENT AND PAYMENT**

#### **Road reserve boundary posts**

Road reserve boundary posts shall be measured by the number erected

#### **Permanent road signs**

Permanent road signs shall be measured by the number of each particular size erected.

#### **Road marking**

Road markings in yellow or white material shall be measured in square metres calculated as the plan area painted.

#### **Guardrail**

Guardrail shall be measured by the metre as the length of the guardrail constructed.

**SECTION 22 - DAYWORKS**

**2202 Measurements and Payment**

(a) Plant

Where items of major plant listed in the schedule of Dayworks are specified by type (e.g. Concrete mixer etc) the power rating of such items of plant are provided by the Contractor shall not be lower than the power ratings of such plant manufactured within the last two years prior to date of Tender. Any item of major plant employed upon Dayworks that has a power rating lower than specified above shall be paid for at rates lower than those in the schedule of Dayworks. The reduction in the rate payable shall be in proportion to the reduction in power rating below that specified above.

(b) Materials – units of measure

(c) Labour - Mandays

**SECTION 11: BILLS OF QUANTITIES**

**PROPOSED CONSTRUCTION OF KENYATTA ROAD-RIURIRO  
BRIDGE  
(BRIDGE SPAN - 10M, WIDTH - 7.8 ABT Ht.4M)  
JUJA SUB COUNTY**

**BILL NO 1: GENERAL**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
					SHS CTS
1.01	P.C. Sum of Kshs. 500,000 for Engineers use in supervision works	L/Sum	1		500,000.00
1.02	Include a %age of PC sum in item 1.01 for profit & overheads	% of 1.01			
1.03	Provide & erect 2No publicity signs as directed by the Engineer.	No	2		
1.04	Allow a PC sum of Kshs.150,000 for erection of a site huts	No	1		150,000.00
1.05	Include a % of PC Sum in item 1.04 for profit and overheads	% of 1.04			
1.06	Allow a PC sum of Kshs. 100,000 for material testing	L/Sum	1		100,000.00
1.07	include a %age of PC sum in item 1.06 for profit and overheads	% of 1.06			
	<b>TOTAL CARRIED TO SUMMARY</b>				



**BILL NO 5: EARTHWORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
					SHS CTS
5.01	Cut to spoil in soft material as directed by the Engineer	M <sup>3</sup>	880		
5.02	Cut to Fill in hard material	M <sup>3</sup>	110		
5.03	Provide, place and compact rockfill as per specifications and to locations directed by the Engineer	M <sup>3</sup>	1060		
5.04	Fill in soft material and compact in layers n.e. 300mm to 95% MDD (AASHTO T99)	M <sup>3</sup>	3170		
5.05	Provide, place and compact natural gravel material subgrade in new road as directed by the Engineer	M3	715		
5.06	Grassing including providing 100mm topsoil mixed with manure and establishing the grass sprigs as per specifications	M2	1780		
<b>TOTAL CARRIED TO SUMMARY PAGE</b>					

**BILL NO 7: EXCAVATION AND FILLING FOR STRUCTURES**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
					SHS CTS
7.01	Excavate in soft material for structures	M <sup>3</sup>	210		
7.02	Backfill and compact with selected material the excavated area in preparation to receive concrete	M <sup>3</sup>	100		
7.03	Backfill with selected porous material behind the abutments and compact as directed by the Engineer	M <sup>3</sup>	70		
7.04	Backfill with approved fill material behind the abutments and compact in layers n.e 200mm to 95% MDD(AASSTO T99) or as directed by the Engineer	M <sup>3</sup>	140		
7.05	River training in soft material	M <sup>3</sup>	300		
7.06	Excavate for gabions in soft material	M <sup>3</sup>	100		
<b>TOTAL CARRIED TO SUMMARY PAGE</b>					

**BILL NO. 8: CULVERTS AND DRAINAGE WORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
					SHS CTS
8.01	Excavate in soft material for side drains, culverts and dispose as directed by the engineer	M3	150		
8.02	Provide and lay 900mm I.D. precast concrete pipe	M	24		
8.03	Provide and place Concrete C15 for concrete pipe surrounds	M <sup>3</sup>	20		
8.04	Provide and place gabion boxes size 2 x 1 x 1 tripple twisted (macaferi type) wire gauge 3.0mm or gauge 10½ as protection works	No	80		
8.05	Provide and place rockfill to gabions in item 8.04	M <sup>3</sup>	160		
	<b>TOTAL CARRIED TO SUMMARY PAGE</b>				



**BILL NO. 9: PASSAGE OF TRAFFIC**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT SHS CTS
9.01	Provide temporary pedestrian crossing during construction including maintenance during the construction period	L/Sum	1		
<b>TOTAL CARRIED TO SUMMARY PAGE</b>					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT SHS CTS
12.01	<p><b>BILL NO. 12: NATURAL MATERIAL SUB BASE &amp; BASE</b></p> <p>Provide, deliver, place and compact approved natural gravel material sub base on the box culvert approaches new road</p>	M3	360		
	<b>TOTAL CARRIED TO SUMMARY PAGE</b>				

	<b>BILL NO. 17: CONCRETE WORKS</b>				
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
					SHS CTS
	<b>CONCRETE</b>				
	Provide, place and compact the following classes of concrete as specified and directed by the engineer				
17.01	Class 15/20 for blinding	M3	10		
17.02	Class 25/20 for structures	M3	108		
17.03	Class 30 for beams	M3	20		
	<b>FORMWORK</b>				
	Provide, erect and afterwards dismantle and remove the items specified				
17.04	Formwork (vertical and horizontal) to class F3 finish	M2	580		
	<b>REINFORCEMENT</b>				
	Provide, bend and fix into position reinforcement steel bars as shown on drawings or as directed by the Engineer.				
17.04	REBARS of high yield, high bond strength to BS 4461 of size 12mm And below	Ton	6		
17.05	As item 17.04 above but size 16mm and above	Ton	8		
	<b>TOTAL CARRIED TO SUMMARY PAGE</b>				

**BILL NO. 21: MISCELLANEOUS BRIDGEWORKS**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					SHS	CTS
21.01	Provide and fix into position standard guardrails including posts, bolts, nut and washers as instructed by the Engineer	M	240			
<b>TOTAL CARRIED TO SUMMARY PAGE</b>						

**SUMMARY**

ITEM	DESCRIPTION				AMOUNT	
					SHS	CTS
1	GENERAL					
4	SITE CLEARANCE					
5	EARTHWORKS					
7	EXCAVATION AND FILLING FOR STRUCTURES					
8	CULVERTS AND DRAINAGE WORKS					
9	PASSAGE OF TRAFFIC					
12	NATURAL MATERIAL SUB BASE & BASE					
17	CONCRETE WORKS					
21	MISCELLANEOUS BRIDGEWORKS					
	<b>Sub total 1</b>					
	<b>Add 10% of Sub-Total 1 of Bills as Provisional sum for contingencies to be expended in whole or in part or deleted as directed by the Engineer</b>					
	<b>Sub total 2</b>					
	Add 16% VAT to subtotal 2					
	<b>GRAND TOTAL</b>					

## PREAMBLE TO BILL OF QUANTITIES

1. The Bills of Quantities forms part of the Contract Documents and are to be read in conjunction with the Instructions to Bidders, Conditions of Contract Parts I and II, Specifications and Drawings.
2. The brief description of the items in the Bills of Quantities is purely for the purpose of identification, and in no way modifies or supersedes the detailed descriptions given in the conditions of Contract and Specifications for the full direction and description of work and materials.
3. The Quantities set forth in the Bills of Quantities are estimated , representing substantially the work to be carried out, and are given to provide a common basis for bidding and comparing of Bids. There is no guarantee to the Contractor that he will be required to carry out all the quantities of work indicated under any one particular item or group of items in the Bill of Quantities. The basis of payment shall be the Contractor's rates and the quantities of work actually done in fulfilment of his obligation under the Contract.
4. The prices and rates inserted in the Bills of Quantities will be used for valuing the work executed, and the Engineer will only measure the whole of the works executed in accordance with this Contract.
5. A price or rate shall be entered in ink against every item in the Bills of Quantities with the exception of items that already have Provisional sums affixed thereto. The bidders are reminded that no “nil” or “included” rates or “lump-sum” discounts will be accepted. The rates for various items should include discounts if any. Bidders who fail to comply will be disqualified.
6. Provisional sums (including Dayworks) in the Bills of Quantities shall be expended in whole or in part at the discretion of the Engineer in accordance with Sub-Clause 52.4 and Clause 58 of Part I of the Conditions of Contract.
7. The price and rates entered in the Bills of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Constructional plant to be used, labour, insurance, supervision, compliance testing, materials, erection, maintenance of works, overheads and profits, taxes and duties together with all general risks, liabilities and obligations set out or implied in the Contract, transport, electricity and telephones, water, use and replenishment of all consumables, including those required under the contract by the Engineer and his staff.
8. Errors in the pricing of the Bills of Quantities will be corrected in accordance with Clause (28) of instructions to bidders.
9. The above should be followed for section A and B in the Bill of Quantities except that for Section A, where the following should be noted:-

- (a) That the materials for works up to base level of the box culvert are available except cement. These materials are at different locations and therefore cost of transporting and processing (working with) them should be taken into account, notwithstanding the taxes, that contractor's overheads and profits.
- (b) The rate for supply and delivery of cement is given in the Bill of Quantities Bill No. 22 – Dayworks.
- (c) That the rate of processing concrete with the available materials is given in a separate item.

**SECTION 12: DRAWINGS**



## **DRAWINGS**

One set of four drawings for the bridge is provided. One of the drawings shows the dimensions of the bridge while the other three show reinforcement details.

The drawings should be read carefully and understood before any works commences. Questions arising thereof should be directed to the Engineer for clarification(s). The construction details should be as shown in the drawings. No change in the dimensions of the bridge should be done by the contractor.

The wingwalls of the bridge may be varied, one, to direct in the river into the bridge and two, to accommodate the fill material over the bridge. This shall be directed on site by the Engineer.

The drawings form part of the contract and should be read in conjunction with the special specifications.