



KENYA RURAL ROADS AUTHORITY
P. O. BOX 48151 – 00100
NAIROBI

TENDER FOR
SPOT IMPROVEMENT OF BISSIL - ORMOTIOK
ROAD

TENDER No. KeRRA/011/39/66/2018-2019

MARCH, 2019

The Engineer

**DIRECTOR - ROADS ASSET MANAGEMENT
(RAM)
KENYA RURAL ROADS AUTHORITY,
P.O. BOX 48151-00100,
NAIROBI.**

The Employer

**DIRECTOR GENERAL,
KENYA RURAL ROADS AUTHORITY,
P.O. BOX 48151-00100,
NAIROBI.**

INVITATION TO TENDER

1. The Kenya Rural Roads Authority (KeRRA) is a State corporation established under the Kenya Roads Act, 2007, with the responsibility for management, development, rehabilitation and maintenance of rural roads.
2. The Authority hereby invites qualified contractors to bid for the Tender for Spot Improvement of Bissil – Ormotiok in Kajiado County to be financed by the Government of Kenya through the Fuel Levy Fund.
3. Bidders are requested to download full details of the advertisement and tender documents from the www.tenders.go.ke and the Authority's website www.kerra.go.ke with effect from 29th March, 2019.
4. **Mandatory Pre-bid site visits** shall be held on 4th April, 2019 at 10:00 a.m starting from the KeRRA Kajiado Regional Manager's Office. Bidders must ensure the Site Visit Certificates are signed by the respective Regional Manager.
5. The following **MUST** be submitted with your bid: -
 - a. Registration and Practicing Certificate from National Construction Authority with "NCA 4, 5, 6"
 - b. Similar previous experience
 - c. Equipment holding
 - d. Professional and Technical personnel
 - e. Turnover and liquid assets supported by audited accounts for the previous (3) years
 - f. Current work load and status
 - g. Litigation history
 - h. VAT registration/ Pin registration
 - i. Valid Tax compliance certificate
 - j. Proof of Bank Account in the Tenderers' Name
 - k. Presentation of the entire tender document must be in a logical table of content and page numbers should be serialized
 - l. Curriculum Vitae (CV) of the proposed key staff.
 - m. Certified copies of certificates and testimonials of the proposed key staff.
 - n. Properly filled, signed and stamped confidential Business Questionnaire
 - o. Properly filled, signed and stamped Declaration Form
 - p. Certificate of Incorporation by Registrar of Companies. (Certified by Commissioner of Oaths)
 - q. Current CR12 Certificate from the Registrar of Companies (Certified by Commissioner of Oaths) including Identification Documents for the Directors
 - r. Submit a written power of attorney authorizing the signatory of the bid to commit the bidder.
 - s. Current Single Business permit. (Certified by Commissioner of Oaths)
6. Completed tenders should be submitted in plain sealed envelopes clearly marked "with the Tender Name and Tender Number and addressed to;
**The Director General
Kenya Rural Roads Authority
Blue Shield Towers, 6th floor
P.O BOX 48151-00100
NAIROBI.**
7. The Tender documents should be deposited in the Tender Box on the 6th floor, Blue Shield Towers, Hospital Road Upper Hill, Nairobi so as to be received on or before 16th April, 2019 at 11.00 a.m.
8. Opening of the tenders will take place immediately thereafter at the Conference Room Blue Shield Towers 6th Floor Hospital Road, Upper Hill, Nairobi in the presence of Bidders' or their representatives who wish to attend.

SPOT IMPROVEMENT OF BISSIL – ORMOTIOK ROAD

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SECTION 1: FORM OF -BID SECTION

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:

SPOT IMPROVEMENT OF BISSIL – ORMOTIOK ROAD

TO: The Director General,
Kenya Rural Roads Authority
P. O. Box 48151 - 00100,
NAIROBI, KENYA.

Sir,

1. Having examined the Conditions of Contract, Specifications, Bills of Quantities, and Drawings 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 and Drawings 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 hundred and eighty (180) 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 BID 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 Bided.

Dated thisDay of20.....

Signature.....in the capacity of

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

(Address of Bidder).....

(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 (Bid Security Only)		Kshs 500,000.00
Amount of Performance Security (Unconditional Bank Guarantee)	10.1	5 per cent of BID 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. 1,000,000.00
Period for commencement, from Engineer's order to commence	41.1	28 days
Time for completion	43.1	12 (Twelve) months
Amount of liquidated damages	47.1	KShs. 50,000.00 per day
Limit of liquidated damages	47.1	10% of Contract Value
Defects Liability period	49.1	12 (Twelve) months
Percentage of Retention	60.3	10% of Interim Payment Certificate
Limit of Retention Money	60. 3	5% of Contract Price
Minimum amount of interim certificates	60.2	KShs. 5,000,000.00
Time within which payment to be made after Interim Payment Certificate signed by Engineer	60.10	90 days
Time within which payment to be made after Final Payment Certificate signed by Engineer	60.10	90 days
Amount of Advance	60.12	Nil
Advance Payment Security	60.12	N/A
Appointer of Arbitrator/Adjudicator	67.3	The Chartered Institute of Arbitrators (Kenya)
Notice to Employer and Engineer	68.2	<p>The Employers address is: Director General, Kenya Rural Roads Authority, P.O. Box 48151, 00100 <u>NAIROBI</u></p> <p>The Engineer's address is: Director – Roads Asset Management (RAM) Kenya Rural Roads Authority, P.O. Box 48151- 0100 <u>NAIROBI</u></p>

SECTION 3: FORM OF BID SECURITY

FORM OF BID SECURITY

Bid security from an approved Insurance Company by Public Procurement and Asset Disposal Act 2015 or a bank guarantee is acceptable.

Note: The bidder shall complete only this form of Bid Security. 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. **(NOTE: ALTERING THE TEXT IN THIS FORM OF BID SECURITY WILL RESULT IN DISQUALIFICATION)**

WHEREAS [*Name of bidder*].....

.....

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

For the proposed **SPOT IMPROVEMENT OF BISSIL – ORMOTIOK ROAD**
hereinafter called “The Bid”

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

.....

.....

of [*Name of Country*]

.....

having our registered offices at

.....

(hereinafter called the Bank/Insurance Company) are bound unto the Director General, Kenya Rural Roads Authority (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/Insurance Company binds itself, its successors and assigns by these presents.

Signed for the said Bank/Insurance Company this.....day of20.....

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 Bidders 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 forty-five (45) 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.

AUTHORIZED SIGNATURE AND SEAL OF THE BANK/INSURANCE COMPANY

.....DATE

NAME OF SIGNATORY

.....

TITLE OF SIGNATORY

.....

NAME OF THE WITNESS

.....

SIGNATURE OF THE WITNESS: DATE

ADDRESS OF THE WITNESS

SECTION 4: INSTRUCTIONS TO BIDDERS

SECTION 4: INSTRUCTIONS TO BIDDERS

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CONDITIONS OF BID AND INSTRUCTIONS TO BIDDERS

B. 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 BID and their derivatives (bidder/Bidder, bid/Bided, bidding/Bidding etc) are synonymous, and day means calendar day. Singular also means plural.

2 SOURCE OF FUNDS

- 2.1 The source of funding is the GoK (Road Maintenance Levy Fund)
- 2.2 The **Engineer’s Estimate** is **Kshs 59,862,000.00**

3 CORRUPT PRACTICES

- 3.1 The Government requires that the bidders, suppliers, sub-contractors and supervisors observe the highest standard of ethics during the procurement and execution of such contracts. in this pursuit of this policy, the government;
 - (a) Defines for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in the execution, and
 - (ii) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the Employer of the benefits of free and open competition
 - (b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract, and
 - (c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a government contract if it at any times determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government financed contract.

4 ELIGIBLE BIDDERS

- 4.1 This invitation to bid is open to all Bidders who are legally registered or incorporated in the Republic of Kenya as of the time of bid submission. Registration with Kenya Rural Roads Authority as a Contractor is mandatory.
- 4.2 Bidders shall not have a conflict of interest. Bidders shall be considered to have conflict of interest, if they participated as a consultant in the preparation of the design, documentation or technical specifications of the works that are the subject of this bidding other than as far as required by the Employer.
- 4.3 A firm that is under a declaration of ineligibility by the Employer in accordance with clause 3, at the date of submission of the bid or thereafter, shall be disqualified.
- 4.4 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.

5 QUALIFICATION OF THE BIDDER

5.1 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.

5.2 As a minimum, Bidders shall provide latest information set out below:

- (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 Registration with National Construction Authority for the applicable class valid at the date of tender submission
- (f) Certificate of Incorporation
- (g) VAT Registration Certificate
- (h) Valid current Tax compliance certificate
- (i) PIN registration certificate

5.3 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.

6 ONE BID PER BIDDER

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

7 COST OF BIDDING

7.1 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.

8 SITE VISIT

8.1 The bidder is informed that pre-BID site visit is mandatory and he/she shall 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.

8.2 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.

8.3 The Employer will conduct a Site Visit, on **4th April 2019 starting at the Regional Office Kajiado at 10am. The site visit is mandatory for all bidders. Failure to attend the site visit by any bidder will lead to disqualification of his /her bid.**

C. BIDDING DOCUMENTS

9 CONTENTS OF BIDDING DOCUMENTS

9.1 The set of documents comprising the BID includes the following together with any addenda issued in accordance with Clause 11:

- (a) Invitation to Bid
- (b) Instructions to bidders
- (c) Qualification Criteria
- (d) Conditions of Contract - Part II
- (e) Conditions of Contract - Part I
- (f) Standard Specifications
- (g) Special Specifications
- (h) Form of Bid, Appendix to Form of Bid and Bid Security
- (i) Bills of Quantities
- (j) Schedules of Supplementary information
- (k) Form of Contract Agreement
- (l) Form of Performance Security
- (m) Drawings
- (n) BID addenda (BID notices)

9.2 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.

10 CLARIFICATION OF BIDDING DOCUMENTS

10.1 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.

10.2 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.

11 AMENDMENT OF BIDDING DOCUMENTS

11.1 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.

11.2 The Addendum thus issued shall be part of the bidding documents pursuant to Sub-Clause 10.1 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.

11.3 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 the submission of bids in accordance with Clause 21.

D. PREPARATION OF BIDS

12 LANGUAGE OF BID

- 12.1 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.

13 DOCUMENTS COMPRISING THE BID

- 13.1 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) Work Methodology
 - (e) Schedules of information
 - (f) Qualification Criteria
 - (g) Any other materials required to be completed and submitted in accordance with the Instructions to Bidders embodied in these bidding documents.
- 13.2 These Forms, Bills of Quantities, work methodology and Schedules provided in these bidding documents shall be used without exception (subject to extensions of the Schedules in the same format).

14 BID PRICES

- 14.1 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.
- 14.2 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.
- 14.3 All duties, taxes (excluding VAT) and other levies payable by the Contractor under the Contract, or for any other cause as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total Bid Price submitted by the bidder.
- 14.4 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.

15 CURRENCIES OF BID AND PAYMENT

- 15.1 Bids shall be priced in Kenya Shillings.

16 BID VALIDITY

- 16.1 The bid shall remain valid and open for acceptance for a period of 180 days from the specified date of bid opening specified in Clause 21.
- 16.2 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 17 in all respects.

17 BID SECURITY

- 17.1 The bidder shall furnish, as part of his bid, a bid security in the amount shown in the Appendix to Form of Bid.
- 17.2 The bid security shall be in the form of unconditional bank guarantee from a reputable bank selected by the bidder and located in Kenya, or insurance bond issued by a bonding or insurance company acceptable to the Employer and approved by the PPOA. The format of the Bid Security shall be in accordance with bid security included in Section 1. The bid security shall remain valid for a period of 45 days beyond the original validity period for the bid, and beyond any period of extension subsequently requested under Sub-Clause 16.2.
- 17.3 Any bid not accompanied by an acceptable bid security will be rejected by the Employer as non-responsive.
- 17.4 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.
- 17.5 The bid security of the successful bidder will be discharged upon the bidder signing the Contract Agreement and furnishing the required performance security.
- 17.6 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 29.2 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.

18 NO ALTERNATIVE OFFERS

- 18.1 The bidder shall submit one offer, which complies fully with the requirements of the bidding documents.
- 18.2 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.
- 18.3 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.

19 FORMAT AND SIGNING OF BIDS

- 19.1 The bidder **shall** prepare one original of the documents comprising the bid as described in Clause 13 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 one copy of the bid clearly marked “COPY”. In the event of discrepancy between them, the original shall prevail.
- 19.2 The original and copy 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 5.1(a). 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.

E. 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 be:
- (a) addressed to the Employer at the address provided in the Appendix to Form of Bid.
 - (b) 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 20.2 not later than the time and date specified in the letter of invitation to bid or as amended in addenda.
- 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 11 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 28.1.
- 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 17 may result in the forfeiture of the bid security pursuant to Sub-Clause 17.6.

F. BID OPENING AND EVALUATION

24 BID OPENING

- 24.1 The Employer will open the bids, including withdrawals and modifications made pursuant to Clause 24, in the presence of bidders' designated representatives who choose to attend at the time, date and location specified in the letter of invitation to bid or as amended in the addenda. 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 23.
- 24.4 The Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with Sub-Clause 25.3.
- 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

- 25.1 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 29.
- 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

- 27.1 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.
- 27.2 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 BID 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.
- 27.3 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 BID 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 BID Sum, shall be corrected in such a way that the BID 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 BID in such a manner as may be agreed or directed by the Engineer failing which the BID may be absolutely rejected and the Bid Security forfeited in accordance with Sub-Clause 17.6 . Any discrepancy that results in variation of more than 15% of the corrected figure shall result in rejection of the Tender.

29 EVALUATION AND COMPARISON OF BIDS

- 29.1 The Employer will then evaluate and compare only the bids determined to be substantially responsive in accordance with Clauses 28 and 29. Any variation, deviation and alternative offers will be rejected and shall not be taken into account in bid evaluation.
- 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.
- 29.3 Preference shall be applied in accordance with clause 157 of the Public Procurement and Asset Disposal Act 2015 and Clause 28 of the accompanying regulations of 2006 as revised in legal notice No. 58 of 8th June 2011.

G. AWARD OF CONTRACT

30 AWARD

- 30.1 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 30, provided that such bidder has been determined to be (a) eligible in accordance with the provisions of Sub-Clause 4.1, and (b) qualified in accordance with the provisions of Clause 5.

31 EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

- 31.1 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.

32 NOTIFICATION OF AWARD

- 32.1 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").
- 32.2 At the same time that the Employer notifies the successful bidder that his bid has been accepted, the Employer shall notify the other bidders that their bids have been unsuccessful and that their bid securities will be returned as promptly as possible, in accordance with Sub-Clause 17.4.

33 SIGNING OF AGREEMENT

- 33.1 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.

After 14 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 PERFORMANCE SECURITY

- 34.1 After 14 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.
- 34.2 The successful bidder shall provide a performance security in the form of an Unconditional Bid Security from a reputable bank located in Kenya.
- 34.3 Failure by the successful Bidder to lodge the required Performance Guarantee within 60 days of the receipt of the Letter of Acceptance shall constitute sufficient grounds for the annulment of the Award and forfeiture of the Bid Surety; in which event the Employer may make the award to another bidder or call for new bids.

35 CONTRACT EFFECTIVENESS

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

SECTION 5: QUALIFICATION CRITERIA

SECTION 5: QUALIFICATION CRITERIA

This Section contains all the factors, methods and criteria that the Employer shall use to evaluate applications. The information to be provided in relation to each factor and the definitions of the corresponding terms are included in the respective Application Forms.

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Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
1. Eligibility							
1.1	Eligibility	Nationality in accordance with Sub-Clause 4.1.	Must meet requirement	Existing or intended JV must meet requirement	Must meet requirement	N / A	Section 7, Schedule 1
1.2	Conflict of Interest	No conflicts of interest in Sub-Clause 4.2.	Must meet requirement	Existing or intended JV must meet requirement	Must meet requirement	N / A	Section 7, Schedule 1
1.3	Employer Ineligibility	Not having been declared ineligible by the Employer, as described in Sub-Clause 4.3.	Must meet requirement	Existing JV must meet requirement	Must meet requirement	N / A	Section 7, Schedule 1
1.4	Incorporation & Registration	Pursuant to sub clause 4.1 the following shall be provided; - Certified Copy of Certificate of incorporation to show that the applicant is a registered company and legally authorised to do business in Kenya - Proof of registration with the National Construction Authority Category NCA 4,5 or 6 for Road Works.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Section 7, Schedule 1

Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
2. Historical Contract Non-Performance							
2.1	History of Non-Performing Contracts	Non-performance of a contract did not occur within the last five (5) years prior to the deadline for application submission based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract, and where all appeal instances available to the applicant have been exhausted.	Must meet requirement by itself or as party to past or existing JV	N / A	Must meet requirement by itself or as party to past or existing JV	N / A	Section 7, Schedule 6
2.2	Pending Litigation	All pending litigation shall in total not represent more than thirty percent (30%)] of the Applicant's net worth and shall be treated as resolved against the Applicant.	Must meet requirement by itself or as party to past or existing JV	N / A	Must meet requirement by itself or as party to past or existing JV	N / A	Section 7, Schedule 11
3. Financial Situation							
3.1	Financial Performance	Submission of audited balance sheets or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last Three [3] years to demonstrate: (a) the current soundness of the applicants financial position and its prospective long term profitability, and	Must meet requirement (a) Must meet requirement	N / A (a) N / A	Must meet requirement (a) Must meet requirement	N / A (a)N / A	Section 7, Schedule 10

Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
		(b) capacity to have a cash flow amount of minimum KShs 15 Million equivalent working capital	(b) Must meet requirement	(b) Must meet requirement	(b) N / A	(b) N / A	
3.2	Average Annual Construction Turnover	Minimum average annual construction turnover of KShs 100 Million calculated as total certified payments received for contracts in progress or completed, within the last two [(2)] years	Must meet requirement	Must meet requirement	Must meet ((100-50)/(n-1))% of the requirement where n= number of joint venture members	Must meet fifty (50%) percent of the of the requirement	Section 7, Schedule 10
4. Experience							
4.1	General Construction Experience	Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last three [3] years prior to the applications submission deadline	Must meet requirement	N / A	Must meet requirement	N / A	Section 7, Schedule 6
4.2(a)	Specific Construction Experience	Participation as contractor, management contractor or subcontractor, in at least two (2) contracts within the last three (3) years, each with a value of at least KShs. 20 Million , that have been successfully and substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods/technology or other characteristics as described in Section 6, Scope of Works	Must meet requirement	Must meet requirement	N / A	Must meet requirement for one contract	Section 7, Schedule 6

Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
4.2(b)		b) For the above or other contracts executed during the period stipulated in 4.2(a) above, a minimum construction experience in at least one (1) of: <ul style="list-style-type: none"> - Drainage Structures - Grading works - Gravelling works 	Must meet requirements	Must meet requirement	N / A	Must meet requirement	Section 7, Schedule 6
4.3	Work Methodology	Submission of a brief work methodology in accordance with Sub-Clause 5.3	Should demonstrate understanding of the scope of works and other general requirements	Should demonstrate understanding of the scope of works and other general requirements	N/A	N/A	Section 7, Schedule 12
5. Equipment holding							
5.1	Minimum number of Equipment	The bidder must indicate the minimum of the core plant and equipment considered by the company to be necessary for undertaking the project together with proof of ownership or proof of lease	Must meet the requirement	Must meet requirement	Must meet requirement	N/A	Section 7, Schedule 5

Qualification Criteria							Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Party	One Party	
6. Current Commitment							
6.1	On-going contracts	The total value of current works on the on-going contracts must not exceed KShs. 100 million.	Must meet requirements	Must meet requirements	Must meet ((100-50)/(n-1))% of the requirement where n= number of joint venture members	N/A	Section 7, Schedule 7
7. Site Staff							
1	Site Agent	The site staff shall possess minimum levels set below; Qualification = H.N.D. Civil General Experience = 10 yrs Specific Experience = 7 Yrs	Must meet requirements	Must meet requirements	N/A	N/A	Section 7, Schedule 4
2	Senior Foreman	Qualification = OD.Civil.Eng General Experience = 6 yrs Specific Experience = 4 Yrs					
3	Site Surveyor	Qualification = OD.Survey General Experience = 6 yrs Specific Experience = 4 Yrs					
4	Foremen (2 NO.)	Qualification = OD, Civil Eng General Experience = 6 yrs Specific Experience =4 Yrs					

SECTION 6: CONDITIONS OF CONTRACT

SECTION 6A: 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
E-mail: fidic@pobox.com
WWW: <http://www.fidic.org>

Or

The Association of Consulting Engineers of Kenya
P.O Box 72643-00200
NAIROBI
The Professional Centre
Parliament Road
Nairobi-Kenya
Tel: 2249085
E-mail: acek@mitsuminet.com

SECTION 6B: 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.

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CONDITIONS OF CONTRACT PART II (CONDITIONS OF PARTICULAR APPLICATION)

SUB-CLAUSE 1.1 – DEFINITIONS

Amend this sub-clause as follows:

- (a) (i) The “Employer” is the Government of Kenya, represented by the Director General, Kenya Rural Roads Authority.
- (iv) The “Engineer” is the Director – Roads Asset Management (RAM), Kenya Rural Roads Authority.

(b) (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 “tender” and the word “Appendix to BID” with “Appendix to Tender” and the word “BID documents” with “bidding documents”.

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

- (h) (i) “Materials” means materials and other things intended to form or forming part of the Permanent Works.

SUB-CLAUSE 2.1 - ENGINEER’S DUTIES AND AUTHORITY.

With reference to Sub-Clause 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)
- (c) Determining an extension of time under Clause 44;
- (d) Issuing a variation under Clause 51;
- (e) Fixing rates or prices under Clause 52

SUB-CLAUSE 5.1 - LANGUAGE AND LAW

- a) 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.

SUB-CLAUSE 5.2 – PRIORITY OF CONTRACT DOCUMENTS

Delete the documents listed 1-6 and substitute:

- (1) The Contract Agreement (if completed)
- (2) The Letter Of Acceptance;
- (3) The Bid and Appendix to Bid;
- (4) The Conditions of Contract Part II;
- (5) The Conditions of Contract Part I;
- (6) The Special Specifications;
- (7) The Standard Specification for Road and Bridge Construction, 1986;
- (8) The Drawings;
- (9) The priced Bills of Quantities
- (10) Other documents as listed in the Appendix to form of Bid

SUB-CLAUSE 10.1 - PERFORMANCE SECURITY

Replace the text of Sub-Clause 10.1 with the following:

“The Contractor shall provide security for his proper performance of the Contract within 60 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.

SUB-CLAUSE 10.2 - VALIDITY OF PERFORMANCE SECURITY

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

SUB-CLAUSE 10. 3- CLAIMS UNDER PERFORMANCE SECURITY

Delete the entire sub-clause 10.3.

SUB-CLAUSE 10. 4- COST OF PERFORMANCE SECURITY

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

SUB-CLAUSE 11. 1- INSPECTION OF SITE

In line 17 after “affect his BID” add
“and the Contractor shall be deemed to have based his BID 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 bidding 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 BID shall be deemed to have been priced accordingly.

SUB-CLAUSE 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.

SUB-CLAUSE 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 BID, 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 (14) 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 (1st January)
- Good Friday
- Easter Monday
- Labour Day (1st May)
- Madaraka Day (1st June)
- Idd Ul Fitr
- Mashujaa Day (20th October)
- Jamhuri Day (12th December)
- Christmas Day (25th December)
- Boxing day (26th December)

The Contractor shall also allow per calendar year for a further two 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.

SUB-CLAUSE 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.

SUB-CLAUSE 15.1 - CONTRACTOR'S SUPERINTENDENCE

Add the following at the end of the first paragraph of Sub-Clause 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

SUB-CLAUSE 15.2 - LANGUAGE ABILITY AND QUALIFICATIONS OF CONTRACTOR'S AUTHORISED AGENT

The Contractor's Representative on the site shall be the Site Agent who shall be a Professional Engineer registered by The Engineer's Act, 2011 or have equivalent status approved by the Engineer and shall be able to read and write in English.

The Contractor's Agent or Representative shall have at least 7 years relevant experience as a Professional Engineer i.e. 7years from the date of registration as an Engineer.

SUB-CLAUSE 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:

SUB-CLAUSE 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) The key staff listed below must have academic qualifications from Government recognised institutions or equivalent institutions of the levels set out in Section 5, Part 7.
 - Site Agent
 - Deputy Site Agent
 - Site Engineer
 - Senior Foreman
 - Site Surveyor
- (c) Foremen The key staff listed below must have minimum experience set out in Section 5, Part 7:
 - Site Agent
 - Deputy Site Agent
 - Site Engineer
 - Senior Foreman
 - Site Surveyor
 - Foremen
- (d) 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.

SUB-CLAUSE 16.4 – EMPLOYMENT OF LOCAL PERSONNEL

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

SUB-CLAUSE 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 (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:

- i) All quarries and borrow pits shall be filled and landscaped to their original state after extraction of construction material
- ii) Soil erosion due to surface runoff or water from culverts or other drainage structures should be avoided by putting in place proper erosion control measures that shall include, but are not limited to grassing and planting if trees
- iii) Long traffic diversion roads shall be avoided so as to minimize the effect of dust on the surrounding environment. In any case all diversions shall be kept damp and dust free
- iv) Spillage of oils, fuels and lubricants shall be avoided and if spilt, shall be collected and disposed off in such a way as not to adversely affect the environment
- v) Rock blasting near settlement areas shall be properly coordinated with the relevant officers of the Government so as to minimize noise pollution and community interference.

SUB-CLAUSE 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

SUB-CLAUSE 21.1 - INSURANCE OF WORKS AND CONTRACTOR 'S EQUIPMENT

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.”

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”

SUB-CLAUSE 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.

SUB-CLAUSE 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) to (h) of the General Conditions of Contract”.

SUB-CLAUSE 23.2 – MINIMUM AMOUNT OF INSURANCE

Add the following at the end of this Clause:

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

SUB-CLAUSE 25.1 – EVIDENCE AND TERMS

Amend Sub-Clause 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

SUB-CLAUSE 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.

SUB-CLAUSE 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.

SUB-CLAUSE 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.”

SUB-CLAUSE 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 Sub-Clause 29.2:

SUB-CLAUSE 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 after Clause 34.1

SUB-CLAUSE 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.

SUB-CLAUSE 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 latest Regulation of Wages (Building and Construction Industry) Order as at the time of bid submission, and subsequent amendments thereto, or in any wage scales, hours of work or conditions agreed by the Ministry of Labour or other Government Departments 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.

SUB-CLAUSE 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 Employer 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.

SUB-CLAUSE 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 BID shall be recruited by the Contractor from the Labour Exchange or Exchanges nearest to the site or sites of the work.

SUB-CLAUSE 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.

SUB-CLAUSE 34.7 – LABOUR STANDARD

- (a) The Contractor shall comply with the existing local labour laws, regulations and labour standards
- (b) The Contractor shall formulate and enforce an adequate safety program with respect to all work under 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.
- (c) Upon written request of the Employer the Contractor shall remove or replace any of his employees employed under this Contract.

SUB-CLAUSE 34.8 – MINORITIES AND PERSONS WITH DISABILITIES

The Contractor shall ensure that no more than Two Thirds of either gender is engaged in the Contract.

Add the following Sub-Clause 35.2 and 35.3.

SUB-CLAUSE 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.

SUB-CLAUSE 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.

SUB-CLAUSE 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”.

SUB-CLAUSE 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.

SUB-CLAUSE 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.”

SUB-CLAUSE 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.”

SUB-CLAUSE 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.”

SUB-CLAUSE 48.2 – TAKING OVER OF PARTS OF WORKS

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

The minimum section for Taking Over shall be as described in the Special Specifications.

SUB-CLAUSE 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 Dayworks rates, or Provisional Sums and items, or for any item in the BOQ.

Modification to Clause 52(3)

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

SUB-CLAUSE 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.

SUB-CLAUSE 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:

SUB-CLAUSE 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: – CERTIFICATES AND PAYMENTS

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

SUB-CLAUSE 60.1 – MONTHLY STATEMENT

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;

- the value of the Permanent Work executed up to the end of previous month
- 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
- such amount as the Engineer may consider fair and reasonable for any Temporary Works for which separate amounts are provided in the Bill of Quantities
- adjustments under Clause 70
- any amount to be withheld under retention provisions of Sub-Clause 60.3
- 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.

SUB-CLAUSE 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 Engineer's 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.

SUB-CLAUSE 60.3 – PAYMENT OF RETENTION MONEY

A retention amounting to the percentage stipulated in the Appendix to Bid shall be held by the Employer 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 BID.

Upon the issue of the Taking-Over Certificate, with respect to the whole of the works one half of the retention money shall become due and shall be paid to the Contractor when the Engineer shall certify in writing that the last section of the whole works has been substantially completed.

Upon expiration of the Defects Liability Period for the works, the other half 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 Sub-Clause, 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.

Bank Retention Guarantees shall be accepted in lieu of cash retentions

SUB-CLAUSE 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.

SUB-CLAUSE 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 Sub-Clause 60.2.

SUB-CLAUSE 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;

- (a) The final value of all work done in accordance with the Contract
- (b) Any further sums which the Contractor considers to be due to him.

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

SUB-CLAUSE 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 60.8 has been made and the Performance Security referred to in Sub-Clause 10.1 has been returned to the Contractor.

SUB-CLAUSE 60.8 – FINAL PAYMENT CERTIFICATE

Upon acceptance of the Final Statement as given in Sub-Clause 60.6, 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 BID.

SUB-CLAUSE 60.9 – CESSATION OF EMPLOYERS LIABILITY

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

SUB-CLAUSE 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:

- (i) 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.
- (ii) In the case of the Final Payment Certificate pursuant to Sub-Clause 60.8, within the time stated in the Appendix to Form Of Bid, after the Engineer has signed the Final Payment Certificate.
- (iii) 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 two percentage points above the average bank lending rates obtained from Central Bank of Kenya. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlements under Clause 69 or otherwise.

SUB-CLAUSE 60.11 – 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.

SUB-CLAUSE 60.12 – ADVANCE PAYMENT

“The Employer may make an interest free advance payment to the contractor for the cost of mobilization in respect of the Works, in a lump sum of equivalent to a maximum of ten (10) percent of the Contract Price named in the Letter of Acceptance. Payment of such advance amount will be due under a separate certification by the Engineer after:

- (i) Provision by the Contractor of the Performance Security in accordance with Clause 10 of the Conditions of Contract, and
- (ii) Provision by the Contractor of a Bank Guarantee that shall remain effective until the advance payment has been completely repaid by the Contractor out of current earnings under the Contract and certified accordingly by the Engineer.

A form of Bank guarantee acceptable to the Employer is included in the Tender Documents. The advance payment shall be used by the Contractor exclusively for mobilization expenditures, in connection with the works. The advance payment shall not be subject to retention money.

The advance payment shall be repaid with percentage reductions from the monthly interim payments certified by the Engineer. The reimbursement of the lump sum advance payment shall be made by deductions from the interim payments and where applicable from the balance owing to the contractor. Reimbursement shall begin when the amount of the sums due under the Contract reaches 20% of the original amount of the contract. It shall have been completed by the time 80% of this amount is reached.

The amount to be repaid by way of successive deductions shall be calculated by the means of the formula:

$$RI = \frac{A(X_2 - X_1)}{80 - 20}$$

Where:

RI = the amount to be reimbursed.

A = the amount of the advance which has been granted.

X_2 = the amount of proposed cumulative payments as a percentage of the original amount of the contract. This figure will exceed 20% but not 80%.

X_1 = the amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.

With each reimbursement the guarantee will be reduced accordingly.

SUB-CLAUSE 60.13 - MATERIALS FOR PERMANENT WORKS

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

-Receive a credit in the month, in which these materials are brought to site,
-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 Engineers 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 Contractors 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 not be more than 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.

SUB-CLAUSE 67.1 – ENGINEER’S DECISION

Delete the entire Sub-Clause 67.1 and add the following;

“If a dispute of any kind whatsoever arises between the Employer and the Contractor in any connection with, or arising out of, the Contract or the execution of the works, whether during the execution of the works or after their completion and whether before or after repudiation or other termination of the Contract including any dispute as to any opinion, instruction, determination, certificate or valuation of the Engineer, the matter in dispute shall, in the first place, be referred in writing to the Engineer, with a copy to the other party. Such reference shall state it is made pursuant to this clause. No later than 28 (twenty eight) day after the day on which he received such reference the Engineer shall give notice of his decision to the Employer and the Contractor. Such decision shall state it is made pursuant to this clause.

Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the works with all due diligence and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same shall be revised, as hereinafter provided, in an Amicable Settlement, Adjudicator’s or Arbitrator’s award.

If either the Employer or the Contractor be dissatisfied with the any decision of the Engineer, or if the Engineer fails to give notice of his decision on or before the 28th (twenty eighth) after the day on which he received the reference, then either the Employer or the Contractor may, on or before the 28th (twenty eighth) day after the day the day on which he received notice of such decision, or on or before the 28th (twenty eighth) day after the day on which the said period of 28 days expired, as the case may be, give notice to the other party, with a copy for information to the Engineer, of his intention to commence Adjudication, as hereinafter provided, as to the matter in dispute. Such notice shall establish the entitlement of the party giving the same to commence Adjudication, as hereinafter provided, as to such dispute; no adjudication in respect thereof may be commenced unless such notice is given.

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no notice of intention to commence adjudication as to such dispute has been given by either the Employer or the Contractor on or before the twenty eighth day after the day on which the parties received notice as to such decision from the Engineer, the said decision shall become final and binding upon the Employer and the Contractor. “

SUB-CLAUSE 67.2 – AMICABLE SETTLEMENT

Delete the entire sub-clause 67.2 and replace with the following;

67.2 (a) Amicable Settlement

"Where notice to of intention to commence adjudication as to a dispute has been in accordance with sub-clause 67.1, the parties shall attempt to settle such dispute in amicably before the commencement of Adjudication; provided that, unless the parties otherwise agree, Adjudication may be commenced on or after the 14th (fourteenth) day after the day on which notice of intention to commence adjudication of such dispute was given, even if an attempt at amicable settlement thereto has been made."

67.2 (b) Adjudication

The adjudication shall commence when it shall be referred in writing to the Dispute Adjudication

Board (the "Board") for its decision. Such reference shall state that it is made under this clause.

1. Unless the member or members of the board have been previously mutually agreed upon by the parties and named in the Contract, the parties shall within 28 days of the contract commencement date jointly ensure the appointment of the Board. The Board shall comprise of suitably qualified persons as members, the number of members being either one or three as stated in the Appendix to form of Tender. If the board is to comprise three members each party shall nominate one member and the two members shall mutually agree upon and appoint the third member (who shall act as chairman)
2. The terms of appointment of the Board shall include: -
 - a) An hourly rate which if not otherwise agreed shall be the average of the rates set by the Chartered Institute of Arbitrators for the class of membership of the member save that the rates for associate membership shall apply to non - members;
 - b) A retainer monthly rate equal to 12 times the hourly rate;
 - c) The hourly rate shall apply when the board members are attending site, travelling and/or engaged in actual dispute resolution work. A member of the board throughout his appointment will act independently at all times without bias or favour;
 - d) Members of the board to act impartially and in accordance with the Contract;
 - e) Undertakings by the parties (to each other and to Board) that the members of the Board shall under no circumstances be liable for anything done or omitted in the discharge of their functions unless the act or omission is shown to have been in bad faith;
 - f) The Board shall be free to pay and seek refund from the parties of any expenses paid out by members of the board in connection with their work;
 - g) The Employer and the Contractor shall each be responsible for paying one half of the Board's remuneration.

The appointment of any member of the Board may be terminated (other than on a member's own initiative) only by mutual agreement of the Employer and the Contractor. The appointment of each member of the Board shall expire when the discharge referred to in sub-clause 60.7 shall have become effective, or at such other time as the parties may mutually agree.

3. The appointment of any member of the Board may be terminated (other than on a member's own initiative) only by mutual agreement of the Employer and the Contractor. The appointment of each member of the Board shall expire when the discharge referred to in sub-clause 60.7 shall have become effective, or at such other time as the parties may mutually agree.
4. If the parties so agree, they may at any time, appoint a suitably qualified person or persons to replace (or to be available to replace) any or all members of the Board. Unless the parties agree otherwise, the appointment will cease if a member of the Board declines to act or is unable to act as a result of death, disability, resignation or termination of appointment. If any of such circumstances occur and no such member is available, the member shall be replaced in the same manner as he had been nominated or agreed upon.
5. If any of the following conditions apply, namely: -

- a) The parties fail to agree upon the appointment of the sole member of a one-person Board within 28 days of the commencement date;
- b) Either party fails to appoint a member in a Board of three members, within 28 days of the commencement date;
- c) The two members of the Board fail to agree upon the appointment of the third member (to act as chairman) for a Board of three members within 28 days from date of appointment of latest member;
- d) The parties or the members fail to appoint a replacement member of the Board within 28 days of the date on which a member of the Board declined to act or is unable to act as a result of death, disability, resignation or termination of appointment;

then the appointing body or official named in the Appendix to Form of Tender shall appoint such member of the Board on request of any party and such appointment shall be final and conclusive.

67.2 (c) Dispute Adjudication Board's Decision

1. When in accordance with sub-clause 67.2 (b) a dispute is referred by one party to the Board, a copy of such reference shall be sent by that party to the other party and (for information) to the Engineer. The parties shall promptly make available to the Board all such additional information, further access to the site, and appropriate facilities as the Board may require for the purposes of rendering a decision.
2. The rules published by the Chartered Institute of Arbitrators Kenya branch shall apply.
3. The Board shall have full power among other things to open up, review and revise any opinion, instruction, determination, certificate or valuation of the Engineer related to the dispute. No later than the 28th day after the day on which it received such a reference the Board acting as a panel of experts and not as arbitrator(s) shall give notice of its decision to the parties and for information to the Engineer. Such decision, which shall be reasoned, shall state that it is given under this Sub-Clause.
4. Unless the Contract has already been repudiated or terminated, the Contractor shall in every case continue to proceed with the works with all due diligence and the Contractor and the Employer as well as the Engineer shall give effect forthwith to every decision of the Board notwithstanding the fact that there may be a party dissatisfied as shown thereunder.
5. If either party is dissatisfied with the Board's decision, then either party on or before the 28th (twenty eighth) day after the day on which it received notice of such decision, may refer the decision to Arbitration.
6. If the Board has given notice of its decision as to a matter in dispute to the Employer, the Contractor and the Engineer and no notice of dissatisfaction has been given by either party on or before the 28th (twenty eighth) day after the day on which the parties received the Board's decision, then the Board's decision shall become final and binding upon the Employer and the Contractor.

67.2 (d) Failure to Comply with the Board's Decision

Where neither party has given notice of dissatisfaction within the period in Sub-Clause 67.2 (c) and Board's related decision, if any has become final and binding either party may, if the other party

fails to comply with such decision and without prejudice to any other rights it may have, refer the failure itself to Arbitration under Sub-Clause 67.3. The provisions of Sub-clause 67.2 shall not apply to any such reference.

67.2 (e) Expiry of the Board's Appointment

When the appointment of the members of the Board, including any replacement, has either been terminated or has expired, any such dispute referred to in Sub-clause 67.2 shall be finally settled by Arbitration pursuant to Sub-clause 67.3. The provisions of Sub-clause 67.2 shall not apply to any such reference.

SUB-CLAUSE 67.3(D) – 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.

SUB-CLAUSE 68.2 – NOTICES TO EMPLOYER AND ENGINEER

Delete in Sub-Clause 68.2 the words "nominated for that purpose in Part II of these conditions".

- a. The Employer's address is:
Director General
Kenya Rural Roads Authority
P.O. Box 48151 – 00100
NAIROBI.
- b. The Engineer's address is:
Director – Roads Asset Management (RAM)
Kenya Rural Roads Authority
P.O. Box 48151 – 00100
NAIROBI.

SUB-CLAUSE 68.4 – CORRESPONDENCES

All letters and notices from the Contractor to the Employer and/Engineer must be signed by the Managing Director or the person given written power of Attorney.

CLAUSE 69 – DEFAULT OF EMPLOYER

Delete in Sub-Clause 69.1 (a) the words ("28 days") and insert the words "ninety (90) days".

Delete Sub-Clause 69.1 (c)

Delete in Sub-Clause 69.4 line 4 the words "(28 days)" and insert the words "sixty (60) days".

In Sub-Clause 69.4 add at the end of first paragraph the following "the period of such suspension shall be as agreed upon by both parties and in any case not more than six (6) months".

In Sub-Clause 69.4 of General Conditions of Contract Part I, insert at the end -----"The amounts of such costs which shall be added to the Contract Price shall exclude any cost due to idle time for equipment, plant and labour."

CLAUSE 70 – CHANGES IN COST AND LEGISLATION

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 labour, 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 daywork 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 (labor, 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;

Ln, Mn, En, 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

Lo, Mo, Eo, 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 **Zo/Zn** will be applied to the respective component factor of **pn** for the formula of the relevant currency. **Zo** 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 **Zn** 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 favorable 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.

CLAUSE 72 – RATES OF EXCHANGE COST

Delete clause 72 in its entirety and substitute the following:

The currency of BID 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 offence 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 TO BE 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.

SECTION 7: SCHEDULES OF SUPPLEMENTARY INFORMATION

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SCHEDULE 1: CONFIDENTIAL BUSINESS QUESTIONNAIRE

This Confidential Business Questionnaire of the Government of Kenya 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

.....

PlotNo.....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.....

Are you an agent of the Kenya National Trading Corporation? YES/NO

Part 2(a) - Sole Proprietor:

Your name in full

.....

Age.....

NationalityCountry of origin.....

*Citizenship details

Part 2(b) - Partnership:

Give details of partners as follows:

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

Note: Attach proof of citizenship(Compulsory)

Part 2(c) – Registered Company

Give details of partners as follows:

Private or Public.....

State the Nominal and Issued Capital of the Company

Nominal Shares (KShs)

Issued Shares (KShs)

.....

Give details of all directors as follows:

Name	Nationality	Citizenship Details*	Shares
1.....
2.....
3.....
4.....
5.....

Note: Attach proof of citizenship (Compulsory)

Part 2 (d) Interest in the Firm:

Are there any person / persons in Kenya Rural Roads who has interest in this firm? Mark in the box alongside as necessary.

Yes	No

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

SCHEDULE 2: FORM OF WRITTEN POWER OF ATTORNEY

(Attested by notary public)

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 **SPOT IMPROVEMENT OF BISSIL – ORMOTIOK ROAD** 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: KEY PERSONNEL

Note: The Bidder 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. Bidders shall attach signed and certified CVs of all key staff.

Designation	Name	Nationality	SUMMARY OF QUALIFICATIONS AND EXPERIENCE		
			Qualifications	General Experience (Yrs)	Relevant Experience (Yrs)
Headquarters					
Partner/Director or other key staff (give designation)					
Site Office					
Site Agent					
Senior Foreman					
Construction Foremen					
Site Surveyor					
Other Key Staff					
Foremen					
(i) Earthworks					
(ii) Concrete					
(iii) Drainage					

Note: The Bidder 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).

Bidders shall attach CV's of key personnel, which should be signed by the staff and certified by a Commissioner of Oaths.

I certify that the above information is correct.

.....
(Signature of Bidder)

.....
(Date)

Format of Resume of Proposed Personnel (use the same)

Bidders shall attach signed and certified CVs of all key staff use the format given below for all other required staff (where required, use separate sheets to add extra data)

Proposed Position			
Personnel information	Name of Personnel		Date of birth
	Professional qualifications		
	Years of Experience		Years with present employer
Present employment	Present Employer's Name:		
	Job Title		
	Name of Contact person (Supervisor)		<i>Telephone No</i> <i>E-mail</i>
From	To	<i>(Summarize professional experience, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project)</i>	
		Company: Project Position Role in project	

Signature of Proposed Staff.....Date:.....

Note: Please attach Certified Copies of Qualification Certificates

SCHEDULE 5: SCHEDULE OF THE MAJOR ITEMS OF PLANT TO BE USED ON THE PROPOSED CONTRACT.

The Bidder must indicate the core plant and equipment considered by the company to be necessary for undertaking the project together with proof ownership (*Mandatory minimum number of equipment required by the Employer for the execution of the project that the bidder must make available for the Contract.)

Item No.	Equipment Details	Minimum Number Required for the execution of the Contract	No. of owned by the Bidder	No. to be availed for the project	No of equipment to be made available for the Contract by the Bidder
1	A) Concrete Equipment 1. Mobile concrete mixers 2. Truck mounted mixers 3. Concrete vibrators 4. Continuous pugmill mixer Subtotal for A	1 Optional 2 Optional <u>3</u>			
2	B) Transport (Tippers, dumpers, water tankers) 1. 6x4 tippers payload 16-20 tonnes 2. Water tankers (18,000-20,000 lts capacity) Subtotal B	4 2 <u>6</u>			
3	C) Earth moving equipment 1. Tractor dozers with dozer attachment (D6-D9) 2. Wheel loaders 3. Motor graders (200-260KW) Subtotal C	1 1 1 <u>3</u>			

Item No.	Equipment Details	Minimum Number Required for the execution of the Contract	No. of owned by the Bidder	No. to be availed for the project	No of equipment to be made available for the Contract by the Bidder
4	D) Diesel Generators 1. Diesel generators (15-200KV _a) Subtotal D	1 <u>1</u>			
5	E) Excavators 1. Hydraulic crawler mounted (7-10 tonnes) – 0.25-0.4m ³ SAE bucket Subtotal for E	1 <u>1</u>			
6	F) Rollers 1. Self-propelled single drum vibrating (various types, 20 tonnes min) 2. Sheep foot roller Subtotal for F	1 1 <u>2</u>			

We hereby certify that notwithstanding the list of plant detailed above, we will provide sufficient, suitable and adequate plant in good working order for the successful completion of works

.....
(Signature of Contractor)

.....
(Date)

SCHEDULE 6: SCHEDULE OF ROADWORKS CARRIED OUT BY THE BIDDER IN THE LAST THREE (3) YEARS

DESCRIPTION OF WORKS	NAME AND ADDRESS OF CLIENT/ EMPLOYER	CONTRACT SUM (KSHS) *	YEAR STARTED	YEAR COMPLETED
<u>A) Non-completed Works</u>				
<u>B) Completed Works</u>				
<u>C) Specific Construction Experience</u>				

I certify that the above works were successfully carried out by me (the bidder). ***Attach Completion Certificates /Substantial completion certificate***

.....
(Signature of Bidder)

.....
(Date)

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

SCHEDULE 7: SCHEDULE OF ONGOING PROJECTS

DESCRIPTION OF WORKS	NAME AND ADDRESS OF CLIENT	DATE OF COMMENCEMENT	DATE OF COMPLETION	VALUE OF CONTRACT SUM (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. Attach Award Letters

.....
(Signature of Bidder)

.....
(Date)

SCHEDULE 8: SCHEDULE OF BASIC RATES OF MATERIALS

This schedule has been omitted in view of the provisions of Clause 70, Conditions of Contract Part II (Conditions of Particular Application) given in Section 6B of this document.

SCHEDULE 9: SCHEDULE OF LOCAL LABOUR BASIC RATES

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

This schedule has been omitted in view of the provisions of clause 70 of Condition of Contract part II (Condition of Particular Application) given in section 8 B of this document.

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

SCHEDULE 10: FINANCIAL STANDING

- 1 Submit copies of audited profit and loss statements and balance sheet for the last three calendar years and estimated projection for the next two years with certified English translation where appropriate.
- 2 Give turnover figures for each of the last three (3) financial years. Quote in millions and decimal thereof.

	Year 2015/16	Year 2016/17	Year 2017/18
	KShs.	KShs.	KShs.
Roadworks			
Other civil Engineering works			
Other (specify)			
Total			

SUMMARY OF ASSETS AND LIABILITIES OF THE AUDITED FINANCIAL STATEMENTS OF THE LAST THREE (3) FINANCIAL YEARS

	Year 2015/16	Year 2016/17	Year 2017/18
	KShs.	KShs.	KShs.
1. Total Assets			
2. Current Assets			
3. Bank Credit Line Value			
4. Total Liabilities			
5. Current Liabilities			
6. Net Worth (1-4)			
7. Working capital (2+3-5)			

- (a) Name/Address of Commercial Bank providing credit line

.....
.....

- (b) Total amount of credit line KShs.....

Attach certified copies of financial bank statements of the last three years.

Attach a certified copy of Undertaking of the Bank to providing the credit.

SCHEDULE 11: 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

SCHEDULE 12: WORK METHODOLOGY

Give a brief description of how you plan to carry out the works including traffic management, quality assurance of works and any designs to be carried out by the Bidder within the contract period, in not less than three (3) pages and not more than five (5) pages.

The Works execution programme should include all relevant information to the project. The information given should be clear, not flawed description and compliance to standard and special specification.

Note Works Execution programme is different from form “programme of works referred in FIDIC and Standard Specification for Roads and Bridge Construction. The said “programme of works” is but part of Works Execution Programme (WEP).

The Content of Works Execution Programme shall include:

i. General information

a) Project data

- Project name,
- financier,
- employer,
- implementing agency
- contract period,
- date of completion,
- defects liability period,
- date of submission of works execution programme,

b) Scopes of works

A brief description of the project which includes major work items.

ii. Mobilization Management Plan

- The Plan should show, the location of site office and site organization chart,
- Personnel management plan (Head Office and Site Office staff)
Deployment plan and schedule of key personnel together with their qualification, and experience statements are shown in WEP. The information in this part includes; name, address, ID, phone number, assigned work types, Subcontractor's information and wage payment plan are also to be included if necessary.
- Equipment management plan
List of the equipment's: Name, type, manufacturer, usage, number, schedule. The bidder shall prepare the maintenance and repair plan for all the equipments.

iii. Work execution schedule

- a) Signed Programme of works
- b) Signed cash flow plan during the contract period

It is desirable that work execution schedule includes time frame of each activity such as in bar chart format.

iv. Quality and Quantity Management

- Method statement
This includes Work procedures, order and methods for execution.
- Proposal on material testing.

Material and structural test methods, test laboratory, test frequency, standard values. The relevant clause on quality in SSRBC should also be incorporated.

- Proposal on measurements
- Photograph plan

The bidder shall provide a photograph plan to record the progress and proof of quality control, measurement and any event that may arise. Type of works, filming item description, filming frequency and filming location mapping should be incorporated in the plan.

v. Safety management plan

This includes but not limited compliance with safety rules and regulation, traffic control and detour plans, emergency contact list

For quick actions during emergency, emergency contact list should be in WEP and shared with staff in the Authority.

vi. Environmental and social management plan

When the negative impacts on third parties during the execution are predicted, the management and mitigation plans should be included in WEP. For example, if earthwork likely cause dust problem around the working site, the contractor needs to make a plan for water spraying; how often and what time water is sprayed, how many water-spraying vehicles are mobilized, and how many workers are assigned. The following issues are also necessary to be considered in the plan.

- ✓ Soil erosion on slopes and sedimentation deposition on the drainage works.
- ✓ Preservation of trees and shrubbery
- ✓ Entrance and accidental spillage of solid matters, debris, pollutants and waste into water sources.
- ✓ Disposal of waste material
- ✓ HIV prevention.

Note:

Works Execution Programme to be submitted by the bidder shall not be more than five (5) pages covering all the above stated items.

SCHEDULE 13: DECLARATION FORM (FRAUD & CORRUPTION)

- 1 If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site.
- 2 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed.
- 3 For the purposes of this Sub-Clause:
 - (i) *"corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;*
 - (ii) *"fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;*
 - (iii) *"collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;*
 - (iv) *"Coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party.*
- 4 The Contractor declares that:
 - a) They did not engage in any action to influence the Project implementation process to the detriment of the Employer, in particular no collusive practice took place nor will take place, and

The bidding proceedings, contract award, and execution have not and will not be subject to any corrupt practice.

Dated this _____ day of _____ 20_____

Signature _____ in the capacity of _____

duly authorized to sign Tenders for and on behalf of
_____ [Name of Tenderer] of

_____ [Address of Tenderer]

_____ [Seal or Stamp of Tenderer]

SECTION 8: FORM OF AGREEMENT

SECTION 8: FORM OF AGREEMENT

THIS AGREEMENT is made on the day of 20
between the Kenya Rural Roads Authority of P. O. Box 48151 - 00100, 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.

SPOT IMPROVEMENT OF BISSIL – ORMOTIOK ROAD 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 BID dated
- The Conditions of Contract Part II
- The Conditions of Contract Part I
- The Standard and Special Specifications
- The Priced Bill of Quantities
- The Letter of Acceptance
- Schedules of Supplementary Information
- The Drawings
- Schedules of Supplementary Information
- The Priced Bill of Quantities
- 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 AND DELIVERED

By the said Employer:

.....
(Director General, Kenya Rural Roads Authority)
For and on behalf of the said Employer.

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 9: FORMS OF PERFORMANCE BID SECURITY AND ADVANCE
PAYMENT GUARANTEE (UNCONDITIONAL)**

PERFORMANCE BANK GUARANTEE

To
Director General,
Kenya Rural Roads Authority,
P.O. Box 48151 - 00100,
NAIROBI.

WHEREAS(hereinafter called “the Contractor”)

has undertaken in pursuance of Contract NoDatedto
execute the **SPOT IMPROVEMENT OF BISSIL - ORMOTIOK ROAD** (hereinafter called
the “Contract”)

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall
furnish you with a Bid Security 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 Taking Over Certificate.

SIGNATURE AND SEAL OF BANK.....

Name of Signatory.....

Name of bank.....

Address.....Date

SECTION 10: STANDARD SPECIFICATIONS

SECTION 10: STANDARD SPECIFICATIONS

The Standard Specifications referred to in this document is the *Standard Specifications for Road and Bridge Construction, 1986 Edition* published by the Ministry of Transport and Communications. This document shall form part of the Contract

Work shall be carried out in accordance with the Standard Specification except as supplemented or revised in the Special Specification.

SECTION 11: SPECIAL SPECIFICATIONS

SECTION 11: SPECIAL SPECIFICATIONS

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SECTION 1 – GENERAL

SPECIAL SPECIFICATIONS.

- 100** 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.

101 LOCATION AND EXTENT OF CONTRACT.

The project is located in Kajiado County and starts at Bisil township on the Athi river - Kajiado - Namanga road, moves in a South Westerly direction through Longuswa to Ormotiok. Total road length is approximately 37Km

The site of the works shall be the area within the road reserve and any other places as may be designated by the Engineer.

102 EXTENT OF CONTRACT.

The major works to be executed under the Contract comprise mainly of but are not limited to the following:

- (a) Preliminary and General items
- (b) Site clearance.
- (c) Earthworks.
- (d) Installation of 600mm, 900mm and 1200mm dia. Culverts and other drainage works.
- (e) Construction of 5 No. 2x4x2m box culverts
- (f) Dozing and grading works
- (g) Gravelling works
- (h) Maintenance of passage of traffic through and around the works
- (i) Maintenance of the Works during construction
- (j) Defects Liability Period shall be 12 months
- (k) Any other auxiliary work as directed by the Engineer.

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

The minimum length of the road for which a certificate will be issued is the whole length of the project road when substantially completed.

108 METHOD OF CONSTRUCTION AND HOURS OF ATTENDANCE BY THE ENGINEER'S REPRESENTATIVE ON SITE

- a) At the commencement of the contract the Contractor will submit in writing to the Engineer, the hours which shall be considered normal working hours, together with the day of the week to be set aside for rest. When approved these shall be maintained throughout the continuance of the Contract.
- b) Notwithstanding the provision of the last paragraph of clause 108 of the Standard Specification, the Engineer's Representative normal working hours shall be 8 hours from Monday to Friday and 5 hours on Saturday with Sunday set aside for rest.
If the Contractor wishes to execute permanent works outside these hours, he shall meet any extra costs arising thereof in addition to giving a day's notice in writing.

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 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.

119 USE OF EXPLOSIVES

The Contractor shall ensure that he complies with the current Government regulations with regard to explosives. No explosives of any kind shall be used without prior consent of the Supervisor. 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.

120 PROTECTION OF EXISTING WORKS

The appropriate provisions of Section 1 of the Standard Specifications in regards to protection of existing works and services shall be adhered to in all respects.

The Contractor's attention is drawn to the fact that it is essential to maintain existing power, telephone, water, sewage and other services throughout the Contract Period.

The Contractor shall give all assistance to Engineers of the Telkom Kenya, the Kenya Power and Lighting Co. Ltd., the Ministry of Water and other relevant authorities to maintain the serviceability of their installations.

121 DIVERSION OF SERVICES

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 BID rates.

If it should become necessary, for the proper execution of the work, temporary, to remove or divert any existing pipe, cable, drain or other service, the Contractor shall obtain permission from the competent authority or owner for removal or diversion to be effected. The Contractor shall carry out all necessary work in such a manner and at such times as may be approved by such authority or owner. The cost of all removal, diversion and reinstatement and all things connected therewith shall be paid for by the Contracting Authority through the Construction Contract.

If in the opinion of the Supervisor or of the competent authority or owner, it should become necessary permanently to remove or realign any existing pipe, cable or other service, the Contractor shall obtain permission from the competent authority or owner for the removal or realignment to be effected. The Contractor shall carry out all necessary work in such a manner and at such times as may be approved by such authority or owner and the completed work shall be to the satisfaction of such authority or owner. The cost of all permanent removal and realignment and all things connected therewith shall be paid for by the Contracting Authority through the Construction Contract.

Any of the work involving repair, replacement of existing pipes, cables or other services shall be carried out by the competent authority or owners if they so desire, in which case the Contractor shall allow them the facilities and assistance they may require and shall pay the full expense of such work and all things connected therewith in the first instance,

but the cost shall be paid for by the Contracting Authority through the Construction Contract.

The Contractor shall allow in his rates for the programming of his work to allow for the necessary diversion of any services.

Subject to the agreement with the Engineer, the Contractor shall be responsible for removal of alteration and relocation of existing services.

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 competent surveyors 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.

126 MATERIAL AND MANUFACTURED ARTICLES

Notwithstanding the provision of clause 126 of the Standard Specification, the Contractor's attention is drawn to his obligation with regard to quality and delivery schedule of materials and goods obtained from suppliers. Should the Engineer at any time be dissatisfied with any goods and materials intended for use or used by the contractor upon the works, he shall be empowered to reject goods and materials and shall order that they be replaced by others of acceptable quality. Any more work that may consequently have to be redone and the cost thereof of the new suppliers shall all be borne by the Contractor.

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 two (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.

142 LIQUIDATED DAMAGES

Liquidated Damages at the rate of KShs. 50,000/- per day shall apply in the event of the work not being completed within the time for completion plus any extension of time which may be determined by the Engineer.

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 Oils and other pollutants shall be cleared up.

The contractor shall as instructed by the Engineer carry out off – road mitigation measures to the approval and satisfaction of the Engineer and to the required STANDARD. The contractor shall obtain Environmental mitigation licence for the same and also comply with Environmental Management Coordination Act (EMCA) 1999, Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulations 2003. Payment will be under appropriate items in the BOQ.

SECTION 2 - MATERIALS AND TESTING OF MATERIALS

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

SECTION 3 - SETTING OUT & TOLERANCES

301 SETTING OUT

- a) In addition to the provisions of clause 3.01(a) if the traverse points to be used for the setting out are close to the existing carriageway and interfere with construction works then the Contractor will have to relocate them to a location where they will not be disturbed. The co-ordinates and heights of all traverse points so located shall be listed and provided to the Engineer for checking and/or approval. Contractor shall also monument the new centreline every 200m along straight and all salient points along curves by a pin in the concrete beacon before commencement of any works.

The road reserve boundary posts shall have 12mm diameter steel pins embedded in concrete, 200mm long with 25mm exposed to the air, sticking out from its top surface. This pin shall be co-ordinated and heighted and result of the same shall be provided to the Engineer for approval. Cost of these works shall be included in the rates as no separate item has been provided.

Commencement of the works shall not be permitted until this basic survey data has been provided and approved by the Engineer for at least 5 KMs of the road.

- b) Detailed Setting Out

Reference pegs shall be 50mm by 50mm in section 600mm long driven 400mm firmly into ground and painted white above the ground. The offset from centre line shall be indicated by small nail 20mm to 25mm long with its head driven flush with the top of the peg.

Chainages, offset and reference elevation shall be clearly indicated to the sides of the peg to the satisfaction of the Engineer.

After cutting of benches and prior to commencement of earthworks or subgrade works, Contractor shall take cross-sections again and submit the copy of the same to Engineer for agreement. These cross-sections shall then be used as basis of measurement for all subsequent layers, unless otherwise stated.

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.

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:

- (i) All material containing more than 5% by weight or organic matter (such as topsoil, material from swamps, mud, logs, stumps and other perishable material)
- (ii) All material with a swell of more than 3% (such as black cotton soil)
- (iii) All clay of plasticity index exceeding 50.
- (iv) All material having moisture content greater than 105% of optimum moisture content (Standard Compaction)

Subgrade repair: Where directed by the Engineer, any localized failure in the subgrade shall be repaired by filling in selected soft, hard or natural of minimum CBR 30% and compacted in accordance with clauses in the specifications applying to normal subgrade.

Embankment repair:

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

508 COMPACTION OF EARTHWORKS

At pipe culverts, all fill above ground level around the culverts shall be compacted to density of 100% MDD (AASHTO T.99) up to the level of the top of the pipes or top of the surround(s), if any and for a width equal to the internal diameter of the pipe on either side of the pipe(s) or surround(s) as applicable.

At locations adjacent to structures, all fill above ground level upto 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 wingwalls.

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 sub-grade material shall be required, this shall be compacted and finished to the same STANDARD 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

Notwithstanding the provisions of clause 517 of the standard specifications, the rate for compaction of fill in soft material shall allow for the requirements of clause 508 of the special specification and no extra payment shall be made for compaction around pipe culverts (100% MDD AASHTO T.99).

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.

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 EXCAVATIONS 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. Grouting will be done for all stone pitching areas and the top line of the stone pitching should be grouted/ sealed with concrete class 15/20.

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. Soil erosion is rampant along the project location and this can be minimised by ensuring that proper protection works is carried out along the drains using stone pitching. Most of the sections shall be stone pitched especially areas where we have steep slopes to minimise undermining of the road by rain water or as may be instructed by the Engineer.

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.

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.

The Works shall involve removal of the damaged gabions / rocks, excavation to the correct levels and grades as directed by the Engineer, and in accordance with Clause 711

of the Standard Specifications and reconstruction with new gabions and other necessary materials as necessary. The damaged gabions shall be recovered and transported to the nearest KeRRA Regional Manager's Yard or MoR Department depot.

712 RIP-RAP PROTECTION WORK

Quarry waste or similar approved material shall be used to backfill scoured and eroded side, outfall and cut-off drain. 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 insitu material. The insitu material immediately behind the pitching shall be compacted to minimum density of 100% MDD compaction (AASHTO T.99)

714 BACKFILL BELOW STRUCTURES

Where instructed this shall be carried out in compliance with the requirements of Clause 507 and 804 of the Standard Specification.

SECTION 8 - CULVERTS AND DRAINAGE WORKS

801 SCOPE OF SECTION

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

In addition, this Section covers: -

- Installation of 600mm, 900mm and 1200mm diameter pipe culverts
- Construction of associated inlet and outlet structures to specifications and/or instructions

804 EXCAVATION FOR CULVERTS AND DRAINAGE WORKS

In the Standard Specifications, make the following amendments: -

- (a) In paragraph 6, line 3, and in paragraph 7, line 5 and in paragraph 11, line 6, delete "95%" and insert "100%".
- (b) Removal of Existing Pipe Culverts

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

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

The payment of this work shall be per linear metre of pipes removed. The void left by removal of these pipes shall be carefully preserved in order to accommodate replacement 600mm, 900mm or 1200mm diameter pipe culverts as shall be directed by the Engineer.

- (c) Removal of Other Existing Drainage Structures

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

- (d) Excavation for Culverts and Drainage Works
The Contractor shall carry out all excavations for new culverts and drainage works to the lines, levels, inclinations, and dimensions shown on the drawings or as instructed by the Engineer.

805 EXCAVATION IN HARD MATERIAL

In the Standard Specifications, Sub-clauses 805(a) and 805 (b) delete "95%" and insert "100%".

In sub-clause 809(a), paragraph 1, line 1, substitute "95%" with "100%".

In sub-clause 809(c), paragraph 2, line 4, between the words "compacted" and "and shaped" insert the words "to 100% MDD (AASHTO T.99)".

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

809 BEDDING AND LAYING OF PIPE CULVERTS

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

The rates inserted shall allow for compaction of the bottom of excavation to 100% MDD (AASHTO T.99).

810 JOINTING CONCRETE PIPES

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

812 BACKFILLING OVER PIPE CULVERTS

In the Standard Specifications, clause 812

- 1). Delete paragraph 6 “for pipe culverts depth of 150mm”, entirely.
- 2). Wherever the expression "dry density of 95% MDD (AASHTO T. 99)" occurs delete and replace with "dry density of 100% MDD (AASHTO T.99)".

The rates entered for laying of pipe culverts shall allow for backfilling to pipe culverts and compacting to 100% MDD (AASHTO T.99) and these works shall **not** be measured and paid for separately.

814.1 SUBSOIL DRAINS

In the event of excavation for repairs exposing local seepage, springs or unacceptably high water table, the Engineer may instruct the provision of counter fort or French drains.

These drains shall consist of a trench excavated to the alignment, width, depth and gradient instructed by the Engineer, and backfilled with approved compacted clean hard crushed rock material as specified in clause 815 of the standard specification. Where these drains lie within the carriageway the carriageway shall be reinstated with compacted stabilised gravel and surfaced with hot asphalt or a surface dressing as instructed by the Engineer.

814.2 FILTER FABRIC TO SUBSOIL DRAINS

A filter fabric shall be placed under, around and over rock fill of the subsoil drains. The provisions and placing of the fabric shall be in accordance with manufacturer's instructions and complying with Clause 804 and 814 of the Standard Specification. Payment shall be in metre square of the fabric used.

815 INVERT BLOCK DRAINS AND HALF ROUND CHANNELS

Invert Block Drains and Half Round Channels shall be constructed as shown in the drawings provided in accordance with the Standard Specifications where directed by the Engineer.

817 REPAIRS TO DRAINS

817.1 Cleaning and Repair of Existing Drains

In areas of existing side drains, mitre or outfall drains where such are blocked, the Engineer shall instruct the Contractor to clean and clear the drains to free flowing condition.

The work shall consist of:

- (a) Stripping and removal of any extraneous material to spoil including vegetation and roots in the drains to the satisfaction of the engineer.
- (b) Spreading of any spoil to the satisfaction of the Engineer.
- (c) Shaping the drains to free flowing condition as directed by the Engineer.

Measurement and Payment for cleaning drains shall be by cubic metre of drain cleaned measured as the product of plan area and vertical depth of extraneous material instructed to be removed. No extra payment will be made for removal of vegetation and roots.

817.2 Channels

The Engineer may instruct that the Contractor provides open channels in place of existing subdrains where the latter may be damaged or in any other place. The rates entered by the Contractor in the bills of quantities must include for removal and disposal of any subdrain material, excavation to line and level, backfilling and compaction as directed by the engineer. The channels shall be constructed of precast class 20/20 concrete of minimum 80mm thickness and lengths or widths not exceeding 1000mm. Joints shall be at least 15mm wide filled with 1:2 cement sand mortar.

817.3 Spoil Material

The contractor shall be responsible for removal from site of all materials excavated in the course of undertaking works in this section of the specification, unless suitable for re-use, and deposit of the material in a spoil dump to be approved by the Engineer.

818 SCOUR CHECKS

Scour checks are to be constructed in mass concrete in accordance with clause 818 of the Standard Specifications and the drawings as shall be provided.

819 CLEANING AND MAINTENANCE

819.1 Desilting of Pipe Culverts

Where instructed, the Contractor shall desilt the existing pipe culverts by removing all the material from the pipe to make them clean and free flowing.

Measurement and payment shall be by the linear metres of pipes de-silted, regardless of diameter size.

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 ROADS

The Contractor shall maintain roads covered in the project using compacted natural gravel in accordance with provision of section 10 of Standard Specification.

904 CONSTRUCTION OF DEVIATIONS

a) General

In addition to requirement of this clause, the maximum length of deviation road shall be restricted to 5 Kms at any given time unless otherwise instructed. The Contractor shall construct and complete deviations to the satisfaction of the Engineer before commencing any permanent work on the existing road. Also during these works the contractor is supposed to provide a detour of adequate pipe culverts for pedestrian and traffic crossing where there is bridge works.

Contractor will be allowed to open further 5 Km of the deviation road only when 80% of the permanent work has been completed on first one and he will not be allowed to open further 5 Km till he has completed first 10 Km of the road and has it opened to traffic. The sequencing of deviation road has been shown on the drawing.

Where the old road exists near the main road, Contractor shall use this road as deviation road.

b) **Geometry**

The carriageway width of the deviations shall not be less than 6m wide and suitable for 2-way lorry traffic unless otherwise specified.

c) **Construction**

Unless otherwise instructed gravel wearing course for the deviation shall be 150 mm compacted thicknesses complying with section 10 of the Standard Specification. The Contractor shall allow in his rate for removal of any unsuitable material before placing of gravel wearing course, as this will not be paid for separately.

In addition to provision of this clause, Contractor is required to sprinkle water at least 4 times a day at the rate of 1 to 1.4 litres/day in regular interval to minimise the effects of dust. Latest sprinkling time shall be one hour before the sunset.

906 PASSAGE OF TRAFFIC THROUGH THE WORKS

The Contractor shall arrange for passage of traffic through the works during construction whenever it is not practicable to make deviations.

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

In addition to provision of clause 909, Contractor shall maintain close liaison with the relevant authorities to clear any broken down 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

(a) **Passage of traffic through the works**

Payment shall be made on Lump Sum basis.

(b) **Construct Deviation**

(i) **Road Deviation**

The Contractor shall be paid only 50% of the rate for this when he completes deviation road to the satisfaction of the Engineer. The balance shall be paid

in equal monthly instalments over the contract period, as he satisfactorily maintains the deviation (as per clause 904 and 905 above) when it is in operation.

(ii) Deviation using Pipe Culverts

The Contractor shall be paid only 50% of the rate for this when he completes deviation to the satisfaction of the Engineer. The balance shall be paid in equal monthly instalments over the contract period, as he satisfactorily maintains the deviation when it is in operation. The Contractor shall be paid full amount when the bridge under construction will be in use.

(c) Assistance to Public

The Contractor will be deemed to have included cost of this item in other items and no separate payment shall be made.

SECTION 10 – MATERIAL REQUIREMENTS FOR GRAVEL WEARING COURSE

In addition to the requirements of the Standard Specifications, the material for gravel wearing course shall be subject to prior approval of the Engineer and shall meet the following requirements.

Grading

Grading of compacted gravel layer shall be within the following grading envelope:-

Sieve Size (mm)	% By Weight Passing
37.5	-
28	100
20	95-100
14	80-100
10	65-100
5	45-85
2	30-68
1	25-56
0.425	18-44
0.0075	12-32

Plasticity and bearing strength

1. Plasticity Modulus
Minimum 200, maximum 1200
2. Plasticity Index
Minimum 10, maximum 30
3. Bearing strength
CBR at 95% MDD (Modified AASHTO) and 4 days soak: minimum 20

Measurement and payment

Unit: m³ of gravel wearing course placed and compacted.

The volume of gravel wearing course shall be calculated as the product of the sectional area of the compacted gravel wearing course multiplied by the length of road gravelled as instructed.

The rate of gravel wearing course shall include for the cost of acquisition and provision of land for borrow pits, excavation and winning of gravel material, haulage, spreading, watering and compaction (including mixing and compaction with any existing or in-situ gravel material) as directed.

SECTION 17 - CONCRETE WORKS

1703 MATERIALS FOR CONCRETE

This work shall consist of placing selected approved material of 100mm minimum diameter on the foundation put after excavation to receive levelling concrete in accordance with these specifications and in conformity with the lines, grades and cross sections shown on the Drawings as directed by the Engineer.

(A) MATERIALS

Selected rock: The selected rock boulders to be placed for this work shall be hard, sound, durable quarry stones as approved by the Engineer. Samples of the stone to be used shall be submitted to and approved by the Engineer before any stone is placed.

The maximum size of the stone boulders shall be 300mm.

(b) Construction Method

After completion of the structural excavation the surface of the loose soil shall be levelled and compacted. Where required, the stone of the above sizes shall be placed in one layers of 250mm over the compacted bed where the bottom slab will rest. Coarse sand shall be spread to fill up the voids in the stone boulders, and compaction with vibratory compactors should be performed to make this layer dense whereon a concrete of levelling course shall be placed.

(c) Measurement and payment

Measurement for the bedding materials shall be made in cubic metres for the completed and accepted work, measured from the dimension shown on the Drawings, unless otherwise directed by the Engineer.

Payment for the bedding Materials for Levelling Concrete Works shall be full compensation for furnishing and placing all materials, all labour equipment, tools and all other items necessary for proper completion of the work in accordance with the Drawings and specifications and as directed by the Engineer.

1703(A) LEVELLING CONCRETE (CLASS 15/20) FOR BOTTOM SLAB INCLUSIVE OF COST OF FORM WORKS

This work shall consist of placing and levelling lean concrete class 15/20 over the prepared bed of stone boulders in the foundation for bottom slab and wing walls in accordance with these specifications and which conformity with the lines, grades, thickness and typical cross-sections shown on the drawings unless otherwise directed by the Engineer.

(a) Materials for Levelling Concrete

Requirement for the concrete class 15/20 is specified as follows:-

Design compressive strength (28) days	:	15N/mm ²
Maximum size of coarse aggregate	:	20mm
Maximum cement content	:	300 kg/m ³ .
Maximum water/cement ration of 50% with slump of 80mm.		

(b) Construction Method

The bed of stone boulders upon which the levelling concrete will be placed shall be smooth, compacted and true to the grades and cross-section shall be set to the required lines and grades.

(c) Measurement and payment

Measurement for levelling concrete (class 15/20) shall be made in cubic metres completed and accepted levelling concrete work measured in place which is done in accordance with the Drawings and the Specifications.

Payment for this work shall be the full compensation for furnishing and placing all materials, labour, equipment and tools, and other incidentals to Specifications and as directed by the Engineer.

Levelling Concrete Works (Class 15/20) for Box Culvert and wing walls inclusive of Cost of Form works.

1703(B) REINFORCING BARS OF WALLS AND SLABS

This work shall consist of furnishing, fabricating and placing in the concrete of the bottom slab, top slab, median wall, sidewalls, wing walls and aprons, reinforcing bars of the quality, type and size in accordance with these specifications in conformity with the requirements shown on the Drawings.

(a) Material:

Reinforcing bars shall be deformed and shall meet the requirements of British standard BS4461, unless otherwise called for the drawings or approved by the Engineer.

No reinforcing bar shall be delivered without a certificate guaranteeing the yield stress. The reinforcing bars shall be kept off the ground, free from dirt, oil, grease, or avoidable rust and stored within a building or provided with suitable covers.

If it is necessary for the Engineer to ascertain the quality of the reinforcing bars, the Contractor shall test the reinforcing bars, at his own expense, by means as directed by the Engineer.

(b) Construction Method

(i) Bar Bending Schedule:

The Engineer shall provide the Contractor with bending schedule showing the location types, sizes, bending dimensions and cut lengths of the reinforcing bar required to be fixed in the works.

(ii) Cutting and Bending:

Qualified personnel shall be employed for the cutting and bending, and proper application shall be provided for such work.

Bars shall be cut and bent cold to the dimensions indicated and with equipment and methods approved by the Engineer.

Stirrups and tie bars shall be bent around a pin having a diameter not less than 15 times the minimum diameter of the bar. Bends of other bars, where full tension in the bar may occur, shall be made around a pin having a diameter not less than 7.5 times the bar diameter as shown on the Drawings.

Reinforcing bars shall be accurately formed to the shapes and dimensions indicated on the Drawings, and shall be fabricated in a manner that will not injure the materials.

(c) Placing

Reinforcing bars shall be accurately placed in proper position, and so that they be firmly held during placing of concrete.

Bars shall be tied at all intersections by using annealed iron wire 0.9mm or larger diameter, or suitable clips.

Distances from the forms shall be maintained, corrected by means of metal hangers, metal blocks, metal supports or other supports approved by the Engineer.

The Engineer shall inspect reinforcing bars after placing. When a long time has elapsed after placing reinforcing bars, they shall be cleaned and inspected again by the Engineer before placing concrete.

(d) Splicing and Joint

When it is necessary to splice reinforcing bars at points, position and methods of splicing shall be determined based on strength calculations and approved by the Engineer.

In lapped splices, the bars shall be lapped by the required length, and wired together at several points by using annealed iron wire larger than 0.9mm.

Exposed reinforcing bars intended for bonding with future extensions shall be effectively protected from injury and corrosion.

Oxyacetylene welding joint of reinforcing steel shall be done only if authorised by the Engineer in writing.

(e) Measurement and Payment

Bending and installation of reinforcing bar of piers and abutments shall be measured in terms of tons. The length of steel bar of each size will be shown on the drawings in which the bar length for splicing is excluded. In computing the weight to be measured, the theoretical weights of bars of the cross-section shown on the Drawings or authorised shall be used.

These weights are given in the following table: -

Bar type and the Cross-section in millimetres	Weight of Bar in Kilogramme— per 12m length of bar
Y10	7.40
Y12	10.66
Y16	18.95
Y20	29.60
Y25	46.30

1703 (C) FORMWORK FOR CULVERT WALLS AND SLABS

This work shall consist of all temporary moulds for forming the concrete for culvert walls and slabs together with all temporary construction required for their support. Unless otherwise directed by the Engineer all formworks shall be removed on completion of the walls and slabs.

(a) 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.

(b) Construction Method

1) Formworks

Formworks shall be designed to carry the maximum loads which 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. PVC pipes of 50mm diameter 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.

b. 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.

c. Removal of formwork

The time at which the formwork is truck shall be the Contractor's responsibility and the forms shall not be removed until the concrete strength has reached 20 N/mm^2 .

d. Measurement and Payment

Formwork shall be measured as the net area, in square metres, in contact with the finished concrete surface of the walls and slabs. No measurement shall be allowed for formwork of temporary construction joints.

Payment for the Formworks shall be full compensation for furnishing, erecting, jointing all the forms for the concrete including furnishing and applying release agent, and construction of the required scaffolding to support the forms, all conforming to the shape, lines, grade and dimensions of the structure as shown on the Drawings, all in accordance with the Drawings and as directed by the Engineer.

1703(D) CONCRETE WORKS (CLASS 25/20)

This work shall consist of furnishing, mixing, delivering and placing of the concrete for the construction of 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 wingwalls and slabs. The requirements of Concrete class 25/20 are provided as follows unless otherwise the Engineer will designate any alteration.

Design compressive strength (28 days)	: 25 N/mm^2
Maximum size of coarse aggregates	: 20mm
Maximum water/cement ratio of 45% with slump of 80mm	

a) Concrete Materials

1. Cement:

Cement shall be of Ordinary Portland type and shall conform to the requirements of BS 12 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 has been stored too long, moist, or caked, the cement shall be rejected and removed from the project.

2. 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:

a) Grading of Fine Aggregates

Sieve Size	Percentage by Weight Passing
10 mm	100
6.3mm	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

Grading of Coarse Aggregates

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

c) Other requirements for aggregates are as follows:

i. 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

ii. Coarse Aggregate

Abrasion, AASGTO T96	: Max. 405 loss
Soft Fragment and shale, AASHTO M80	: Max. 5% by weight
Thin and elongated Pieces, AASHTO M80	: Max. 15%

3. 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.

4. 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.

b) 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 its job-mix proportions have been approved by the Engineer.

c) Concrete Work

(i) Batching shall be done by weight with accuracy of:

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

(ii) 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.

(iii) Mixing and delivery

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

(iv) Concrete in hot weather

No concrete shall be placed when the ambient air temperature is expected to exceed thirty three degrees celsius (33⁰c) during placement operations.

(v) 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.

(vi) 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.

d) Measurement and Payment

Measurements for the Concrete Works 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 and other incidental 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

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.

SECTION 12: BILLS OF QUANTITIES

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 Day works) in the Bills of Quantities shall be expended in whole or in part at the discretion of the Engineer.
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.

SPOT IMPROVEMENT OF BISSIL – ORMOTIOK ROAD

BILL NO. 1 : PRELIMINARY AND SUPERVISORY SERVICES
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ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (KSHS)
1.01	Field Supervision	No.	1	2,000,000.00	2,000,000.00
1.02	Include a percentage of item 1.01 for Contractor's overheads and profits	%			
1.03	Provide, erect and and maintain publicity signs as directed by the Engineer	No.	2		
	Total Carried forward to summary page				

BILL NO. 4 : SITE CLEARANCE AND TOPSOIL STRIPPING

[illegible]

[illegible]

Total carried forward to summary page

BILL NO. 7 : EXCAVATION AND FILLING FOR STRUCTURES					
		UNIT	QUANTITY	RATE	AMOUNT (KSHS)
7.01	Excavate for structure in soft material	m ³	600		
7.02	Excavate for structure but in hard material	m ³	200		
7.03	Provide gabions (1x1x2) and fix into position as instructed by the Engineer.	No	100		
7.04	Provide and place into position rock fill to gabion boxes.	M ³	200		
7.05	Provide, water and compact selected fill material for structure	M ³	640		
Total carried forward to summary page					

BILL NO. 8 : CULVERTS AND DRAINAGE WORKS					
	Note: No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excavation materials and the cost of such shall be included in the rate and price	UNIT	QUANTITY	RATE	AMOUNT (KSHS)
8.01	Excavate for culverts, provide, lay and joint 600mm I.D. Concrete pipes including class 15/20 for blinding and surround and class 20/20 for headwalls, wingwalls and aprons.	m	64		
8.02	As 8.03 but 900mm I.D.	m	64		
8.03	As 8.03 but 1200mm I.D.	m	30		
8.04	Allow for demolition of existing structures	No	1	240,000.00	240,000.00
8.05	Stone pitching	M ²	200		
Total carried forward to summary page					

[illegible]

BILL NO.17: CONCRETE WORKS					
		UNIT	QUANTITY	RATE	AMOUNT (KSHS)
17.01	Provide concrete class 15/20 for blinding 100mm thick	m³	42		
17.02	Provide concrete class 25/20 for base, slabs, walls and aprons	m³	596		
17.03	Provide and fabricate formwork class f2 finish	m²	1,664		
17.04	Provide and fix into position as per the drawings reinforcement bars of high yield strength to BS 4461	ton	45		
17.05	Weep holes	no	100		
Total carried forward to summary					

[illegible]

BILL NO. 22 : DAY WORKS	
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[illegible]

SUMMARY OF BILLS OF QUANTITIES		
ITEM	DESCRIPTION	AMOUNT (KSHS)
1	PRELIMINARY	
4	SITE CLEARANCE AND TOPSOIL STRIPPING	
5	EARTHWORKS	
7	EXCAVATION AND FILLING FOR STRUCTURES	
8	CULVERTS AND DRAINAGE WORKS	
10	GRADING AND GRAVELLING WORKS	
17	CONCRETE WORKS	
20	ROAD FURNITURE	
22	DAY WORKS	
A	SUB-TOTAL 1	
B	Add 16% of Sub-total 1 for Value Added Tax	
	GRAND TOTAL CARRIED TO FORM OF BID	

SECTION 13: DRAWINGS
(See book of drawings)