



**Kenya National Highways Authority**

*Quality Highways, Better Connections*

**TENDER NO. KeNHA/2884/2025**

**TENDER DOCUMENT FOR UPGRADING TO  
BITUMEN STANDARDS OF KAKAMEGA  
AIRSTrip – SHINYALU – CHEPSONOI (B12)  
ROAD**

**JUNE 2025**

**DIRECTOR DEVELOPMENT  
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AUTHORITY  
P.O. BOX 49712-00100  
NAIROBI**

**DIRECTOR GENERAL  
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## **SECTION I**

## **INVITATION TO TENDER**

**UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI  
(B12) ROAD**

The Kenya National Highways Authority (KeNHA) is a State Corporation established under the Kenya Roads Act, 2007, with the responsibility for the management, development, rehabilitation and maintenance of national roads.

The Authority invites bids from eligible construction companies registered with the **National Construction Authority (NCA) in Category 1** or equivalent for foreign contractors (however the successful tenderer shall register with the NCA before the signing of the contract) for the **UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD** to be funded through the Government of Kenya Development Fund.

**SCOPE OF WORK**

The scope of works shall be as described in the tender document.

**QUALIFICATION FOR TENDERING**

**Mandatory Requirements**

The following **MUST** be submitted together with the bid;

1. **Copy of Certificate of Incorporation or Certificate of Compliance** for Foreign Contractors.
2. **Copy of Valid Annual Practicing Licence** with the National Construction Authority in the class specified above for Citizen Contractors.
3. **Copy of Valid Tax Compliance Certificate**
4. **Copy of a recent CR12 form** (or its equivalent for international firms) issued by the Registrar of Companies, showing the list of directors and ownership structure. *The CR12 form must be dated not earlier than six (6) months from the bid submission deadline.*
5. **Bidders must sequentially serialize all pages** for each bid document submitted.
6. **The tender must be accompanied by a Kenya Shillings Five Million Only (Kshs 5,000,000.00) Tender Security.**

**Other Requirements**

As specified in the tender documents, covering the following: -

1. **Similar previous experience.**
2. **Equipment holding** as per Appendix 1.
3. **Professional and technical personnel.**
4. **Current work load, Litigation history** and Current Sworn Affidavit (i.e. dated within three months of the tender opening date)
5. **Eligibility**
  - a. Director (s) bidding under different companies for the same tender shall be disqualified
  - b. Director (s) bidding under different companies should not participate in more than Two (2) tenders
  - c. Only those bidders registered in the **NCA 1 category** (as indicated in the tender document) shall bid as a **Single Domestic bidder** or its equivalent in case of Foreign Contractors.
  - d. Bidders to comply with Section 157 of the Public Procurement and Asset Disposal Act, 2015 (PPADA, 2015) on participation of candidates in preference and reservations

- e. Bidders with history of **Non-performance** (e.g., failure to complete the projects in the last three (3) Financial Years, notice of termination or termination of contracts in the last three (3) Financial Years will be disqualified.

## 1. Additional Notes

- i. **Procurement Method:**
  - Procurement shall be based on the **post qualification method**, and the above details must be submitted with the priced bid.
- ii. **Document Verification**
  - All submitted documents may be verified with the issuing agencies to confirm their authenticity.
  - **KeNHA reserves the right to verify all submitted documents.**
- iii. **Canvassing**
  - Any form of canvassing will lead to **disqualification**.

There shall be a **mandatory Pre-Tender site visits on date, time and meeting venue as detailed in the Tender Notice Advert**

### NOTE:

Every Bidder shall be represented by one Technical Person with a Minimum qualification of a Bsc/Btech in Civil/Highway Engineering. The Individual **SHALL** bring along the following in hard copies:

1. Original ID/Passport and a **CERTIFIED** Copy
2. **CERTIFIED** copy of Degree Certificate
3. **CERTIFIED** Copy of Registration Certificate and proof of current subscription by Engineers Board of Kenya (EBK) / Institute of Engineers of Kenya (IEK)
4. Original Introductory letter bearing the Company letterhead and an Official Stamp authorizing them to represent them in the specific pre-tender site visit/Pre-Tender Conference. The letter shall be duly signed. Photocopies or any other media shall not be accepted.
  - The copies of ID/Passport, Academic Certificates, Professional Registration Certificate, proof of current subscription **SHALL** be certified by commissioner of oaths or Notaries public
  - All the above documents shall be retained by the Procuring Entity's and may be verified later for authenticity.

**One (1) person shall only represent one (1) company per Tender.**

The detailed tender notice is available in the KeNHA website and Public Procurement Information Portal (PIIP). Clarifications and Questions may be sent to [procurement@kenha.co.ke](mailto:procurement@kenha.co.ke) as indicated in the Tender Notice.

### NOTE:

1. Every bidder shall make their own arrangements to familiarize themselves with the site conditions and the Road and its features.
2. **Clarity on Serialization of Tender Documents by Prospective Bidders**

Please note that all pages of the tender documents submitted by bidders shall be sequentially serialized numerically that is; 1,2,3,4,5...etc. The serialization shall be undertaken by the bidder, by doing fresh numbering on its documents. The pagination of the tender documents as downloaded from the KeNHA website should not be used as a means of Serialization. The bidder's serialization should follow the same logical sequence from the first page to the end.

Interested eligible candidates may obtain further information and inspect tender documents from the Kenya National Highways Authority Headquarters, Barabara Plaza during normal working hours.

A complete set of tender documents may be obtained by interested tenderers from the Kenya National Highways Authority website: [www.kenha.co.ke](http://www.kenha.co.ke) or PPIP portal: [www.tenders.go.ke](http://www.tenders.go.ke) free of charge. Bidders are encouraged to download tender documents to minimise physical visits to **KeNHA Headquarters Office**.

Completed tender documents are to be enclosed in plain sealed envelope clearly marked with tender name, reference number and submitted to: -

**Deputy Director – Supply Chain Management**  
**Kenya National Highways Authority Headquarters, Barabara Plaza,**  
**Jomo Kenyatta International Airport (JKIA), Nairobi, Off Mazao Road,**  
**Block C - 2nd Floor Board Room.**

or

deposited in the Tender Box at the reception area, KeNHA - Block C - 2nd Floor Board Room so as to be received on or before the date and time indicated in the **Tender Notice**.

All interested bidders are required to continually check the Kenya National Highways Authority website: [www.kenha.co.ke](http://www.kenha.co.ke) for any tender addendums or clarifications that may arise before submission date specified in the Tender Notice.

Tenders will be opened immediately thereafter in the presence of Tenderers/Representatives who wish to attend at **the Kenya National Highways Authority Headquarters, Barabara Plaza, Jomo Kenyatta International Airport (JKIA), Nairobi, Off Mazao Road, Block C - 2nd Floor Board Room.**

**Deputy Director, Supply Chain Management**  
**For: DIRECTOR GENERAL**

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## **PART 1    TENDERING PROCEDURES**

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## SECTION II - INSTRUCTIONS TO TENDERERS

### **A. GENERAL PROVISIONS**

#### **1. Scope of Tender**

The Procuring Entity as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The name, identification, and number of lots (contracts) of this Tender Document are **specified in the TDS**.

#### **2. Fraud and Corruption**

- 2.1 The Procuring Entity requires compliance with the provisions of the Public Procurement and Asset Disposal Act, 2015, Section 62 “Declaration not to engage in corruption”. The tender submitted by a person shall include a declaration that the person shall not engage in any corrupt or fraudulent practice and a declaration that the person or his or her sub-contractors are not debarred from participating in public procurement proceedings.
- 2.2 The Procuring Entity requires compliance with the provisions of the Competition Act 2010, regarding collusive practices in contracting. Any tenderer found to have engaged in collusive conduct shall be disqualified and criminal and/or civil sanctions may be imposed. To this effect, Tenders shall be required to complete and sign the “Certificate of Independent Tender Determination” annexed to the Form of Tender.
- 2.3 Tenderers shall permit and shall cause their agents (where declared or not), subcontractors, sub-consultants, service providers, suppliers, and their personnel, to permit the Procuring Entity to inspect all accounts, records and other documents relating to any initial selection process, pre-qualification process, tender submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Procuring Entity.
- 2.4 Unfair Competitive Advantage -Fairness and transparency in the tender process require that the firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender. To that end, the Procuring Entity shall indicate in the **Data Sheet** and make available to all the firms together with this tender document all information that would in that respect give such firm any unfair competitive advantage over competing firms.

#### **3. Eligible Tenderers**

- 3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.8, or an individual or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender. The maximum number of JV members shall be specified in the **TDS**.
- 3.2 Public Officers of the Procuring Entity, their Spouses, Child, Parent, Brothers or Sister. Child, Parent, Brother or Sister of a Spouse, their business associates or agents and firms/organizations in which they have a substantial or controlling interest shall not be eligible to tender or be awarded a contract. Public Officers are also not allowed to participate in any procurement proceedings.
- 3.3 A Tenderer shall not have a conflict of interest. Any tenderer found to have a conflict of interest shall be disqualified. A tenderer may be considered to have a conflict of interest for the purpose of this

tendering process, if the tenderer:

- a) Directly or indirectly controls, is controlled by or is under common control with another tenderer; or
  - b) Receives or has received any direct or indirect subsidy from another tenderer; or
  - c) Has the same legal representative as another tenderer; or
  - d) Has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process; or
  - e) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods or works that are the subject of the tender; or
  - f) any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as a consultant for Contract implementation; or
  - g) Would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the contract specified in this Tender Document; or
  - h) Has a close business or personal relationship with senior management or professional staff of the Procuring Entity who has the ability to influence the bidding process and:
    - i) are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract; or
    - ii) May be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.
- 3.4 A tenderer shall not be involved in corrupt, coercive, obstructive or fraudulent practice. A tenderer that is proven to have been involved in any of these practices shall be automatically disqualified.
- 3.5 A Tenderer (either individually or as a JV member) shall not participate in more than one Tender, except for permitted alternative tenders. This includes participation as a subcontractor in other Tenders. Such participation shall result in the disqualification of all Tenders in which the firm is involved. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender.
- 3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT3.9. A Tenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or sub-consultants for any part of the Contract including related Services.
- 3.7 A Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA [www.ppra.go.ke](http://www.ppra.go.ke).
- 3.8 A Tenderer that is a state-owned enterprise or a public institution in Kenya may be eligible to tender and be awarded a Contract(s) only if it is determined by the Procuring Entity to meet the following conditions, i.e. if it is:
- i) A legal public entity of Government and/or public administration,
  - ii) financially autonomous and not receiving any significant subsidies or budget support from any public entity or Government, and
  - iii) Operating under commercial law and vested with legal rights and liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.
- 3.9 Firms and individuals shall be ineligible if their countries of origin are:

- a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country, or
- b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.

A tenderer shall provide such documentary evidence of eligibility satisfactory to the Procuring Entity, as the Procuring Entity shall reasonably request.

- 3.10 Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, local subcontracts and labor) from citizen suppliers and contractors. To this end, a foreign tenderer shall provide in its tender documentary evidence that this requirement is met. Foreign tenderers not meeting this criterion will be automatically disqualified. Information required to enable the Procuring Entity determine if this condition is met shall be provided for this purpose in *“SECTION III-EVALUATION AND QUALIFICATION CRITERIA, Item 9”*.
- 3.11 Pursuant to the eligibility requirements of ITT4.10, a tender is considered a foreign tenderer, if the tenderer is not registered in Kenya or if the tenderer is registered in Kenya and has less than 51 percent ownership by Kenyan citizens. JVs are considered as foreign tenderers if the individual member firms are not registered in Kenya or if are registered in Kenya and have less than 51 percent ownership by Kenyan citizens. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.
- 3.12 The National Construction Authority Act of Kenya requires that all local and foreign contractors be registered with the National Construction Authority and be issued with a Registration Certificate before they can undertake any construction works in Kenya. Registration shall not be a condition for tender, but it shall be a condition of contract award and signature. A selected tenderer shall be given opportunity to register before such award and signature of contract. Application for registration with National Construction Authority may be accessed from the website [www.nca.go.ke](http://www.nca.go.ke).
- 3.13 The Competition Act of Kenya requires that firms wishing to tender as Joint Venture undertakings which may prevent, distort or lessen competition in provision of services are prohibited unless they are exempt in accordance with the provisions of Section 25 of the Competition Act, 2010. JVs will be required to seek for exemption from the Competition Authority. Exemption shall not be a condition for tender, but it shall be a condition of contract award and signature. A JV tenderer shall be given opportunity to seek such exemption as a condition of award and signature of contract. Application for exemption from the Competition Authority of Kenya may be accessed from the website [www.cak.go.ke](http://www.cak.go.ke).
- 3.14 A Kenyan tenderer shall be eligible to tender if it provides evidence of having fulfilled his/her tax obligations by producing a valid tax compliance or valid tax certificate issued by the Kenya Revenue Authority.

#### **4. Eligible Goods, Equipment, and Services**

- 4.1 Goods, equipment and services to be supplied under the Contract may have their origin in any country that is not ineligible under ITT3.9. At the Procuring Entity's request, Tenderers may be required to provide evidence of the origin of Goods, equipment and services.
- 4.2 Any goods, works and production processes with characteristics that have been declared by the relevant national environmental protection agency or by other competent authority as harmful to human beings and to the environment shall not be eligible for procurement.

#### **5. Tenderer's Responsibilities**

- 5.1 The tenderer shall bear all costs associated with the preparation and submission of his/her tender, and the Procuring Entity will in no case be responsible or liable for those costs.

- 52 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the Site of the Works and its surroundings and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the tenderer's own expense.
- 53 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter up on its premises and lands for the purpose of such visit. The Tenderer shall indemnify the Procuring Entity against all liability arising from death or personal injury, loss of or damage to property, and any other losses and expenses incurred as a result of the examination and inspection.
- 54 The tenderer shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including charts, as necessary or required.

## **B. CONTENTS OF TENDER DOCUMENTS**

### **6. Sections of Tender Document**

- 6.1 The tender document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT10.

#### **PART 1: Tendering**

##### **Procedures** Section I:

Instructions to Tenderers

Section II: Tender Data Sheet  
(TDS)

Section III: Evaluation and Qualification

Criteria Section IV: Tendering Forms

#### **PART 2: Works'**

##### **Requirements** Section V:

Bills of Quantities Section

VI: Specifications Section

VII: Drawings

#### **PART3: Conditions of Contract and Contract**

**Forms** Section VIII: General Conditions

(GCC) Section IX: Particular Conditions of

Contract Section X: Contract Forms

- 62 The Invitation to Tender Notice issued by the Procuring Entity is not part of the Contract documents.
- 63 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of a pre-arranged site visit and those of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 10. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.
- 64 The Tenderer is expected to examine all instructions, forms, terms, and specifications in the Tender Document and to furnish with its Tender all information and documentation as is required by the Tender document.

### **7. Clarification of Tender Document, Site Visit, Pre-Tender Meeting**

- 7.1 Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address **specified in the TDS** or raise its enquiries during the pre-Tender meeting if provided for in accordance with ITT 7.2. The Procuring Entity will respond in writing to any request for clarification, provided that such request is received no later than the period

specified in the **TDS** prior to the deadline for submission of tenders. The Procuring Entity shall forward copies of its response to all tenderers who have acquired the Tender D documents in accordance with ITT 7.4, including a description of the inquiry but without identifying its source. If so specified in the **TDS**, the Procuring Entity shall also promptly publish its response at the web page identified in the **TDS**. Should the clarification result in changes to the essential elements of the Tender Documents, the Procuring Entity shall amend the Tender Documents following the procedure under ITT 8 and ITT 22.2.

- 72 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the site(s) of the required contracts and obtain all information that may be necessary for preparing a tender. The costs of visiting the Site shall be at the Tenderer's own expense. The Procuring Entity shall specify in the **TDS** if a pre- arranged Site visit and or a pre-tender meeting will be held, when and where. The Tenderer's designated representative is invited to attend a pre-arranged site visit and a pre-tender meeting, as the case may be. The purpose of the site visit and the pre-tender meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 73 The Tenderer is requested to submit any questions in writing, to reach the Procuring Entity not later than the period specified in the **TDS** before the meeting.
- 74 Minutes of a pre-arranged site visit and those of the pre-tender meeting, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents. Minutes shall not identify the source of the questions asked.
- 75 The Procuring Entity shall also promptly publish anonymized (*no names*) Minutes of the pre-arranged site visit and those of the pre-tender meeting at the web page identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-arranged site visit and those of the pre-tender meeting shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT 8 and not through the minutes of the pre-Tender meeting. Non-attendance at the pre-arranged site visit and the pre-tender meeting will not be a cause for disqualification of a Tenderer.

## **8 Amendment of Tender Documents**

- 8.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tender Documents by issuing addenda.
- 8.2 Any addendum issued shall be part of the Tender Documents and shall be communicated in writing to all who have obtained the Tender Documents from the Procuring Entity. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's website in accordance with ITT 7.5.
- 8.3 To give Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity should extend the deadline for the submission of Tenders, pursuant to ITT 22.2.

## **C. PREPARATION OF TENDERS**

### **9. Cost of Tendering**

The Tenderer shall meet all costs associated with the preparation and submission of its Tender, and the Procuring Entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

### **10. Language of Tender**

The Tender, as well as all correspondence and documents relating to the tender exchanged by the tenderer and the Procuring Entity, shall be written in the English Language. Supporting documents and printed literature that are part of the Tender may be in another language provided they are accompanied

by an accurate and notarized translation of the relevant passages into the English Language, in which case, for purposes of interpretation of the Tender, such translation shall govern.

## **11. Documents Comprising the Tender**

### **11.1 The Tender shall comprise the following:**

- a) Form of Tender prepared in accordance with ITT 12;
- b) Schedules including priced Bill of Quantities, completed in accordance with ITT 12 and ITT 14;
- c) Tender Security or Tender-Securing Declaration, in accordance with ITT 19.1;
- d) Alternative Tender, if permissible, in accordance with ITT 13;
- e) Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 20.3;
- f) Qualifications: documentary evidence in accordance with ITT 17 establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
- g) Conformity: a technical proposal in accordance with ITT 16;
- h) Any other document required in the TDS.

### **11.2 In addition to the requirements under ITT 11.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Tender shall be signed by all members and submitted with the Tender, together with a copy of the proposed JV Agreement. Change of membership and conditions of the JV prior to contract signature will render the tender liable for disqualification.**

## **12. Form of Tender and Schedules**

### **12.1 The Form of Tender and Schedules, including the Bill of Quantities, shall be prepared using the relevant forms furnished in Section IV, Tendering Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITT 20.3. All blank spaces shall be filled in with the information requested. The Tenderer shall chronologically serialize all pages of the tender documents submitted.**

### **12.2 The Tenderer shall furnish in the Form of Tender information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Tender.**

## **13. Alternative Tenders**

### **13.1 Unless otherwise specified in the TDS, alternative Tenders shall not be considered.**

### **13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the **TDS**, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.**

### **13.3 Except as provided under ITT13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Tenderer with the Winning Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.**

### **13.4 When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the **TDS**, as will the method for their evaluating, and described in Section VII, Works' Requirements.**

## **14. Tender Prices and Discounts**



- 14.1 The prices and discounts (including any price reduction) quoted by the Tenderer in the Form of Tender and in the Bill of Quantities shall conform to the requirements specified below.
- 14.2 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Procuring Entity. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Tender, and provided that the Tender is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Tenderers will be added to the Tender price and the equivalent total cost of the Tender so determined will be used for price comparison.
- 14.3 The price to be quoted in the Form of Tender, in accordance with ITT 12, shall be the total price of the Tender, including any discounts offered.
- 14.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 12
- 14.5 It will be specified in the **TDS** if the rates and prices quoted by the Tenderer are or are not subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, excepting cases where the contract is subject to fluctuations and adjustments, not fixed price. In such a case, the Tenderer shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Procuring Entity may require the Tenderer to justify its proposed indices and weightings.
- 14.6 Where tenders are being invited for individual lots (contracts) or for any combination of lots (packages), tenderers wishing to offer discounts for the award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 14.4, provided the Tenders for all lots (contracts) are opened at the same time.
- 14.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of Tenders, shall be included in the rates and prices and the total Tender Price submitted by the Tenderer.

## **15. Currencies of Tender and Payment**

- 15.1 The currency (ies) of the Tender and the currency (ies) of payments shall be the same.
- 15.2 Tenderers shall quote entirely in Kenya Shillings. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya shillings
- a) A Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya (referred to as “the foreign currency requirements”) shall (if so allowed in the **TDS**) indicate in the Appendix to Tender the percentage(s) of the Tender Price (excluding Provisional Sums), needed by the Tenderer for the payment of such foreign currency requirements, limited to no more than two foreign currencies.
  - b) The rates of exchange to be used by the Tenderer in arriving at the local currency equivalent and the percentage(s) mentioned in (a) above shall be specified by the Tenderer in the Appendix to Tender and shall be based on the exchange rate provided by the Central Bank of Kenya on the date 30 days prior to the actual date of tender opening. Such exchange rate shall apply for all foreign payments under the Contract.
- 15.3 Tenderers may be required by the Procuring Entity to justify, to the Procuring Entity's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Schedule of Adjustment Data in the Appendix to Tender are reasonable, in which case a detailed breakdown of the foreign currency requirements shall be provided by Tenderers.

## **16. Documents Comprising the Technical Proposal**

The Tenderer shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Tender Forms, insufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

## **17. Documents Establishing the Eligibility and Qualifications of the Tenderer**

- 17.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT 4.
- 17.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract the Tenderer shall provide the information requested in the corresponding information sheets included in Section IV, Tender Forms.
- 17.3 If a margin of preference applies as specified in accordance with ITT33. 1, national tenderers, individually or in joint ventures, applying for eligibility for national preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.
- 17.4 Tenderers shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a particular contract or group of contractors qualifies for a margin of preference. Further the information will enable the Procuring Entity identify any actual or potential conflict of interest in relation to the procurement and/or contract management processes, or possibility of collusion between tenderers, and there by help to prevent any corrupt influence in relation to the procurement process or contract management.
- 17.5 The purpose of the information described in ITT 17.2 above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by the Procuring Entity as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.
- 17.6 The Tenderer shall provide further documentary proof, information or authorizations that the Procuring Entity may request in relation to ownership and control which information on any changes to the information which was provided by the tenderer under ITT 6.4. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.
- 17.7 All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to the Procuring Entity. In submitting the information required pursuant to these requirements, the Tenderer shall warrant that the information submitted is complete, current and accurate as at the date of submission to the Procuring Entity.
- 17.8 If a tenderer fails to submit the information required by these requirements, its tenderer will be rejected. Similarly, if the Procuring Entity is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.
- 17.9 If information submitted by a tenderer pursuant to these requirements, or obtained by the Procuring Entity (whether through its own enquiries, through notification by the public or otherwise), shows any conflict of interest which could materially and improperly benefit the tenderer in relation to the procurement or contract management process, then:
- i) If the procurement process is still on going, the tenderer will be disqualified from the procurement process,
  - ii) If the contract has been awarded to that tenderer, the contract award will be set aside,
  - iii) the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other persons have committed any criminal offence.



- 17.10 If a tenderer submits information pursuant to these requirements that is incomplete, inaccurate or out-of-date, or attempts to obstruct the verification process, then the consequences ITT 17.8 will ensue unless the tenderer can show to the reasonable satisfaction of the Procuring Entity that any such act was not material, or was due to genuine error which was not attributable to the intentional act, negligence or recklessness of the tender.

## **18. Period of Validity of Tenders**

- 18.1. Tenders shall remain valid for the Tender Validity period specified in the **TDS**. The Tender Validity period starts from the date fixed for the Tender submission deadline (as prescribed by the Procuring Entity in accordance with ITT 22). A Tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

- 18.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 19, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting their quest shall not be required or permitted to modify its Tender.

## **19. Tender Security**

- 19.1 The Tenderer shall furnish as part of its Tender, either a Tender-Securing Declaration or a Tender Security as specified in the **TDS**, in original form and, in the case of a Tender Security, in the amount and currency **specified in the TDS**. A Tender-Securing Declaration shall use the form included in Section IV, Tender Forms.
- 19.2 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security shall be a demand guarantee in any of the following forms at the Tenderer's option:
- i) cash;
  - ii) a bank guarantee;
  - iii) a guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority listed by the Authority; or
  - iv) a guarantee issued by a financial institution approved and licensed by the Central Bank of Kenya, from a reputable source, and an eligible country.
- 19.3 If an unconditional bank guarantee is issued by a bank located outside Kenya, the issuing bank shall have a correspondent bank located in Kenya to make it enforceable. The Tender Security shall be valid for thirty (30) days beyond the original validity period of the Tender, or beyond any period of extension if requested under ITT 18.2.
- 19.4 If a Tender Security or Tender-Securing Declaration is specified pursuant to ITT 19.1, any Tender not accompanied by a substantially responsive Tender Security or Tender-Securing Declaration shall be rejected by the Procuring Entity as non-responsive.
- 19.5 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security of unsuccessful Tenderers shall be returned as promptly as possible upon the successful Tenderer's signing the Contract and furnishing the Performance Security and any other documents required in the TDS. The Procuring Entity shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined non-responsive or a bidder declines to extend tender validity period.
- 19.6 The Tender Security of the successful Tenderer shall be returned as promptly as possible once the successful Tenderer has signed the Contract and furnished the required Performance Security, and any other documents required in the TDS.
- 19.7 The Tender Security may be forfeited or the Tender-Securing Declaration executed:
- a) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension there to provided by the Tenderer; or

- b) if the successful Tenderer fails to:
  - i) sign the Contract in accordance with ITT 47; or
  - ii) furnish a Performance Security and if required in the TDS, and any other documents required in the TDS.
- 19.8 Where tender securing declaration is executed, the Procuring Entity shall recommend to the PPRA that PPRA debars the Tenderer from participating in public procurement as provided in the law.
- 19.9 The Tender Security or the Tender-Securing Declaration of a JV shall be in the name of the JV that submits the Tender. If the JV has not been legally constituted into a legally enforceable JV at the time of tendering, the Tender Security or the Tender-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITT 4.1 and ITT 11.2.
- 19.10 A tenderer shall not issue a tender security to guarantee itself.

## **20. Format and Signing of Tender**

- 20.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 11 and clearly mark it “ORIGINAL.” Alternative Tenders, if permitted in accordance with ITT 13, shall be clearly marked “ALTERNATIVE.” In addition, the Tenderer shall submit copies of the Tender, in the number **specified in the TDS** and clearly mark them “COPY.” In the event of any discrepancy between the original and the copies, the original shall prevail.
- 20.2 Tenderers shall mark as “CONFIDENTIAL” all information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.
- 20.3 The original and all copies of the Tender shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Tenderer. This authorization shall consist of a written confirmation as specified in the **TDS** and shall be attached to the Tender. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Tender where entries or amendments have been made shall be signed or initialed by the person signing the Tender.
- 20.4 In case the Tenderer is a JV, the Tender shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- 20.5 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Tender.

## **D. SUBMISSION AND OPENING OF TENDERS**

### **21. Sealing and Marking of Tenders**

- 21.1 The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Procuring Entity and a warning not to open before the time and date for Tender opening date. Within the single envelope, package or container, the Tenderer shall place the following separate, sealed envelopes:
  - a) in an envelope or package or container marked “ORIGINAL”, all documents comprising the Tender, as described in ITT 11; and
  - b) in an envelope or package or container marked “COPIES” all required copies of the Tender; and
  - c) if alternative Tenders are permitted in accordance with ITT 13, and if relevant:
    - i) in an envelope or package or container marked “ORIGINAL - ALTERNATIVE TENDER”, the alternative Tender; and

- ii) in the envelope or package or container marked “COPIES-ALTERNATIVE TENDER”, all required copies of the alternative Tender.

The inner envelopes or packages or containers shall:

- a) bear the name and address of the Procuring Entity.
- b) Bear the name and address of the Tenderer; and
- c) Bear the name and Reference number of the Tender.

- 21.2 If an envelope or package or container is not sealed and marked as required, the *Procuring Entity* will assume no responsibility for the misplacement or premature opening of the Tender. Tenders that were misplaced or opened prematurely will not be accepted.

## **22. Deadline for Submission of Tenders**

- 22.1 Tenders must be received by the Procuring Entity at the address specified in the **TDS** and no later than the date and time also specified in the **TDS**. When so specified in the **TDS**, Tenderers shall have the option of submitting their Tenders electronically. Tenderers submitting Tenders electronically shall follow the electronic Tender submission procedures specified in the **TDS**.
- 22.2 The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders by amending the Tender Documents in accordance with ITT 8, in which case all rights and obligations of the Procuring Entity and Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

## **23. Late Tenders**

The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 22. Any Tender received by the Procuring Entity after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the Tenderer.

## **24. Withdrawal, Substitution, and Modification of Tenders**

- 24.1 A Tenderer may withdraw, substitute, or modify its Tender after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITT 20.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:
- a) prepared and submitted in accordance with ITT 20 and ITT 21 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” “MODIFICATION;” and
  - b) received by the Procuring Entity prior to the deadline prescribed for submission of Tenders, in accordance with ITT 22.
- 24.2 Tenders requested to be withdrawn in accordance with ITT 24.1 shall be returned unopened to the Tenderers.
- 24.3 No Tender may be withdrawn, substituted, or modified in the interval between the deadline for submission of Tenders and the expiration of the period of Tender validity specified by the Tenderer on the Form of Tender or any extension thereof.

## **25. Tender Opening**

- 25.1 Except in the cases specified in ITT 23 and ITT 24.2, the Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified **in the TDS**, in the presence of Tenderers' designated representatives and anyone who chooses to attend. Any specific

electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 22.1, shall be as specified in the **TDS**.

- 25.2 First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelopes with the corresponding Tender shall not be opened but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at tender opening.
- 25.3 Next, envelopes marked “SUBSTITUTION” shall be opened and read out and exchanged with the corresponding Tender being substituted, and the substituted Tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Tender opening.
- 25.4 Next, envelopes marked “MODIFICATION” shall be opened and read out with the corresponding Tender No. Tender modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Tender opening.
- 25.5 Next, all remaining envelopes shall be opened on eata time, reading out: the name of the Tenderer and whether there is a modification; the total Tender Price, per lot (contract) if applicable, including any discounts and alternative Tenders; the presence or absence of a Tender Security or Tender-Securing Declaration, if required; and any other details as the Procuring Entity may consider appropriate.
- 25.6 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further for evaluation. The Form of Tender and pages of the Bill of Quantities (to be decided on by the tender opening committee) are to be initialed by the members of the tender opening committee attending the opening.
- 25.7 At the Tender Opening, the Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 23.1).
- 25.8 The Procuring Entity shall prepare minutes of the Tender Opening that shall include, as a minimum:
- a) The name of the Tenderer and whether there is a withdrawal, substitution, or modification;
  - b) The Tender Price, per lot (contract) if applicable, including any discounts;
  - c) any alternative Tenders;
  - d) the presence or absence of a Tender Security, if one was required.
  - e) number of pages of each tender document submitted.
- 25.9 The Tenderers' representatives who are present shall be requested to sign the minutes. The omission of a Tenderer's signature on the minutes shall not invalidate the contents and effect of the minutes. A copy of tender opening register shall be issued to a tenderer upon request.

## **E. Evaluation and Comparison of Tenders**

### **26 Confidentiality**

- 26.1 Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 43.
- 26.2 Any effort by a Tenderer to influence the Procuring Entity in the evaluation of the Tenders or Contract award decisions may result in the rejection of its tender.
- 26.3 Notwithstanding ITT 26.2, from the time of tender opening to the time of contract award, if a tenderer wishes to contact the Procuring Entity on any matter related to the tendering process, it shall do so in writing.

## **27. Clarification of Tenders**

- 27.1 To assist in the examination, evaluation, and comparison of the tenders, and qualification of the tenderers, the Procuring Entity may, at its discretion, ask any tenderer for a clarification of its tender, given a reasonable time for a response. Any clarification submitted by a tenderer that is not in response to a request by the Procuring Entity shall not be considered. The Procuring Entity's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the tender shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Procuring Entity in the evaluation of the tenders, in accordance with ITT 31.
- 27.2 If a tenderer does not provide clarifications of its tender by the date and time set in the Procuring Entity's request for clarification, its Tender may be rejected.

## **28. Deviations, Reservations, and Omissions**

- 28.1 During the evaluation of tenders, the following definitions apply:
- a) "Deviation" is a departure from the requirements specified in the tender document;
  - b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the tender document; and
  - c) "Omission" is the failure to submit part or all of the information or documentation required in the Tender document.

## **29. Determination of Responsiveness**

- 29.1 The Procuring Entity's determination of a Tender's responsiveness is to be based on the contents of the tender itself, as defined in ITT 11.
- 29.2 A substantially responsive Tender is one that meets the requirements of the Tender document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that, if accepted, would:
- a) Affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
  - b) limit in any substantial way, inconsistent with the tender document, the Procuring Entity's rights or the tenderer's obligations under the proposed contract; or
  - c) if rectified, would unfairly affect the competitive position of other tenderers presenting substantially responsive tenders.
- 29.3 The Procuring Entity shall examine the technical aspects of the tender submitted in accordance with ITT 16, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.
- 29.4 If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

## **30. Non-material Non-conformities**

- 30.1 Provided that a tender is substantially responsive, the Procuring Entity may waive any non-conformities in the tender.
- 30.2 Provided that a Tender is substantially responsive, the Procuring Entity may request that the tenderer submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial non- conformities in the tender related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the price of the tender. Failure of the tenderer to comply with the request may result in the rejection of its

tender.

- 30.3 Provided that a tender is substantially responsive, the Procuring Entity shall rectify quantifiable nonmaterial non-conformities related to the Tender Price. To this effect, the Tender Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified **in the TDS**.

### **31. Arithmetical Errors**

- 31.1 The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in anyway by any person or entity.
- 31.2 Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis:
- a) Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.
  - b) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, sub total and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and
  - c) If there is a discrepancy between words and figures, the amount in words shall prevail
- 31.3 Tenderers shall be notified of any error detected in their bid during the notification of award.

### **32. Conversion to Single Currency**

For evaluation and comparison purposes, the currency (ies) of the Tender shall be converted into a single currency **as specified in the TDS**.

### **33. Margin of Preference and Reservations**

- 33.1 A margin of preference may be allowed only when the contract is open to international competitive tendering where foreign contractors are expected to participate in the tendering process and where the contract exceeds the value/threshold specified in the Regulations.
- 33.2 A margin of preference shall not be allowed unless it is specified so in the **TDS**.
- 33.3 Contracts procured on basis of international competitive tendering shall not be subject to reservations exclusive to specific groups as provided in ITT 33.4.
- 33.4 Where it is intended to reserve a contract to a specific group of businesses (these groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be), and who are appropriately registered as such by the authority to be specified in the **TDS**, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses or firms belonging to the specified group are eligible to tender. No tender shall be reserved to more than one group. If not so stated in the Invitation to Tender and in the Tender documents, the invitation to tender will be open to all interested tenderers.

### **34. Nominated Subcontractors**

- 34.1 **Unless** otherwise stated **in the TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity. Incase the Procuring Entity nominates a subcontractor, the subcontract agreement shall be signed by the Subcontractor and the Procuring Entity. The main contract shall specify the working arrangements between the main contractor and the nominated subcontractor.
- 34.2 Tenderers may propose subcontracting upto the percentage of total value of contracts or the volume of works as specified **in the TDS**. Subcontractors proposed by the Tenderer shall be fully qualified



for their parts of the Works.

- 34.3 Domestic subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works unless their specialized parts of the Works were previously designated so by the Procuring Entity **in the TDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Tenderer may be added to the qualifications of the Tenderer.

### **35. Evaluation of Tenders**

- 35.1 The Procuring Entity shall use the criteria and methodologies listed in this ITT and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies the Procuring Entity shall determine the Lowest Evaluated Tender in accordance with ITT 40.
- 35.2 To evaluate a Tender, the Procuring Entity shall consider the following:
- a) Price adjustment in accordance with ITT 31.1(iii); excluding provisional sums and contingencies, if any, but including Day work items, where priced competitively;
  - b) Price adjustment due to discounts offered in accordance with ITT 14.4;
  - c) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 32;
  - d) price adjustment due to quantifiable non-material non-conformities in accordance with ITT 30.3; and
  - e) any additional evaluation factors specified **in the TDS** and Section III, Evaluation and Qualification Criteria.
- 35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be considered intender evaluation.
- 35.4 Where the tender involves multiple lots or contracts, the tenderer will be allowed to tender for one or more lots (contracts). Each lot or contract will be evaluated in accordance with ITT 35.2. The methodology to determine the lowest evaluated tenderer or tenderers based one lot (contract) or based on a combination of lots (contracts), will be specified in Section III, Evaluation and Qualification Criteria. In the case of multiple lots or contracts, tenderer will be will be required to prepare the Eligibility and Qualification Criteria Form for each Lot.

### **36. Comparison of Tenders**

The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders established in accordance with ITT 35.2 to determine the Tender that has the lowest evaluated cost.

### **37. Abnormally Low Tenders and Abnormally High**

#### **Tenders Abnormally Low Tenders**

- 37.1 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price or that genuine competition between Tenderers is compromised.
- 37.2 In the event of identification of a potentially Abnormally Low Tender, the Procuring Entity shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.
- 37.3 After evaluation of the price analyses, in the event that the Procuring Entity determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price,

the Procuring Entity shall reject the Tender.

### **Abnormally High Tenders**

- 37.4 An abnormally high tender price is one where the tender price, in combination with other constituent elements of the Tender, appears unreasonably too high to the extent that the Procuring Entity is concerned that it (the Procuring Entity) may not be getting value for money or it may be paying too high a price for the contract compared with market prices or that genuine competition between Tenderers is compromised.
- 37.5 In case of an abnormally high price, the Procuring Entity shall make a survey of the market prices, check if the estimated cost of the contract is correct and review the Tender Documents to check if the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. The Procuring Entity may also seek written clarification from the tenderer on the reason for the high tender price. The Procuring Entity shall proceed as follows:
- i) If the tender price is abnormally high based on wrong estimated cost of the contract, the Procuring Entity may accept or not accept the tender depending on the Procuring Entity's budget considerations.
  - ii) If specifications, scope of work and/or conditions of contract are contributory to the abnormally high tender prices, the Procuring Entity shall reject all tenders and may retender for the contract based on revised estimates, specifications, scope of work and conditions of contract, as the case may be.
- 37.6 If the Procuring Entity determines that the Tender Price is abnormally too high because genuine competition between tenderers is compromised (*often due to collusion, corruption or other manipulations*), the Procuring Entity shall reject all Tenders and shall institute or cause competent Government Agencies to institute an investigation on the cause of the compromise, before retendering.

### **38. Unbalanced and/or Front-Loaded Tenders**

- 38.1 If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or front loaded, the Procuring Entity may require the Tenderer to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the tender prices with the scope of works, proposed methodology, schedule and any other requirements of the Tender document.
- 38.2 After the evaluation of the information and detailed price analyses presented by the Tenderer, the Procuring Entity may as appropriate:
- a) accept the Tender; or
  - b) require that the total amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding a 10% of the Contract Price; or
  - c) agree on a payment mode that eliminates the inherent risk of the Procuring Entity paying too much for undelivered works; or
  - d) reject the Tender,

### **39. Qualifications of the Tenderer**

- 39.1 The Procuring Entity shall determine to its satisfaction whether the eligible Tenderer that is selected as having submitted the lowest evaluated cost and substantially responsive Tender, meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.
- 39.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 17. The determination shall not take into consideration the qualifications of other firms such as the Tenderer's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the Tender document),



or any other firm(s) different from the Tenderer.

- 39.3 An affirmative determination shall be a prerequisite for award of the Contract to the Tenderer. A negative determination shall result in disqualification of the Tender, in which event the Procuring Entity shall proceed to the Tenderer who offers a substantially responsive Tender with the next lowest evaluated price to make a similar determination of that Tenderer's qualifications to perform satisfactorily.

#### **40. Lowest Evaluated Tender**

Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Lowest Evaluated Tender. The Lowest Evaluated Tender is the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:

- a) Most responsive to the Tender document; and
- b) The lowest evaluated price.

#### **41. Procuring Entity's Right to Accept Any Tender, and to Reject Any or All Tenders.**

The Procuring Entity reserves the right to accept or reject any Tender and to annul the Tender process and reject all Tenders at any time prior to Contract Award, without there by incurring any liability to Tenderers. In case of annulment, all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

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

#### **42. Award Criteria**

The Procuring Entity shall award the Contract to the successful tenderer whose tender has been determined to be the Lowest Evaluated Tender.

#### **43. Notice of Intention to enter into a Contract**

Upon award of the contract and prior to the expiry of the Tender Validity Period the Procuring Entity shall issue a Notification of Intention to Enter into a Contract/Notification of award to all tenderers which shall contain, at a minimum, the following information:

- a) the name and address of the Tenderer submitting the successful tender;
- b) the Contract price of the successful tender;
- c) a statement of the reason(s) the tender of the unsuccessful tenderer to whom the letter is addressed was unsuccessful, unless the price information in (c) above already reveals the reason;
- d) the expiry date of the Standstill Period; and
- e) instructions on how to request a debriefing and/or submit a complaint during the stand still period;

#### **44. Stand still Period**

- 42.1 The Contract shall not be signed earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply.

- 42.2 Where a Standstill Period applies, it shall commence when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter into a Contract with the successful Tenderer.

#### **45. Debriefing by the Procuring Entity**

45.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 43, an unsuccessful tenderer may make a concern(s) regarding their tender. The Procuring Entity shall provide the debriefing within five days of receipt of the request.

45.2 Debriefings of unsuccessful Tenderers may be done in writing or verbally. The Tenderer shall bear its own costs of attending such a debriefing meeting.

#### **46. Letter of Award**

Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period specified in ITT 42.1, upon addressing a complaint that has been filed within the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

#### **47. Signing of Contract**

47.1 Upon the expiry of the fourteen days of the Notification of Intention to enter into contract and upon the parties meeting their respective statutory requirements, the Procuring Entity shall send the successful Tenderer the Contract Agreement.

47.2 Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.

47.3 The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period.

#### **48. Performance Security**

48.1 Within twenty-one (21) days of the receipt of the Letter of Award from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other documents required in the **TDS**, in accordance with the General Conditions of Contract, subject to ITT 38.2 (b), using the Performance Security and other Forms included in Section X, Contract Forms, or another form acceptable to the Procuring Entity. A foreign institution providing a bank guarantee shall have a correspondent financial institution located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent bank is not required.

48.2 Failure of the successful Tenderer to submit the above-mentioned Performance Security and other documents required in the **TDS** or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Procuring Entity may award the Contract to the Tenderer offering the next Best Evaluated Tender.

48.3 Performance security shall not be required for contract estimated to cost less than the amount specified in the Regulations.

#### **49. Publication of Procurement Contract**

Within fourteen days after signing the contract, the Procuring Entity shall publish the awarded contract at its notice boards and websites; and on the Website of the Authority. At the minimum, the notice shall contain the following information:

- a) name and address of the Procuring Entity;
- b) name and reference number of the contract being awarded, a summary of its scope and the selection method used;
- c) the name of the successful Tenderer, the final total contract price, the contract duration.
- d) dates of signature, commencement and completion of contract;
- e) names of all Tenderers that submitted Tenders, and their Tender prices as read out at Tender opening.

## **50. Procurement Related Complaint**

The procedures for making Procurement-related Complaints shall be specified in the **TDS**.

### SECTION III - TENDER DATA SHEET (TDS)

The following specific data for the Works and Services to be procured shall complement, supplement, or amend the provisions in the Instructions to Tenderers (ITT). Whenever there is a conflict, the provisions herein shall prevail over those in ITT.

<b>A. General</b>	
ITT1.1	<p>The reference number of the Invitation to Tender is: <b>KeNHA/2884/2025</b></p> <p>The Procuring Entity is: <u><b>Kenya National Highways Authority (KeNHA)</b></u></p> <p>The name of the ITT is: <u><b>Not Applicable</b></u></p> <p>The number and identification of lots (contracts) comprising this ITT T is: <u><b>Not Applicable</b></u></p> <p>The Road is: <u><b>UPGRADING TO BITUMEN STANDARD OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD</b></u></p> <p>The sections of the Road(s) subject to Rehabilitation Works are: <u><b>Not applicable</b></u></p> <p>Construction Works are required as detailed in the scope of works</p>
ITT2.3	<p>The information made available to competing firms is as follows:</p> <p><u><b>NONE</b></u></p>
ITT2.4	<p>The firms that provided consultancy services for the contract being tendered for are:</p> <p><u><b>NONE</b></u></p>
ITT3.1	Maximum number of members in the JV shall be: <b>NONE</b> .
ITT3.10	Foreign contractors are encouraged to source locally manufactured items/materials and locally assembled machines, equipment, vehicles, labour etc.
<b>B. Contents of Tender Documents</b>	
ITT 7.1	<p>i) The Tenderer will submit any request for clarification in writing at the Address <b><i>Provided in the detailed Tender Notice</i></b></p> <p>To reach the Procuring Entity not later than <b>7 days</b> before bid submission deadline</p> <p>as indicated in the Tender Notice</p> <p>ii) The Procuring Entity will publish the response at the Website <u><b>www.kenha.co.ke</b></u></p>
ITT 7.2	Mandatory Site Visit <b>on date, time and meeting venue specified in the Tender Notice</b>
ITT 7.3	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than the date specified in TDS- ITT 7.1
ITT 7.5	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre- arranged pretender will be published is <u><b>www.kenha.co.ke</b></u>

<b>C. Preparation of Tenders</b>	
ITP 11.1(h)	The Tenderer shall submit the following additional documents in its Tender: <i>As indicated in the Qualification Form/Criteria</i>
ITT 13.1	Alternative Tenders <b>shall not</b> be considered. <i>[If alternatives shall be considered, the methodology shall be defined in Section III, Evaluation and Qualification Criteria.]</i>
ITT 13.2	Alternative times for completion <b>shall not be permitted</b>
ITT 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: <b>None</b>
ITT 14.5	The prices quoted by the Tenderer shall be: <b>fixed</b>
ITT 15.2	Foreign currency requirements: <b>not allowed</b> .
ITT 18.1	The Tender validity period shall be <b>175 days</b> from the specified date of opening as indicated in the invitation to Tender
ITT 18.2	<p>a) The Number of days beyond the expiry of the initial tender validity period will be 60 days.</p> <p>(b) The Tender price shall be adjusted by the following percentages of the tender price:</p> <p>(i) By 0 % of the local currency portion of the Contract price adjusted to reflect local inflation during the period of extension, and</p> <p>(ii) By 0 % the foreign currency portion of the Contract price adjusted to reflect the international inflation during the period of extension.</p>
ITT 19.1	<p>A Bid Security <b>IS</b> required.</p> <p>The amount and currency of the bid security shall be <b>Five Million Kenya Shillings (KShs. 5,000,000.00)</b>.</p> <p>The Bid Security shall be an <b>unconditional demand guarantee issued by a bank</b>.</p>
19.2 (h)	The other security is <b><u>Not Applicable</u></b>
ITT 19.5	Other documents required are as specified in <b>Form No. 3; Contract Agreement</b>
ITT 19.9	The Procuring Entity will declare the Tenderer ineligible to be awarded contracts by the Procuring Entity for a period of <b>two (2)</b> years.
ITT 20.1	In addition to the original of the Tender, the number of copies is: <b><u>One (1)</u></b>
ITT 20.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: <b><u>Certificate of Independent Tender Determination Part B of Form of Tender</u></b>

<b>D. Submission and Opening of Tenders</b>	
<b>ITT 21.3</b>	A tender package or container that cannot fit in the tender box shall be received follows: shall be received at the Supply Chain Management Offices of the location specified in the tender notice.
<b>ITT 22.1</b>	(A) For <u>Tender submission purposes</u> only, the Procuring Entity's address is: As indicated in the <b>Invitation to Tender</b>  Tenders <b>shall not be submitted</b> electronically.
<b>ITT 25.1</b>	If Tenderers are allowed to submit Tenders electronically, they shall follow the electronic tender submission procedures <b>specified below</b> <i>Not Applicable</i>
<b>ITT 25.6</b>	The number of representatives of the Procuring Entity to sign is <i>I. By all members of the Tender opening committee</i> <i>II. In the pages they shall deem appropriate</i>
<b>E. Evaluation, and Comparison of Tenders</b>	
<b>ITT 30.3</b>	The adjustment shall be based on the average price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its Lowest estimate.
<b>ITT 31.2</b>	The error shall be considered a major deviation that leads to disqualification of the tender if the percentage of the error (error over the tender price quoted) is: <b>more than 0% or less than 0%.</b>
<b>ITT 32.1</b>	The currency that shall be used for Tender evaluation and comparison purposes is:- <i>Kenya Shillings</i>
<b>ITT 33.2</b>	A margin of preference <i>shall</i> apply.  <i>[If a margin of preference applies, the application methodology shall be defined in Section III - Evaluation and Qualification Criteria.]</i>
<b>ITT 33.4</b>	The invitation to tender is extended to the following groups that qualify for reservations- <b>ALL</b>
<b>ITT 34.1</b>	At this time, the Procuring Entity <b><i>does not intend</i></b> to execute certain specific parts of the Works by subcontractors selected in advance.
<b>ITT 34.2</b>	Contractor's may propose subcontracting: Maximum percentage of subcontracting permitted is: <b><i>40% of the total contract amount.</i></b> Tenderers planning to subcontract more than 10% of total volume of work shall specify, in the Form of Tender, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualification and experience.

<b>ITT 34.3</b>	<p>The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows:</p> <p>For the above-designated parts of the Works that may require Specialized Subcontractors, the relevant qualifications of the proposed Specialized Subcontractors will be added to the qualifications of the Tenderer for the purpose of evaluation. N/A</p>
<b>ITT 35.2 (d)</b>	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
<b>ITT 37</b>	Abnormally High/low Tenders shall be treated as per the procedure outlined in Section IV, Evaluation and Qualification Criteria
<b>ITT 38</b>	Unbalanced or Front-loaded Tenders shall be treated as per the procedure outlined in Section IV, Evaluation and Qualification Criteria
<b>ITT 48.2</b>	Additional requirements are: As detailed in the Qualification Criteria/Form
<b>ITT 49.1</b>	<p>The procedures for making a Procurement-related Complaint are available from the PPRA website <a href="mailto:info@ppra.go.ke">info@ppra.go.ke</a> or <a href="mailto:complaints@ppra.go.ke">complaints @ppra.go.ke</a>. If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to:</p> <p>For the attention: <b>Director General</b></p> <p>Procuring Entity: <b>Kenya National Highways Authority (KeNHA)</b></p> <p>Email address: <b>dg@kenha.co.ke</b></p> <p>In summary, a Procurement-related Complaint may challenge any of the following:</p> <ul style="list-style-type: none"> <li>(i) the terms of the Tender Documents; and</li> <li>(ii) the Procuring Entity's decision to award the contract.</li> </ul>

## SECTION IV- EVALUATION AND QUALIFICATION CRITERIA

### General Provisions

#### 1 General Provisions

- 11 This section contains the criteria that the Employer shall use to evaluate tender and qualify tenderers. No other factors, methods or criteria shall be used other than specified in this tender document. The Tenderer shall provide all the information requested in the forms included in Section IV, Tendering Forms. The Procuring Entity shall use **the Standard Tender Evaluation Document for Goods and Works** for evaluating Tenders.
- 12 Wherever a Tenderer is required to state a monetary amount, Tenderers should indicate the Kenya Shilling equivalent using the rate of exchange determined as follows:
  - a) For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.
  - b) Value of single contract - Exchange rate prevailing on the date of the contract signature.
  - c) Exchange rates shall be taken from the publicly available source identified in the ITT 14.3. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.
- 13 Evaluation and contract award Criteria

The Procuring Entity shall use the criteria and methodologies listed in this Section to evaluate tenders and arrive at the Lowest Evaluated Tender. The tender that (i) meets the qualification criteria, (ii) has been determined to be substantially responsive to the Tender Documents, and (iii) is determined to have the Lowest Evaluated Tender price shall be selected for award of contract.

#### 2. Preliminary examination for Determination of Responsiveness

The Procuring Entity will start by examining all tenders to ensure they meet in all respects the eligibility criteria and other requirements in the ITT, and that the tender is complete in all aspects in meeting the requirements of “*Part 2 – Procuring Entity's Works Requirements*”, including checking for tenders with unacceptable errors, abnormally low tenders, abnormally high tenders and tenders that are front loaded. The Standard Tender Evaluation Report for Goods and Works for evaluating Tenders provides clear guidelines on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered irresponsive and will not be considered further.

##### i. Financial Capacity:

- The Tenderer shall demonstrate access to, or availability of, **liquid assets, unencumbered real assets, lines of credit, or other financial means** (independent of any contractual advance payment) sufficient to meet the construction cash flow requirement equivalent to **Kshs 300,000,000.00**.

##### ii. Minimum Average Annual Construction Turnover

- The Tenderer shall have a minimum average annual construction turnover of **Kshs 600,000,000.00**, calculated as the total gross certified payments received for contracts in progress and/or completed within the last five (5) years, divided by five (5).

##### iii. Similar Contracts Executed:

- The Tenderer shall have executed at least **two (2) contracts** of a similar nature, each with a minimum value of **Kshs 1,000,000,000.00**, within the last five (5) years. At least **one (1) contract** shall have been satisfactorily and substantially completed (Eighty Per cent) as a **prime contractor or joint venture** member within **Kenya or the East African Community**.

##### NB:

- i. The total value of outstanding works on the on-going contracts should not exceed the average annual turnover for the last five years.



iv. **Contractor's Representative and Key Personnel:**

- The Tenderer shall provide qualified personnel, including a **Site Agent, Site Engineers, Surveyor, Environmentalist, Sociologist** and other key staff, as specified in the tender documents.

v. **Contractor's Key Equipment:**

- The Tenderer shall possess the necessary equipment listed in the table "Contractor's Equipment" below, including but not limited to [specify requirements].

vi. **Other Conditions:**

- The Tenderer shall comply with any additional conditions specified in the tender documents, including environmental, safety, and quality standards.

2.1 **ASSESSMENT OF ADEQUACY OF TECHNICAL PROPOSAL WITH REQUIREMENTS (IF APPLICABLE)**

The Procuring Entity will evaluate the Technical Proposals of all unresponsive tenders using the following criteria, sub-criteria, and point system for the evaluation of the Technical Proposals:

- i) History of non-performance
- ii) financial capability
- iii) General and specific experience
- iv) Key personnel
- v) Contractors Plant and Equipment
- vi) Adequacy and quality of the proposed methodology, and work plan in responding to the schedule of Requirements:

Total points for the five criteria: 100points. The minimum technical score (St) required to pass is: 75points.

Tenderers who score less than the required pass will be automatically disqualified. Tenderers who pass the technical evaluation will be evaluated further.

**3. Tender Evaluation (ITT 35)**

**Price evaluation:** In addition to the criteria listed in ITT 35.2 (a) – (d) the following criteria shall apply:

1. **Alternative Completion Times**, if permitted under ITT 13.2, will be evaluated as follows:

.....N/A.....

2. **Alternative Technical Solutions** for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows: .....N/A.....

3. **Other Criteria**; if permitted under ITT 35.2(d): .....N/A.....

**4. Multiple Contracts**

Delete in its entirety

**5. Alternative Tenders (ITT 13.1)**

*An alternative if permitted under ITT 13.1, will be evaluated as follows:*

The Procuring Entity shall consider Tenders offered for alternatives as specified in Part2-Works

Requirements. Only the technical alternatives, if any, of the Tenderer with the Best Evaluated Tender conforming to the basic technical requirements shall be considered by the Procuring

## **6. Margin of Preference**

- 6.1.If the TDS so specifies, the Procuring Entity will grant a margin of preference of fifteen percent (15%) to be loaded one valuated price of the foreign tenderers, where the percentage of shareholding of Kenyan citizens is less than fifty-one percent (51%).
- 6.2.Contractors applying for such preference shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a particular contract or or group of contractors qualifies for a margin of preference.
- 6.3.After Tenders have been received and reviewed by the Procuring Entity, responsive Tenders shall be assessed to ascertain their percentage of shareholding of Kenyan citizens. Responsive tenders to shall be classified into the following groups:
- i) Group A: tenders offered by Kenyan Contractors and other Tenderers where Kenyan citizens hold shares of over fifty one percent (51%).
  - ii) Group B: tenders offered by foreign Contractors and other Tenderers where Kenyan citizens hold shares of less than fifty one percent (51%).
- 6.4 All evaluated tenders in each group shall, as a first evaluation step, be compared to determine the lowest tender, and the lowest evaluated tender in each group shall be further compared with each other. If, as a result of this comparison, a tender from Group A is the lowest, it shall be selected for the award. If a tender from Group B is the lowest, an amount equal to the percentage indicated in Item 3.1 of the respective tender price, including unconditional discounts and excluding provisional sums and the cost of day works, if any, shall be added to the evaluated price offered in each tender from Group B. All tenders shall then be compared using new prices with added prices to Group Band the lowest evaluated tender from Group A. If the tender from Group A is still the lowest tender, it shall be selected for award. If not, the lowest evaluated tender from Group B based on the first evaluation price shall be selected.

## **7. Post qualification and Contract award (ITT 39), more specifically,**

- a) In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of pre-qualification data, if so required.
- b) In case the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tenderer shall be considered for contract award, subject to meeting each of the following conditions.
  - i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow of Kenya Shillings
  - ii) Minimum average annual construction turnover of **Kenya Shillings 1,000,000,000.00** equivalent calculated as total certified payments received for contracts in progress and/or completed within the last 5 years.
  - iii) At least 2 of contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value **Kenya shillings 1,000,000,000.**
  - iv) Contractor's Representative and Key Personnel, which are specified in the qualification criteria
  - v) Contractors key equipment listed on the table "Contractor's Equipment" below and more specifically listed as specified in the qualification criteria
  - vi) Other conditions depending on their seriousness.
- c) **History of non-performing contracts:**  
Tenderer and each member of JV incase the Tenderer is a JV, shall demonstrate that Non-performance of a contract did not occur because of the default of the Tenderer, or the member of

a JV in the last 5 *years*). The required information shall be furnished in the appropriate form.

**d) Pending Litigation**

Financial position and prospective long-term profitability of the Single Tenderer, and in the case the Tenderer is a JV, of each member of the JV, shall remain sound according to criteria established with respect to Financial Capability under Paragraph (i) above if all pending litigation will be resolved against the Tenderer. Tenderer shall provide information on pending litigations in the appropriate form.

**e) Litigation History**

There shall be no consistent history of court/arbitral award decisions against the Tenderer, in the last 5 *years*. All parties to the contract shall furnish the information in the appropriate form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the years specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender.

#### **SECTION IV: EVALUATION AND QUALIFICATION CRITERIA CONTD...**

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.

1. Eligibility Requirements
2. Historical Contract Non-Performance
3. Financial Situation
4. Technical/Engineering Works Experience
5. Program of Works and Work Methodology
6. Key Professional and Technical Site Staff
7. Major Plant and Equipment to be used in the Project

## QUALIFICATION FORM

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
<b>A. PRELIMINARY EVALUATION</b>				
1.	Nationality	Nationality in accordance with ITT 3.6	Forms ELI - 1.1, 1.2 and 1.3, with attachments	
2.	Goods, equipment and services to be supplied under the contract	To have their origin in any country that is not determined ineligible under ITT 4.1	Forms ELI - 1.4	
3.	Conflict of Interest	No conflicts of interest in accordance with ITT 3.3	Form of Tender	
4.	<b>PPRA</b> Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.7	Form of Tender - <b>Form SD 1</b>	
5.	State- owned Enterprise	Meets conditions of ITT 3.8	Forms ELI - 1.1 and 1.2, with attachments	
6.	Appendix to Form of Bid	Form properly filled & signed	Appendix to Form of Bid in the Prescribed Format	
7.	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.8.	To be confirmed from Internal records by the procuring entity	
8.	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in 3.1 and assuming that all pending litigation will NOT be resolved against the Tenderer.	Form CON - 1	

<b>Item No.</b>	<b>Qualification Subject</b>	<b>Qualification Requirement</b>	<b><i>Document To be Completed/provided by Tenderer</i></b>	<b><i>For Procuring Entity's Use (Qualification met or Not Met)</i></b>
9.	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer for the last three (3) years.	Form CON - 1	
10.	Declaration of Fair employment laws and practices	Bidders shall declare they are not guilty of any serious violation of fair employment laws and practices and will be bound to abide by the industry CBA at minimum	Form CON - 2	
11.	Declaration of Knowledge of Site /Pre-Bid Conference	<ul style="list-style-type: none"> <li>• Attend Pre-Tender Site Visits as per TDS, ITT 7.1</li> <li>• Bidders to sign attendance register</li> <li>• Certificate must be signed by the Employer's representative</li> <li>• Bidders to send Technical Persons for the Site Visit – Min Qualifications – Diploma in Civil Engineering</li> </ul>	Form CON - 3	
12.	Tender Security	Tender Security document	a) Form in the Prescribed Format b) Digital Tender Securities will be accepted	
13.	Priced Bill of Quantities	<ul style="list-style-type: none"> <li>- Fill all rates, and amounts,</li> <li>- NO Alterations of the Quantities accepted,</li> <li>- All bidders own Corrections must be Countersigned</li> <li>- NO Errors noted in the Bills of Quantities</li> </ul>	Bills of Quantity in the Prescribed Format	
14.	Annual Practicing License with the National Construction Authority	Proof of registration with the National Construction Authority in Class 1 or 2 as Roads/Bridges Contractor	Copy of Current NCA Practicing License	

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
15.	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority in accordance with ITT 3.14.	<b>Provide Valid Tax Compliance Certificate</b>	
16.	Serialization of the Bid	Bidders shall sequentially serialize all pages of each tender submitted. Any written Pages or document attached or inserted Documents <b>MUST</b> be sequentially serialized.	The Serialization <b>MUST</b> be numerically sequential starting from Numeric 1.	
17.	Completeness of tender document	The person or persons signing the bid <b>shall</b> initial all pages of the bid where entries have been made. Bidders shall own all alterations made to the tender document. Bidders shall duly fill all relevant forms/schedules provided for in the document that requires entries	All pages with entries (Typed or hand written) must be initialed. Any alterations made in the tender document must be countersigned. All relevant Forms/ Schedules shall be duly filled	
18.	Proposed weightings	Dully filled and Signed Schedule H	Bidder to fill Schedule H: Basic Prices for Materials and Labour	
19.	Rates derivation	Bidders shall provide current (atleast 28 days before tender opening) proof of cost of materials e.g. Proforma Invoices/quotation (Cement, Bitumen etc)	Bidder to fill Schedule G: Part I. Schedule of Materials; -Basic Prices Part II. Schedule of rates derivation	
<b>B. TECHNICAL EVALUATION</b>				
1.	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default for the last Five (5) years. Non-performance shall be deemed to	Form CON-1 <b>If a bidder fails to disclose, shall be disqualified</b>	5 Marks

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
		<p>have occurred by evidence of:</p> <ul style="list-style-type: none"> <li>• <i>Termination Letter</i></li> <li>• <i>Liquidated Damages</i></li> </ul>	<p><b>Reference to be made to procuring Authority's records</b></p> <p><b>A bidder with any history of non-performance earns zero(0) marks</b></p>	
2.	Financial Capabilities	<p>(i) Bidders shall provide audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last 5 years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability (as demonstrated by Financial Evaluation ratios).</p> <p>(ii) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow of equivalent to Kshs. 300,000,000.00.</p> <p>(iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last 5 years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.</p>	<p>Form FIN - 3.1, with attachments</p> <p><b>Attachments include:</b></p> <p><b>i. Audited accounts</b></p> <p><b>All pages must be initialed and stamped by both a practicing Auditor registered with ICPAK and one of the Directors. Auditor's practicing membership number from ICPAK must be indicated and a valid practicing license shall be provided.</b></p> <p><b>The Financial ratio Form to be signed by the Auditor registered with ICPAK and one of the Directors</b></p> <ul style="list-style-type: none"> <li>• <b>Financial Ratios</b></li> </ul> <p>Computation shall be made for the following Ratios and marks awarded to each of the ratios:</p> <p>-Working Capital</p>	<p>3 Marks</p> <p>4 Mark</p>



Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
			- Debt to Equity Ratio - Current ratio - Operating Cash Flow ratio  • <i>Line of Credit</i> • <i>Bank statements</i> <i>Etc.</i>	5 Marks
3.	Average Annual Construction Turnover	The Tenderer shall have a minimum average annual construction turnover of <b>Kshs 1,000,000,000.00</b> , calculated as the total gross certified payments received for contracts in progress and/or completed within the last five (5) years, divided by five (5).	Form FIN - 3.2 <b><i>Attachments include Financial Statements</i></b>	3 Marks
4.	Ongoing Works	The total value of outstanding works on the on-going contracts should not exceed the average annual turnover for the last five years.	Form FIN - 3.4 If the value of the outstanding Works and the new commitment is more than the operating cash flow (based on the last audited financial statement) of the bidder, the bidder loses two marks	2marks
5.	General Construction Experience	Experience under construction contracts in the role of prime contractor, sub-contractor, or management contractor for at least the last 5 years. Grading shall be based on general projects handled. Five projects and above earns maximum points and prorated downwards.	Form EXP -4.1 <b><i>Attach Letters of Award and Completion Certificates</i></b>	3 Marks

<b>Item No.</b>	<b>Qualification Subject</b>	<b>Qualification Requirement</b>	<b>Document To be Completed/provided by Tenderer</b>	<b>For Procuring Entity's Use (Qualification met or Not Met)</b>
6.	Specific Construction & Contract Management Experience	The Tenderer shall have executed at least two (2) contracts of a similar nature, each with a minimum value of <b>Kshs 1,000,000,000.00</b> , within the last five (5) years. At least one (1) contract shall have been satisfactorily and substantially completed (Eighty per cent) as a prime contractor or joint venture member within Kenya or the East African Community. In case of JVs, the combined parties will be required to attain the above requirement.	<p>Form EXP 4.2(a)&amp;(b)</p> <p><b><i>Provide Letters of Award and Completion Certificates</i></b></p> <p><b><i>For subcontracted works, the bidder should provide the following;</i></b></p> <ul style="list-style-type: none"> <li>• <b><i>Award letter of the main contractor</i></b></li> <li>• <b><i>Award letter of the subcontract.</i></b></li> <li>• <b><i>Completion letter of the subcontract.</i></b></li> <li>• <b><i>Subcontract approval from the Engineer/supervision Authority</i></b></li> </ul>	10 Marks
7.	Contractor's Representative and Key Personnel	Curriculum Vitae (CVs) of the Proposed Key Staff must be presented in the provided format and duly signed by the proposed individual. Copies of certificates and Annual Practicing Licenses (for Engineers) and Academic Certificates for all staff is mandatory.	Schedule F (Form PER. 1 and PER. 2)	15 Marks

Item No.	Qualification Subject	Qualification Requirement		Document To be Completed/provided by Tenderer		For Procuring Entity's Use (Qualification met or Not Met)	
				KEY PERSONNEL			Max 15
		1.		Project Director/Site Agent  (Max 5marks)	Registration & Qualification	Professional Engineer & Degree (BSc. Civil) holder	2
					Relevant experience	15 years and above	3
						7-14years	1.5
						Less than 7yrs	0
		2.		Material Engineer & Structural/ Bridge Engineer (Max 4 marks)  Each personnel above earn Max. 2marks	Registration	Registered Engineer	2
					Qualification	Degree	1
					Relevant experience	10 years and above	1
						6-9years	0.5
						Less than 6yrs	0
				Surveyor (Max 2marks)	Qualification	Degree	1
						HND	0.5
					Relevant experience	10 years and above	1.0
						6-9years	0.5
						Less than 6 years	0

Item No.	Qualification Subject	Qualification Requirement				Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
				Foreman (Max 2marks)	Qualification	HND	1
					Diploma	0.8	
					Relevant experience	15 years and above	1.0
						7-14years	0.5
						3-6 years	0.25
						Less than 3 years	0
			Environmental Specialist &  Social Specialist Max 2marks) Each personnel above earn Max. 1mark	Qualification	Degree	1	
				Relevant experience	15 years and above	1.0	
					7-14years	0.5	
					Below 7 years	0	
8.	Contractors key equipment	<ul style="list-style-type: none"><li>Bidders shall declare they have possession/Ownership of various equipment as proposed to be used in the Project by providing Logbooks that demonstrate proof of ownership</li><li>For Bidders planning to hire, they shall provide an Active Lease Agreement in Place that can be used during the Project Life. The copy of logbooks of the lessor(s) shall also be provided.</li></ul>			Schedule D of Technical Proposal	20 Marks	

Item No.	Qualification Subject	Qualification Requirement			Document To be Completed/provided by Tenderer		For Procuring Entity's Use (Qualification met or Not Met)		
9.		Main Scope of Works of Tender	Main Equipment	Quantity (No) (Minimum)	Marks (Score)		No. of Equipment to be made available for the Contract by the Bidder		
					No. of Equipment Owned by the Bidder	No. of Equipment to be hired/ purchased by the Bidder			
		Earthworks	a) General Plant						
		Concrete works  Bituminous works (AC & Surface Dressing)	Primary/Secondary Crusher Unit/Power Screen Min capacity – 90t/hr.	1	3	1.5			
			Concrete batching plant Min Cap 20 m3/hr	1					
			Asphalt Concrete batching plant.	1					
		b) Bituminous Plants							
		Bitumen Pressure distributor	2	2	1				
		Asphalt concrete paver	1						
		c) Compactors							
		Vibrating compaction plate 300 mm wide	2	1.5	0.5				
		Vibrating compaction plate 600 mm wide	1						

Item No.	Qualification Subject	Qualification Requirement		Document To be Completed/provided by Tenderer		For Procuring Entity's Use (Qualification met or Not Met)		
			d) Mobile Compressors					
			Single tool (1.8 m3/min)	1	1.5	1.0		
			Two tool (2.8 – 7.3 m3/min)	2				
			Four tool (11.3 – 25.3 m3/min)	1				
			Medium rock drill (1.5 m3/min)	1				
			Heavy rock drill (2.4 m3/min)	1				
			e) Concrete Equipment					
			Mobile concrete mixers	3	5	2		
			Truck mounted mixers	1				
			Concrete vibrators	5				
			f) Transport (Tippers, dumpers, water tankers)					
			4X2 tippers payload 7 – 12 tonnes	20	12.5	5		
			6X4 tippers payload 16 – 20 tonnes	2				
			8X4 tippers payload 16 – 20 tonnes	1				
			Articulated trailers	2				
			Dump trucks	10				
			Flatbed lorries	2				

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
		<div>Water tankers (18,000 – 20,000 lts. capacity)</div> <div>g) Diesel Generators</div> <div>Diesel generators (15 – 200Kva)</div> <div>h) Excavators</div> <div>Hydraulic crawler mounted (7 – 10 tonnes) – 0.25 – 0.4 m<sup>3</sup> SAE bucket.</div> <div>Hydraulic crawler mounted (10 – 16 tonnes) – 0.40 – 0.60 m<sup>3</sup> SAE bucket.</div> <div>Hydraulic wheel mounted (7 – 10 tonnes) – 0.25 – 0.4 m<sup>3</sup> SAE bucket.</div> <div>Hydraulic wheel mounted (10 – 16 tonnes) – 0.40 – 0.6 m<sup>3</sup> SAE bucket.</div> <div>Hydraulic wheel mounted backloader (7 – 10 tonnes) – 0.25 – 0.4 m<sup>3</sup> SAE bucket.</div> <div>i) Rollers</div>	<div>5</div> <div></div> <div>3</div> <div>1.5</div> <div>0.5</div> <div></div> <div></div> <div>3</div> <div>3</div> <div>1</div> <div>8</div> <div>3.5</div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>

Item No.	Qualification Subject	Qualification Requirement		Document To be Completed/provided by Tenderer		For Procuring Entity's Use (Qualification met or Not Met)	
			Self-propelled single drum vibrating (various types)	3	5	1	
			Pneumatic rubber tyre (1-2 tonnes/wheel)	2			
			Sheep's foot roller	2			
			Double drum vibrating roller	2			
			pedestrian rollers	2			
			Pulvymixer	2			
			Motor graders	6			
			Total		40	16	
			<b>Note:</b> Score for Construction Equipment = (X/40)*20 ----Owned = (Y/40)*20.....Hired				
10.	Proposed methodology	Adequacy and quality of the proposed methodology		<b>a) Technical approach and methodology</b> <ul style="list-style-type: none"> <li>Provided a detailed Work Methodology: <ul style="list-style-type: none"> <li>a) Procedure on execution of activities as outlined in the BoQs</li> <li>b) Allocation of machinery/labour in</li> </ul> </li> </ul>		3 Marks	





Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
			<p>9. Procurement Management</p> <p>10. Human Resource Management</p> <p>Stakeholder Management</p> <p><b>b) Work plan/Program of Works (PoW)</b></p> <ul style="list-style-type: none"> <li>PoW Resourced with Equipment-Min. allocation pursuant to the <b>Schedule E of Technical Proposal</b> - – To be submitted in A3 Size Paper well legible Fonts</li> <li>PoW captures Monthly outputs for each activity</li> <li>PoW details BoQ Quantities, Units and Rates</li> <li>PoW is superimposed with Cashflow Projections as detailed in <b>Schedule A</b> of the technical proposal</li> </ul> <p><b>c) Site Organization and staffing</b> (Schedule B of Technical proposal)</p>	<p>4marks</p> <p>2 Marks</p> <p>2 Marks</p> <p>2 Marks</p> <p>3 Marks</p>

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
11.	Knowledge Transfer [When transfer of knowledge is a particularly important component of the assignment, the following sub- criteria may be provided]	Transfer of knowledge (training) program (relevance of approach and methodology	a) Relevance of training program [Not Applicable] b) Training approach and methodology [Not Applicable] c) Qualifications of experts and trainers [Not Applicable]	

*Tenderers who score less than the required pass (75%) will be automatically disqualified. Tenderers who meet the minimum pass mark in the technical evaluation will be evaluated further.*

#### **C. FINANCIAL EVALUATION:**

The lowest evaluated bidder shall be subjected to Financial Evaluation which include but not limited to **sensitivity analysis** of the **rates** to **detect abnormally low bids or abnormally high bids or unbalanced tenders or front loaded**.

#### **Treatment of Abnormally Low Bid/Abnormally high Bid/ Unbalanced bid**

The Procuring Entity may undertake an analysis of bidders' rates which are potentially lower/higher than the known prevailing market rates. The bidders shall be required to provide objective justification including supporting documents on derivation of their rates within stipulated time to the Procuring Entity (*See Schedule G, Part I&II on Derivation of Rates*).

In addressing the above criteria, the following steps shall be undertaken by the Procuring Entity;

- a. **Identify:** The Procuring Entity identifies a potential Abnormally Low/High Bid based on comparison with known prevailing market rates or with the project's total cost estimate.
- b. **Evaluate:** The Procuring Entity fully analyses the Bidder's justification provided on Schedule G to verify if it is Abnormally Low/High Bid. Due diligence may be carried out by the Procuring Entity on the bidder's documentation.

Item No.	Qualification Subject	Qualification Requirement	Document To be Completed/provided by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
				<p>c. <b>Determination:</b> The Procuring Entity fully documents the decision to accept or reject the Bid and executes appropriate action(s)/recommendation(s) including but not limited to enhancement of the performance Security.</p> <p>In view of the above, the procuring Entity shall evaluate and analyze the Bidders' submissions against the known prevailing market rates and cost estimation guidelines. The analysis of the bidder's justification shall consider all evidence provided.</p> <p>Accordingly, the Procuring Entity's relevant committee shall make a recommendation to the Accounting Officer.</p>
				<p><b>D. POST QUALIFICATION:</b> The procuring entity may verify the documents provided by the bidder with the issuing authority.</p>

## APPENDIX TO THE QUALIFICATION CRITERIA

ITEM	DESCRIPTION		POINT SCORE SCALE
1	<b>HISTORY OF NON-PERFORMANCE</b>		<b>Max 5</b>
	History of Non-Performance		<b>0 -5</b>
2	<b>FINANCIAL CAPACITY</b>		<b>Max 15</b>
	Audited Statements		0-3
	Computation of Financial Ratios		0-4
	Working capital to be at least 10% of the Bid Price		0-5
	Turnover		0-3
3	<b>EXPERIENCE</b>		<b>Max 15</b>
	General Experience		0-3
	Specific experience in related works		0-10
	Workload Analysis		0-2
4	<b>KEY PERSONNEL</b>		<b>Max 15</b>
5	<b>PLANT AND EQUIPMENT</b>		<b>Max 20</b>
	Relevant Equipment (As Detailed in Schedule D)	Owned (Max 20marks)	0-20
		100% Leased (Max 8 marks)	0-8
6	<b>PROGRAM OF WORKS AND WORK METHODOLOGY</b>		<b>Max 30</b>
6a	Work Methodology	Provided a detailed Work Methodology	0-3
		Provided a Methodology on safety during the construction period	0-2
		Provided a specific Quality management plan	0-2
6b	Program of Works	PoW Resourced with Equipment-Min. allocation pursuant to the Schedule E of Technical Proposal - – To be submitted in A3 Size Paper well legible Fonts	0-4
		PoW captures Monthly outputs for each activity	0-2
		PoW details BoQ Quantities, Units and Rates	0-2
		PoW is superimposed with Cash flow Projections as detailed in Schedule A of the technical proposal	0-2
7	<b>Organization and staffing</b> (Schedule B of Technical proposal) Equivalent of Site Base facilities		0-3
8	<b>Environmental and social impact requirements</b>		5
9	<b>Participation by Kenyan Citizens among proposed key experts</b>		5
	<b>TOTAL</b>		<b>MAX 100</b>

## **SECTION V - TENDERING FORMS**

- 1. TENDERER'S QUALIFICATION FORMS**
  - Form ELI-1.1- Tenderer Information Form**
  - Form ELI- 1.2- Tenderer JV information**
  - Form ELI - 1.3- Qualification of Foreign Contractors**
  - Form ELI - 1.4- Declarations of materials, equipment and labor sources**
- 2. FORM OF TENDER**
  - A. TENDERER'S ELIGIBILITY - CONFIDENTIAL BUSINESS QUESTIONNAIRE**
  - B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION**
  - C. SELF-DECLARATION FORMS**
    - FORM SD1**
    - FORM SD2**
    - FORM SD3**
- 3. APPENDIX TO FORM OF TENDER**
- 4. CONTRACTUAL FORMS**
  - FORM CON – 1**
  - FORM CON – 2**
  - FORM CON – 3**
- 5. FINANCIAL FORMS**
  - FORM FIN- 3 .1**
  - FORM FIN- 3.2**
  - FORM FIN- 3.3**
- 6. TECHNICAL EXPERIENCE**
  - FORM EXP - 4.1**
  - FORM EXP - 4.2 (A)**
  - FORM EXP - 4.2 (B)**
- 7. TECHNICAL PROPOSAL**
  - SCHEDULE A. Projected Cash Flow**
  - SCHEDULE B. Site Organizations**
  - SCHEDULE C. Subcontractors**
  - SCHEDULE D. Contractor's Equipment**
  - SCHEDULE E. Initial Tentative Program of Performance**
  - SCHEDULE F. Key Personnel Proposed**
  - SCHEDULE D. Schedule of Materials Basic Rates**
- 8. FORM OF TENDER SECURITY - DEMAND GUARANTEE**
- 9. FORM OF TENDER SECURITY (TENDER BOND)**
- 10. FORM OF TENDER-SECURING DECLARATION**
- 11. FORM OF DECLARATION OF FAIR EMPLOYMENT LAWS AND PRACTICES**
- 12. FORM OF DECLARATION OF CONTRACTS TERMINATED IN THE LAST THREE (3) YEARS**

## TENDERER'S QUALIFICATION FORMS

### FORM ELI-1.1- TENDERER INFORMATION FORM

<b>Form ELI-1.1</b>
<b>Tenderer Information Form</b>
Date: _____
Tender No. _____
Tender title: _____
Tenderer's name: .....
In case of Joint Venture (JV), name of each member:.....
Tenderer's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Tenderer's actual or intended year of incorporation:
Tenderer's legal address [in country of registration]:
Tenderer's authorized representative information Name: Address: Telephone/Fax numbers: E-mail address:
1. Attached are copies of original documents of:  I. <i>Certificate of Incorporation and CR12</i> of the legal entity named above, in accordance with ITT 3.6.  II. <i>Copies of National Identification documents for Directors</i>  <input type="checkbox"/> In case of a JV, Form of intent to form JV or JV agreement, in accordance with ITT 3.6. <input type="checkbox"/> In case of a state-owned enterprise or institution, in accordance with ITT 3.8. documents establishing: <ul style="list-style-type: none"><li>• Legal and financial autonomy</li><li>• Operation under commercial law</li><li>• Establishing that tenderer is not under the supervision of the Procuring Entity,</li></ul> 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership ( <i>Applicable</i> ).

## FORM ELI- 1.2- TENDERER JV INFORMATION

Tenderer's JV Information Form

(to be completed for each member of Tenderer's JV)

Date: \_\_\_\_\_

Tender No. \_\_\_\_\_

Tender title: \_\_\_\_\_

Tenderer's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of:  i. Certificate of Incorporation and CR 12 of the legal entity named above, including Registered JV agreement (Registration of Documents Act), in accordance with ITT 3.6.  ii. Copies of National Identification documents for all Directors  <input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.8.  2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership ( <i>Applicable</i> ).



## FORM ELI - 1.3- QUALIFICATION OF FOREIGN CONTRACTORS

### Qualification of Foreign Tenderers

Pursuant to ITT 3.10, a foreign tenderer must complete this form to demonstrate that the tender fulfils this condition (the 40% Rule).

ITEM	Description of Work Item	Describe location of source	COST in K. shillings	Comments, if any
<b>A</b>	Local Labour			
1				
2				
3				
4				
5				
<b>B</b>	Sub contracts from Local sources			
1				
2				
3				
4				
5				
<b>C</b>	Local materials			
1				
2				
3				
4				
5				
<b>D</b>	Use of Local Plant and Equipment			
1				
2				
3				
4				
5				
<b>E</b>	Add any other items			

1				
2				
3				
4				
5				
6				
7				
	TOTAL COST LOCAL CONTENT		xx	
	PERCENTAGE OF CONTRACT PRICE		xx	

## FORM ELI - 1.4- DECLARATIONS OF MATERIALS, EQUIPMENT AND LABOUR SOURCES

Pursuant to ITT 5.1, tenderers must complete this form to demonstrate that the tender fulfils this condition

ITEM	Description of Work Item	Describe location of source	Comments, if any
<b>A</b>	<b>Materials</b>		
1	10/14mm precoated Chippings		
2	Asphalt Concrete		
3	Cement		
4	Coarse aggregates		
5	Gravel		
6	Road Marking Paints		
<b>B</b>	<b>Equipment</b>		
1	Chippings Spreader		
2	Paver		
3	Tipper		
4	Pneumatic Roller		
5	Concrete Mixer		
<b>C</b>	<b>Labour</b>		
1	Skilled		
2	Unskilled		
3			
4			
5			
6			
	TOTAL COST LOCAL CONTENT		
	PERCENTAGE OF CONTRACT PRICE		

## FORM OF TENDER

### INSTRUCTIONS TO TENDERERS

- (i) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.
  - (ii) All italicized text is to help Tenderer in preparing this form.
  - (iii) Tenderer must complete and sign and TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE, CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER, all attached to this Form of Tender.
- i) The Form of Tender shall include the following Forms duly completed and signed by the Tenderer.
- A) Tenderer's Eligibility- Confidential Business Questionnaire
  - B) Certificate of Independent Tender Determination
  - C) Self-Declaration of the Tenderer

### FORM OF TENDER

Date of this Tender submission: *[insert date (as day, month and year) of Tender submission]*

Invitation to Tender No.: *[insert identification]* Alternative No.: *[Not Applicable]*

To:

---

We, the undersigned, declare that:

- a) *No reservations:* We have examined and have no reservations to the tendering document, including Addenda issued in accordance with Instructions to Tenderers (ITT) ;
- b) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT4;
- c) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing Declaration or Proposal-Securing Declaration in Kenya in accordance with ITT 3.9.
- d) *Conformity:* We offer to execute in conformity with the tendering document and in accordance with the construction or service schedule the following Works:  
*[Tender Number and Name]*
- e) *Tender Price:* The total price of our Tender is [name of currency] (*amount in figures and words*).

- f) *Combined Price:* We hereby confirm that our combined price for Rehabilitation Works and Improvement Works does not exceed the threshold given in the TDS ITT 37.5, which is **[NOT APPLICABLE]**.
- g) *Tender Validity Period:* Our Tender shall be valid for a period specified in TDS 18.1 (or as amended if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (or as amended if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- h) *Performance Security:* If our Tender is accepted, we commit to obtain a Performance Security in accordance with the tendering document;
- i) *One Tender per Tenderer:* We are not submitting any other Tender (s) as an individual Tenderer, and we are not participating in any other Tender(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITT 4.4, other than alternative Tenders submitted in accordance with ITT 13;
- a) *Suspension and Debarment:* We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Procuring Entity. Further, we are not ineligible under Kenya laws or official regulations or pursuant to a decision of the United Nations Security Council;
- b) *State-owned enterprise or institution:* [select the appropriate option and delete the other] [We are not a state-owned enterprise or institution] / [We are a state-owned enterprise or institution but meet the requirements of ITT 3.8];
- c) *Commissions, gratuities and fees:* We have paid, or will pay the following commissions, gratuities, or fees with respect to the Tendering process or execution of the Contract: [insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate “none.”).

- d) *Binding Contract:* We understand that this Tender, together with your written acceptance thereof included in your Form of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- e) *Not Bound to Accept:* We understand that you are not bound to accept the lowest evaluated cost Tender, the Best Evaluated Tender or any other Tender that you may receive;
- f) *Fraud and Corruption:* We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption;
- g) *Collusive practices:* We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the “Certificate of Independent Tender Determination” attached below.
- r) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from [www.ppra.go.ke](http://www.ppra.go.ke) during the procurement process and the execution of any resulting contract.
- s) We, the Tenderer, have completed fully and signed the following Forms as part of our Tender:
- a) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.
- b) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.

- a) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
- b) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal.
- t) Further, we confirm that we have read and understood the full content and scope of fraud and corruption as informed in “Appendix 1- Fraud and Corruption” attached to the Form of Tender.

Name of the Tenderer: \*[insert complete name of person signing the Tender]

Name of the person duly authorized to sign the Tender on behalf of the Tenderer: \*\*[insert complete name of person duly authorized to sign the Tender]

Title of the person signing the Tender: [insert complete title of the person signing the Tender]

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date signed [insert date of signing] day of [insert month], [insert year]

Name in the capacity of \_\_\_\_\_

Signed

Duly authorized to sign the Tender for and on behalf of

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

## A. TENDERER'S ELIGIBILITY - CONFIDENTIAL BUSINESS QUESTIONNAIRE

### Instruction to Tenderer

Tender is instructed to complete the particulars required in this Form, one form for each entity if Tender is a JV. Tenderer is further reminded that it is an offence to give false information on this Form.

#### a) Tenderer's details

	ITEM	
1	Name of Procuring Entity	Kenya National Highways Authority
2	Reference Number of the Tender	KeNHA/2884/2025
3	Date and Time of Tender Opening	As indicated in the Tender Notice
4	Name of Tenderer	
5	Full Address and Contact Details of the Tenderer	1. Country 2. City 3. Location 4. Building 5. Floor 6. Postal Address 7. Name and email of contact person
6	Current Trade License Registration Number and Expiring date	
	Name, country and full address (postal and physical addresses, email, and telephone number) of Registering Body/Agency	
7	Description of Nature of Business	
8	Maximum value of business which the Tenderer handles	
9	State if Tenders Company is listed in stock exchange, give name and full address ( <i>postal and physical addresses, email, and telephone number</i> ) of state which stock exchange	

## General and Specific Details

- b) Sole Proprietor, provide the following details

Name in full \_\_\_\_\_ Age \_\_\_\_\_

Nationality \_\_\_\_\_ Country of Origin \_\_\_\_\_

Citizenship \_\_\_\_\_

- c) Partnership, provide the following details.

	Name of Partners	Nationality	Citizenship	%Shares Owned
1				
2				
3				

- (d) Registered Company, provide the following details.

i) Private or public Company \_\_\_\_\_

ii) State the nominal and issued capital of the Company-

Nominal Kenya Shillings (Equivalent).....

Issued Kenya Shillings (Equivalent).....

iii) Give details of Directors as follows.

	Name of Directors	Nationality	Citizenship	%Shares Owned
1				
2				
3				

- e) DISCLOSURE OF INTEREST - Interest of the Firm in the Procuring Entity.

i) Are there any person/persons in..... (*Name of Procuring Entity*) who has/have an interest or relationship in this firm? Yes/No.....

If yes, provide details as follows.

	Name of Person	Designation in the Procuring Entity	Interest or Relationship with Tenderer
1			
2			



3			
---	--	--	--

ii) Conflict of interest disclosure

	Type of Conflict	Disclosure YES or NO	If YES provide details of the relationship with Tenderer
1	Tenderer is directly or indirectly controls, is controlled or is under common control with another tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process		
5	Any of the Tenderer's affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender.		
6	Tenderer would be providing goods, works, non-consulting services or consulting services during implementation of the contract specified in this Tender Document.		
7	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract.		
8	Tenderer has a close business or family relationship with a professional staff of the Procuring Entity who would be involved in the implementation or supervision of the such Contract.		
9	Has the conflict stemming from such relationship stated in item 7 and 8 above been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.		

### **Certification**

On behalf of the Tenderer, I certify that the information given above is complete, current and accurate as at the date of submission.

Full Name \_\_\_\_\_

Title or Designation \_\_\_\_\_

\_\_\_\_\_  
(Signature) (Date)

## B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying Letter of Tender to the KENYA NATIONAL HIGHWAYS  
AUTHORITY for \_\_\_\_\_ [Name of tender] \_\_\_\_\_ [Tender number]

in response to the request for tenders made by: \_\_\_\_\_ [Name of Tenderer]  
do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of \_\_\_\_\_ [Name of Tenderer] that:

1. I have read and I understand the contents of this Certificate;
2. I understand that the Tender will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am the authorized representative of the Tenderer with authority to sign this Certificate, and to submit the Tender on behalf of the Tenderer;
4. For the purposes of this Certificate and the Tender, I understand that the word “competitor” shall include any individual or organization, other than the Tenderer, whether or not affiliated with the Tenderer, who:
  - a) Has been requested to submit a Tender in response to this request for tenders;
  - b) could potentially submit a tender in response to this request for tenders, based on their qualifications, abilities or experience;
5. The Tenderer discloses that [tick one of the following, as applicable]:
  - a) The Tenderer has arrived at the Tender independently from, and without consultation, communication, agreement or arrangement with, any competitor;
  - b) the Tenderer has entered into consultations, communications, agreements or arrangements with one or more competitors regarding this request for tenders, and the Tenderer discloses, in the attached document(s), complete details thereof, including the names of the competitors and the nature of, and reasons for, such consultations, communications, agreements or arrangements;
6. In particular, without limiting the generality of paragraphs (5) (a) or (5) (b) above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - a) prices;
  - b) methods, factors or formulas used to calculate prices;
  - c) the intention or decision to submit, or not to submit, a tender; or
  - d) the submission of a tender which does not meet the specifications of the request for Tenders; except as specifically disclosed pursuant to paragraph (5) (b) above;
7. In addition, there has been no consultation, communication, agreement or arrangement with any competitor regarding the quality, quantity, specifications or delivery particulars of the works or services to which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph (5) (b) above;
8. the terms of the Tender have not been, and will not be, knowingly disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening, or of the awarding of the Contract, whichever comes first, unless otherwise required by law or as specifically disclosed pursuant to paragraph (5) (b) above.

Name and Title \_\_\_\_\_

Date \_\_\_\_\_  
*[Name, title and signature of authorized agent of Tenderer and Date]*

## C. SELF-DECLARATION FORMS

### FORM SD 1: SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENT AND ASSET DISPOSAL ACT 2015

I, ....., of Post Office Box.....being a resident of  
.....in the Republic of.....do hereby make a statement as follows: -

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of  
..... (*insert name of the Company*) who is a Bidder in respect of Tender  
No.....for.....(*insert tender  
title/description*) for..... (*insert name of the Procuring entity*) and duly  
authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in  
procurement proceeding under Part IV of the Act.
3. THAT what is deponed to herein above is true to the best of my knowledge, information and belief.

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

Bidder Official Stamp

**FORM SD 2: SELF DECLARATION THAT THE TENDERER WILL NOT ENGAGE IN  
ANY CORRUPT OR FRAUDULENT PRACTICE**

I, .....of P. O. Box.....being a resident of  
.....in the Republic of.....do hereby make a statement as follows: -

1. THAT I am the Chief Executive/Managing Director/Principal Officer/Director of.....  
..... (insert name of the Company) who is a Bidder in respect of Tender No.  
..... for ..... (*insert tender title/description*) for ..... (*insert  
name of the Procuring entity*) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its servants and/or agents /subcontractors will not engage in any corrupt or  
fraudulent practice and has not been requested to pay any inducement to any member of the Board,  
Management, Staff and/or employees and/or agents of ..... (*insert name of the Procuring entity*)  
which is the procuring entity.
3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any  
member of the Board, Management, Staff and/or employees and/or agents of..... (*name of the  
procuring entity*).
4. THAT the aforesaid Bidder will not engage/has not engaged in any corrosive practice with other bidders  
participating in the subject tender
5. THAT what is deponed to herein above is true to the best of my knowledge information and belief.

.....  
(Title)

.....  
(Signature)

.....  
(Date)

Bidder's Official Stamp

### FORM SD 3: DECLARATION AND COMMITMENT TO THE CODE OF ETHICS

I, ..... (person) on behalf of (Name of the Business/Company/Firm) ..... declare that I have read and fully understood the contents of the Public Procurement & Asset Disposal Act, 2015, Regulations and the Code of Ethics for persons participating in Public Procurement and Asset Disposal and my responsibilities under the Code.

I do hereby commit to abide by the provisions of the Code of Ethics for persons participating in Public Procurement and Asset Disposal.

Name of Authorized signatory.....

Sign.....

Position.....

Office address.....Telephone.....

E-mail.....

Name of the

Firm/Company.....

Date.....

*(Company Seal/ Rubber Stamp where applicable)*

Witness

Name.....

Sign.....

Date.....

## APPENDIX 1-FRAUD AND CORRUPTION

*(Appendix 1 shall not be modified)*

### 1. Purpose

- 1.1 The Government of Kenya's Anti-Corruption and Economic Crime laws and their sanction's policies and procedures, Public Procurement and Asset Disposal Act (*no. 33 of 2015*) and its Regulation, and any other Kenya's Acts or Regulations related to Fraud and Corruption, and similar offences, shall apply with respect to Public Procurement Processes and Contracts that are governed by the laws of Kenya.

### 2. Requirements

- 1.2 The Government of Kenya requires that all parties including Procuring Entities, Tenderers, (applicants/proposers), Consultants, Contractors and Suppliers; any Sub-contractors, Sub-consultants, Service providers or Suppliers; any Agents (whether declared or not); and any of their Personnel, involved and engaged in procurement under Kenya's Laws and Regulation, observe the highest standard of ethics during the procurement process, selection and contract execution of all contracts, and refrain from Fraud and Corruption and fully comply with Kenya's laws and Regulations as per paragraphs 1.1 above.
- 1.3 Kenya's public procurement and asset disposal act (*no. 33 of 2015*) under Section 66 describes rules to be followed and actions to be taken in dealing with Corrupt, Coercive, Obstructive, Collusive or Fraudulent practices, and Conflicts of Interest in procurement including consequences for offences committed. A few of the provisions noted below highlight Kenya's policy of no tolerance for such practices and behavior:
  - 1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
  - 2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
  - 3) Without limiting the generality of the subsection (1) and (2), the person shall be—
    - a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
    - b) if a contract has already been entered into with the person, the contract shall be voidable;
  - 4) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;
  - 5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement—
    - a) shall not take part in the procurement proceedings;
    - b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
    - c) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.
  - 6) An employee, agent or member described in subsection (1) who refrains from doing

anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;

- 7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5) (a) and the contract is awarded to the person or his relative or to another person in whom one of them had a director indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer. Etc.

1.4 In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:

- i) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows: "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 misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain 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;
- v) "obstructive practice" is:
  - deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
  - acts intended to materially impede the exercise of the PPRA's or the appointed authority's inspection and audit rights provided for under paragraph 2.3 e. below.
- b) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:

"fraudulent practice" includes a misrepresentation of fact in order to influence a procurement or disposal process or the exercise of a contract to the detriment of the procuring entity or the tenderer or the contractor, and includes collusive practices amongst tenderers prior to or after tender submission designed to establish tender prices at artificial non-competitive levels and to deprive the procuring entity of the benefits of free and open competition.

- c) Rejects a proposal for award<sup>1</sup> of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction or recommend to appropriate authority(ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;
- e) Requires that a clause be included in Tender documents and Request for Proposal documents



requiring (i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub- consultants, Service providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect<sup>2</sup> all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and

- f) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a “Self-Declaration Form” as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/will not engage in any corrupt or fraudulent practices.

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<sup>1</sup>For the avoidance of doubt, a party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and tendering, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

<sup>2</sup> Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Investigating Authority or persons appointed by the Procuring Entity to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

## APPENDIX TO FORM OF TENDER

(This appendix forms part of the bid)

Conditions	Sub-Clause	Data
Employer's name and address	1.1.2.2	Director General, Kenya National Highways Authority, P.O. Box 49712 – 00100, <b><u>NAIROBI</u></b>
Engineer's name and address	1.1.2.4	Director – Development, Kenya National Highways Authority, P.O. Box 49712 – 00100, <b><u>NAIROBI</u></b>
Time for Completion	1.1.3.3	Thirty-Six (36) Months
Defects Notification Period	1.1.3.7	Twenty-four (24) Months
Site	1.1.6.7	Upgrading to Bitumen Standard Kakamega Airstrip – Shinyalu – Chepsonoi (B12) Road
Communications	1.3(b)	<p>The Employers address is: The Director General, Kenya National Highways Authority (KeNHA), P.O. Box 49712 - 00100 <b><u>NAIROBI</u></b></p> <p>The Engineer's address is: The Director, Development, Kenya National Highways Authority (KeNHA), P.O. Box 49712 - 00100 <b><u>NAIROBI</u></b></p> <p><b>The Contractor address is:</b> Name.....</p>

Conditions	Sub-Clause	Data
		P.O Box.....  City/Town.....  Email.....  Telephone:.....
Governing Law	1.4	Laws of the Republic of Kenya
Ruling and communications language	1.4	English
Contract Agreement	1.6	Within the bid validity period
Assignment	1.7	Not applicable
Care and Supply of documents	1.8	One (1) Contract document to be supplied to the Contractor
Right of access to the Site	2.1	Within Twenty-Eight (28) days of the Notice of Commencement Date
Performance Security	4.2	The Performance Security shall be in the form of an unconditional Bank Guarantee in the amount(s) of 10% of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount and submitted by the 28 <sup>th</sup> day from the date of the award letter
Subcontractors	4.4	Maximum of thirty percent (40%) of permanent works
Parts of the Works for which subcontracting is not permitted	4.4	N/A
Progress reports	4.21	Softcopies
Penalty for not implementing approved ESMP, OHS and Safety Plan.	4.8	Upto Kshs. 100, 000.00 per day up to limit of 3% of the contract sum.
Normal working hours	6.5	Weekdays: 8am – 5pm (With 1hour break) Saturdays: 8am – 12 Noon

Conditions	Sub-Clause	Data
Commencement of Works	8.1	Twenty Eight (28) days after order to commence
Programme	8.3	<ul style="list-style-type: none"> <li>• Electronic through the CPM tool</li> <li>• One (1) Hard copy</li> <li>• Within 28days</li> </ul>
Delay damages payable for each day of delay	8.7	0.05% of the Accepted Contract Amount
Maximum amount of delay damages	8.7	5% of the Accepted Contract Amount
Take Over of Parts of the Works	10.2	<p>The Employer shall appoint a committee to inspect and accept works prior to the Engineer issuing the taking over certificate for the following sections:</p> <ol style="list-style-type: none"> <li>Kakamega Airstrip – Shinyalu Junction; Approximately 6 kms</li> <li>Shinyalu Junction – Forest edge; Approximately 6 kms</li> <li>Forest Entry edge – Forest Exit boundary, Approximately 7Kms</li> <li>Forest Boundary - Chepsonoi; Approximately 6kms</li> </ol>
Provisional Sums	13.5 (b)(ii)	As specified in the Schedule of rates
Adjustment to changes in cost	13.8	<p>i. Current indices or prices in the Interim Payment Certificate should be those prevailing on the month 28 days prior to the last day of the period to which a particular IPC is to be released falls.</p> <p>ii. In cases, the Contractor failed to complete the works within the “Time of Completion”, CPA calculation thereafter has been made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time of Completion of the Works, or (ii) the current index or price: whichever is more favorable to the Employer. The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.</p> <p>iii. The Price Adjustment provision shall not be applicable if the contract is not completed in time due to the delay caused by the contractor.</p>

Conditions	Sub-Clause	Data
		<p>iv. The price adjustment will not be applicable if the prices of the construction material increase or decrease within +/- 10% of the base rate.</p> <p>v. Variation of Price shall be calculated base each month's financial statement from the contractor. Monthly statements shall be taken as the indices prevailing for the month when the first date of valuation period of the current IPC falls.</p> <p>vi. Variation of Price will be applied on monthly financial statements and will become effective 12 months after commencement of the Works</p> <p>vii. In case of negative price escalation then the amount will be deducted from the IPC.</p>
Advance payment	14.2	<p>The Employer MAY pay up to a maximum of 10% of Contract Sum (in installments) after signing of contract, issuance of order to commence and submission of advance payment bank guarantee.</p> <p>NB</p> <p>Upon one month of request by the Employer, the Contractor will be required to submit evidence of utilization of the Advance Payment for the project as follows:</p> <ul style="list-style-type: none"> <li>i. Establishment</li> <li>ii. Materials</li> <li>iii. Equipment</li> </ul> <p>Any portion of the advance payment not utilized in accordance to the conditions of this clause Shall lead to the Employer recalling the advance payment guarantee immediately.</p>
Application for interim payment certificates (Statements)	14.3	1 hard copy and 1 soft copy
Percentage of retention	14.3(c)	5% of the Accepted Contract Amount
Limit of Retention Money	14.3(c)	5% of the Accepted Contract Amount
Schedule of payments	14.4	Payment shall be by milestone as shown in

Conditions	Sub-Clause	Data
		<b>Table A below.</b>
Minimum number of interim certificates	14.6	<b>Per Milestone</b> in accordance with the Schedule of Payment
Period of payment of Advance Payment to the Contractor	14.7(a)	Ninety (90) days
Period for the Employer to make interim payments to the Contractor	14.7b	Ninety (90) days
Period for the Employer to make final payment to the Contractor	14.7(c)	Ninety (90) days
Delayed payment	14.8	Simple interest at a rate equal to two percentage points above the mean Base Lending Rate obtained from the Central Bank of Kenya
Number of additional paper copies of draft Final Statement	14.11	1 hard copy and 1Soft copy
Currencies of Payment	14.15	Kenya Shillings (KES)
Maximum total liability of the Contractor to the Employer	17.6	The accepted contract amount
Periods for submission of insurance	18.1	a. evidence of insurance – 14days b. relevant policies – 28 days
Maximum number of deductibles for insurance of the Employer's risks	18.2(d)	Not Applicable
Minimum amount of third-party insurance	18.3	Limited to Accepted Contract Amount for each occurrence, with unlimited number of occurrences
Date by which the DB shall be appointed	20.2	As and when required
The DB shall be comprised of	20.2	Three Members (ad hoc)
Appointment (if not agreed) to be made by:	20.3	Chartered Institute of Arbitrators (Kenya)
Place and Seat of arbitration	20.6(a)	Nairobi, Kenya

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

**Table A: Schedule of Payments**

Q/No.	Milestone	Payment Date	Valuation	Recovery of advance
1.	On attainment of 10% of projectlength to bitumen standard		Full value of Milestone as per approved measured work	
2.	On attainment of 20% of projectlength to bitumen standard		Full value of Milestone as per approved measured work	Start recovery as per clause 14.2
3.	On attainment of 30% of projectlength to bitumen standard		Full value of Milestone as per approved measured	
4.	On attainment of 40% of projectlength to bitumen standard		Full value of Milestone as per approved measured work	
5.	On attainment of 50% of projectlength to bitumen standard		Full Value of Milestone as as per approved measured	
6.	On attainment of 60% of projectlength to bitumen standard		Full value of Milestone as per approved measured work	
7.	On attainment of 70% of projectlength to bitumen standard		Full value of Milestone as per approved measured work	
8.	On attainment of 80% of projectlength to bitumen standard		Full measure of Milestone as measured works including with 30% of road furniture	End of recovery as per clause 14.2
9.	On attainment of 90% of projectlength to bitumen standard		Full measure of Milestone as measured works including additional 30% of road furniture	
10.	On attainment of 100% of projectlength to bitumen standard		Full measure of Milestone as measured work including the remaining 40% the road furniture.	
11.	Final statement on attainment of 100% of project length to bitumen standard.		Final statement including value of measured works, claims, interests etc..	

**Key Notes**

1. A milestone shall be a fully completed section of the road as above having all pavement layers, access culverts, cross pipeculverts and functioning drains.
2. For assigned or formally sub-contracted works, a milestone shall constitute 10% of the total length assigned or formally sub-contracted, having all pavement layers, access culverts, cross pipe culverts and functioning drains.
3. Works done as part safety installation such as guardrails and road bumps shall be paid within the milestone
4. Completion of bottleneck section on the project road to pavement standard as instructed and approved by the Engineer shall constitute a milestone.
5. Work executed under Major structures (box culverts and bridges will be valued and paid together with due milestone payments
6. Road Furniture and road marking will form part of the completed mile stone for milestones 8,9 and 10.

7. In case of an emergency the cost of repair shall be paid in the succeeding milestone. Emergency works shall be subject to Employers approval. Emergency works may be undertaken as day works or as approved under the contingencies.



# **FORM CON – 1 HISTORICAL CONTRACT NON-PERFORMANCE, PENDING LITIGATION AND LITIGATION HISTORY**

Tenderer's Name: \_\_\_\_\_ Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

Tender No. \_\_\_\_\_

Tender title: \_\_\_\_\_

Non- Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> Contract non-performance did not occur for the last five (5) years from the day of tender opening. <input type="checkbox"/> Contract(s) not performed for the last five (5) years from the day of tender opening			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (Kenya Shilling equivalent)
[insert year]	[insert amount and percentage]	Contract Identification: [indicate complete contract name/number; and any other identification]  Name of Procuring Entity: [insert full name]  Address of Procuring Entity: [insert street/city/country]  Reason(s) for nonperformance: [indicate main reason(s)]	[insert amount]
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements			
<input type="checkbox"/> No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 8. <input type="checkbox"/> Pending Litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 9 as indicated below			
Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (Kenya Shilling equivalent)
		Contract Identification: Name of Procuring Entity: Address of Procuring Entity: Matter in dispute: Party who initiated the dispute: Status of dispute:	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4. <input type="checkbox"/> Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below			
Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (Kenya Shilling equivalent)

**FORM CON – 2: DECLARATION FORM – FAIR EMPLOYMENT LAW AND PRACTICES**

Date

To

The Director General,

Kenya National Highways Authority (KeNHA),

P.O. Box 49712-00100

**NAIROBI**

We (name and address)\_\_\_\_\_

\_\_\_\_\_ declare the following:

1. Have not been involved in and will not be involved in violation of fair employment laws and practices.
2. THAT what is declared hereinabove is true to the best of my knowledge, information and belief

-----	.....	-----
Name of Bidder's authorized Representative	Signature	Date

(To be signed by authorized representative and officially stamped)

**FORM CON – 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 organized inspection visit of the site of the works for the

**UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) 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.

## FORM FIN – 3.1: FINANCIAL SITUATION AND PERFORMANCE

### PART 1

Tenderer's Name: \_\_\_\_\_ Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

Tender No. \_\_\_\_\_

Tender title: \_\_\_\_\_

#### 1. Financial data

Type of Financial information (Kenya Shillings)	Historic information for previous <u>5</u> years, (amount in Millions (KSh.))				
	2020	2021	2022	2023	2024
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

## 2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (Kenya Shilling equivalent)
1	Letter of line of Credit from a recognized Financial Institution	
2	Bank account balance (demonstrated by bank statements)	

## 3. Financial documents

The Tenderer and its parties shall provide copies of financial statements for the last five (5) years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

- Reflect the financial situation of the Tenderer or in case of JV member, and not an affiliated entity (such as parent company or group member).
- Be independently audited or certified in accordance with local legislation.
- Be complete, including all notes to the financial statements.
- Correspond to accounting periods already completed and audited.

Attached are copies of financial statements for the five (5) years required above; and complying with the requirements

## PART 2

### Detailed Financial Situation Evaluation

No.	Description	Auditors Assessment 2020	Auditors Assessment 2021	Auditors Assessment 2022	Auditors Assessment 2023	Auditors Assessment 2024	Evaluation Score Award Criteria
1.	Financial Ratios						Max score=4 Marks
a.	<b>Current Ratio=</b> <b><u>Current Assets</u></b> <b>Current Liabilities</b>						Current Ratio more than 1 = 1 marks
b.	<b>Debt to Equity Ratio =</b> <b><u>Total Liabilities</u></b> <b>Total Equity</b>						Equity Capital Ratio less than 1 = 1 Marks
c.	<b>Working Capital =</b> <b>Current Assets-</b> <b>Current Liabilities</b>						Positive Working Capital = 1 marks
d.	<b>Operating Cash Flow Ratio =</b> <b>Cash Flow from</b> <b><u>Operations</u></b> <b>Current Liabilities</b>						Operating Cash-flow more than 1 = 1 marks
2.	<b>Working Capital in KShs. ....</b>						Working Capital is equal or more than 10% of the bid price = 5 Marks

The above Financial Ratios have to be derived from first Principles from the Audit Statements. The Auditor who has undertaken the analysis has to demonstrate the financial ratios and append his signature and stamp to the Document as below:

The Auditor shall be required to provide his/her workings and demonstrate the source of the workings from the various Audited statements by including the Page Numbers and references of the source of the figures used in the computation of the assigned values.

The Auditor undertaking the above Financial Analysis **MUST** duly fill the Contact Sheet below in all aspects and attach current annual practising license.

**Financial ratios Computed by a Certified Public Accountant:**

<b>CPA: Name</b>	
<b>ICPAK Number</b>	
<b>Telephone Number</b>	
<b>Email Address</b>	
<b>Postal Address</b>	
<b>Physical Address</b>	
<b>Contact Person</b>	
<b>Mobile Contact of the Contact Person</b>	
<b>Signature</b>	
<b>Date</b>	
<b>Personal/Corporate Stamp</b>	

**Ratios attested by the Company Director:**

<b>Director's Name</b>	
<b>ID/Passport Number</b>	
<b>Telephone Number</b>	
<b>Email Address</b>	
<b>Postal Address</b>	
<b>Physical Address</b>	
<b>Signature</b>	
<b>Date</b>	
<b>Personal/Corporate Stamp</b>	

**FORM FIN – 3.2: AVERAGE ANNUAL CONSTRUCTION TURNOVER**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

Tender No. \_\_\_\_\_

Tender title: \_\_\_\_\_

		<b>Annual turnover data (construction only)</b>	
<b>Year</b>	<b>Amount Currency</b> <i>[insert amount and indicate currency]</i>	<b>Exchange Rate</b> <b>(where applicable)</b>	<b>Kenya Shilling equivalent</b>
2020			
2021			
2022			
2023			
2024			
Average Annual Construction Turnover*			

\* See Section III, Evaluation and Qualification Criteria.

*If the most recent set of financial statements is for a period earlier than 12 months from the date of Bid, the reason for this should be justified.*



**FORM FIN - 3.3: CURRENT CONTRACT COMMITMENTS / WORKS IN PROGRESS**

Tenderers and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a Form of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

**Current Contract Commitments**

No.	Name of Contract	Procuring Entity's Contact Address, Tel, Fax	Value of Outstanding Work (Kenya Shilling equivalent)	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [KSh./month]

**FORM EXP - 4.1: GENERAL CONSTRUCTION EXPERIENCE**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

Tender No. \_\_\_\_\_

Tender title: \_\_\_\_\_

Starting Year	Ending Year	Contract Identification	Role of Tenderer
		Contract name:  Brief Description of the Works and Services performed by the Tenderer:  Amount of contract: Name of Procuring Entity: Address:	<i>Main Contractor/ Subcontractor/ Management Contractor</i>
		Contract name:  Brief Description of the Works and Services performed by the Tenderer:  Amount of contract: Name of Procuring Entity: Address:	
		Contract name:  Brief Description of the Works and Services performed by the Tenderer:  Amount of contract: Name of Procuring Entity: Address:	

# **FORM EXP - 4.2(A): SPECIFIC CONSTRUCTION AND CONTRACT MANAGEMENT EXPERIENCE**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

Tender No. \_\_\_\_\_

Tender title: \_\_\_\_\_

Similar Contract No..	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-Contractor <input type="checkbox"/>
Total Contract Amount			Kenya Shillings	
If member in a JV or sub-contractor, specify participation in total Contract amount				
Procuring Entity's Name:				
Address:				
Telephone/fax number				
E-mail:				
Description of the similarity in accordance with Sub-Factor 4.2(b) of Section III:				
1. Amount				
2. Physical size of required Works and Services items				
3. Complexity				
4. Methods/Technology				
5. Construction rate for key activities				
6. Other Characteristics				



**FORM EXP - 4.2(B): CONSTRUCTION EXPERIENCE IN KEY ACTIVITIES**

Tenderer's Name:

---

Date:

Tenderer's JV Member Name:

Sub-contractor's Name (as per ITT 33.2):

Tender No. \_\_\_\_\_

Tender title: \_\_\_\_\_

All Sub-contractors for key activities must complete the information in this form as per ITT 33.2 and Section III, Qualification Criteria and Requirements, Sub-Factor 4.2.

1. Key Activity No One: \_\_\_\_\_

	<b>Information</b>			
Contract Identification				
Award date				
Completion date				
Role in Contact	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-Contractor <input type="checkbox"/>
Total Contract Amount			Kenya Shillings	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)	Actual Quantity Performed (i)*(ii)	
Year 1				
Year 2				
Year 3				
Year 4				
Procuring Entity's Name: Address: Telephone/fax number E-mail:				

Information	
Description of key activities in accordance with Sub-Factor 4.2(b) of Section III:	
Earthworks	
Gabion protection works	
Concrete works	
Surface Dressing	
Asphalt Concrete works	

*If applicable*

2 Activity No. Two

3. ....

## **TECHNICAL PROPOSAL**

The Tenderer's Technical Proposal shall include the following elements:

SCHEDULE A. Projected Cash Flow

SCHEDULE B. Site Organizations

SCHEDULE C. Subcontractors

SCHEDULE D. Contractor's Equipment

SCHEDULE E. Initial Tentative Program of Performance

SCHEDULE F. Key Personnel Proposed

Instructions on how to present the various schedules of the Technical Proposal are given on the following pages

## SCHEDULE A

### Projected Cash Flow

- 1) Tenderers shall tabulate below estimates, based on their preliminary work programme, of:
  - a) On the expenditure side, the value of the work which will be carried out;
  - b) On the revenue side, the net payments to which they will become entitled with due allowance for the advance payment and repayment, materials prepayments, and retention money, but excluding price adjustments for rise and fall and provisional sums for emergency works.
  - c) The projected net cash flow during the contract period.
- 2) The prospective successful Tenderer may be required to submit full details to substantiate his estimates.

Period (Months)	Cost of Construction Works	Net Payment to be received	Net Cashflow
1-4			
4-8			
8-12			
12-16			
16-20			
20-24			
24-28			
28-32			
32-36			



## **SCHEDULE B**

### **Site Organization**

Tenderers shall give below full particulars of the organization they propose to establish, direct, and administer the performance of the Contract. In particular, Tenderers shall indicate the location of site camps and the resources they intend to allocate to Self-Control Units for planning and monitoring purposes.

1. SITE ORGANIZATION CHART
  - i. ORGANOGRAM
  - ii. SITE ORGANISATION LAYOUTS
  - iii. SITE LOCATION MAP
2. NARRATIVE DESCRIPTION OF SITE ORGANIZATION CHART

## **SCHEDULE C**

### **SUB-CONTRACTORS / PARTNERS**

Tenderers shall list below those parts of the Works and Services which they propose to subcontract, and state the approximate value of those parts and the names and addresses of the proposed subcontractors, if those are known at Tendering stage. Tenderers shall also list other business partners involved in the execution of the contract and their respective roles and responsibilities.

Part of Works /  
Services:

Approximate  
value:

Name and address of proposed subcontractor / partner:

Part of Works /

Services:

Approximate  
value:

Name and address of proposed subcontractor / partner:

Part of Works /

Services:

Approximate  
value:

Name and address of proposed subcontractor / partner:

Part of Works /

Services:

Approximate  
value:

Name and address of proposed subcontractor / partner:

## SCHEDULE D

### Contractor's Equipment Form EQU

The Tenderer shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed in Section B (Technical Evaluation) of Qualification Form.

Equipment Information and current status for equipment leased from Government Agencies may be omitted

<b>Item of equipment</b>		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current Status	Current Location:	
	Details of current commitments	
Source	Indicate source of equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Tenderer.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	
Agreements	Details of rental/ lease/ manufacture agreements specific to the project	

## **SCHEDULE E**

### **Initial Tentative Program of Works**

To demonstrate a clear understanding of the requirements of the Contract, Tenderers shall provide the following:

- i) A bar chart sub-divided into sections for each road showing the major activities to be carried out for Maintenance Works. The activities shall be shown against time, with linkages shown between related/sequential activities as far as possible and appropriate.
- ii) A bar chart or schedule showing the usage of major plant, including those listed in Schedule D (Contractor's Equipment).

## SCHEDULE F

### Form PER -1 Key Personnel Schedule

Tenderers should provide the names and details of the suitably qualified Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

#### Key Personnel

<b>1.</b>	<b>Title of position: Site Agent</b>	
	<b>Name of candidate:</b>	
	<b>Duration of appointment:</b>	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	<b>Time commitment for this position:</b>	<i>[insert the number of days/weeks/months that has been scheduled for this position]</i>
	<b>Expected time schedule for this position:</b>	<b><i>Full time site presence</i></b>
<b>2.</b>	<b>Title of position: Foreman</b>	
	<b>Name of candidate:</b>	
	<b>Duration of appointment:</b>	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	<b>Time commitment for this position:</b>	<i>[insert the number of days/weeks/months that has been scheduled for this position]</i>
	<b>Expected time schedule for this position:</b>	<b><i>Full time site presence</i></b>

Countersignature of authorized representative of the Tenderer:

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

**Form PER -2****Resume and Declaration – Key Personnel- (Resume to be provided in this format)**

<b>Name of Tenderer</b>
-------------------------

<b>Position [1]: [title of position from Form PER-1]</b>		
<b>Personnel information</b>	<b>Name:</b>	<b>Date of birth:</b>
	<b>Address:</b>	<b>E-mail:</b>
	<b>Professional qualifications:</b>	
	<b>Academic qualifications:</b>	
	<b>Language proficiency:</b> <i>[language and levels of speaking, reading and writing skills]</i>	
<b>Details</b>	<b>Address of Tendering Entity:</b>	
	<b>Telephone:</b>	<b>Contact (manager/personnel officer):</b>
	<b>Fax:</b>	
	<b>Job title:</b>	<b>Years with present Entity:</b>

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	Role	Duration of involvement	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

**Declaration**

I, the undersigned Key Personnel, certify that to the best of my knowledge and belief, the information contained in this Form PER -2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Tender:

Commitment	Details
Commitment to duration of contract:	<i>[insert period (start and end dates) for which this Key Personnel is available to work on this contract]</i>
Time commitment:	<i>[insert the number of days/weeks/months that this Key Personnel will be engaged]</i>

I understand that any misrepresentation or omission in this Form may:

- be taken into consideration during Tender evaluation;
- my disqualification from participating in the Tender;
- my dismissal from the contract.

Name of Key Personnel: *[insert name]*

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

Countersignature of authorized representative of the Tenderer:

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

## SCHEDULE G

### PART I. SCHEDULE OF MATERIALS; -BASIC PRICES

ITEM NO	DESCRIPTION	NAME OF SUPPLIER	COUNTRY OF ORIGIN	UNIT	BASE PRICE	
					KSHS	CTS
1.	Cut-back Bitumen MC 30 in bulk			Litre		
2.	Cut-back Bitumen MC 30 in drums			Litre		
3.	Bitumen 80/100 in bulk			Kg		
4..	Bitumen 80/100 in drums			Kg		
5..	Bitumen Emulsion K1-60 in bulk			Litre		
6.	Bitumen Emulsion K1-60 in drums			Litre		
7.	Petrol, Regular Grade			Litre		
8.	Petrol, Premium/ super Grade			Litre		
9.	Automotive Diesel Fuel			Litre		
10.	Industrial Diesel Oil			Litre		
11.	Industrial Fuel Oil			Litre		
12.	Kerosene Fuel			Litre		
13.	Cement			Tonne		
14.	Flex beam Guardrail			Metre		
15.	Gabion Mesh			M <sup>2</sup>		
16.	Reinforcing Steel			Tonne		
17.	Lime			Tonne		

I certify that the above information is correct

.....  
(Title)

.....  
(Signature)

.....  
(Date)

#### Notes:

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



**PART II. SCHEDULE OF RATES DERIVATION**  
(Sample Copy for Guidance)

**Form for Detailed Breakdown of Cost Comparison**

<b>Bill item No.</b>	16-80-001
<b>Description</b>	Provide, lay and compact Asphalt Concrete Type 1 wearing course to carriageway
<b>Units</b>	M <sup>3</sup>
<b>Quantity</b>	654.00

(Assumed production is 160m<sup>3</sup> per day)

**Rate build up**

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
AC Type 1	M <sup>3</sup>	1	20,900.00	20,900.00
<b>Sub Total For Material</b>				<b>20,900.00</b>

2) Labour Price

Personnel	No. Required	Rate /day	Amount
Skilled Labour overseer	2	1,800.00	22.50
Skilled Labour - Operator	6	2,045.00	76.69
Artisans Grade II	12	1,612.00	120.90
Unskilled labour	15	873.00	81.84
<b>Sub Total for Labor</b>			<b>301.93</b>
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
Drum Roller	1	38,720.00	242.00	Hired
Pneumatic Roller	1	29,200.00	182.00	Hired
Air Compressor	1	9,625.00	60.16	Hired
Bitumen Sprayer Hand operated	1	4,400.00	27.50	Hired
AC Paver	1	50,504.00	315.65	Hired
<b>Sub Total for Machinery</b>			<b>827.81</b>	
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	22,029.74

ii) Haulage Cost	1,104.49
------------------	----------

Sub-totals of DC	23,131.22
------------------	-----------

b) Indirect Cost	2,313.12
------------------	----------

c) Overheads and Profits	6,939.37
--------------------------	----------

<b>Total Cost</b>	
Sum (a+b+c)	
Carried forward to the BoQ	32,383.71

(For use during Tender Evaluation)

### Form for Detailed Breakdown of Cost Comparison

**Bill item No.**

17.02

**Description**

Provide and place class 25/20 concrete to headwalls, wing walls, aprons, surrounds to walls, inlets and outlets to pipe culverts including formwork

**Units**

M<sup>3</sup>

**Quantity**

**Rate build up**

*a) Direct cost (DC)*

i) Unit work  
Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price

Sum (1+2+3)

ii) Haulage Cost

Sub-totals of DC

*b) Indirect Cost*

*c) Overheads and Profits*

**Total Cost**

Sum (a+b+c) Carried forward to the BoQ

**Notes:**

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: <https://krb.go.ke/downloads>

I certify that the above information is correct

.....  
(Title)

.....  
(Signature)

.....  
(Date & Official Stamp)

(For use during Tender Evaluation)

### Form for Detailed Breakdown of Cost Comparison

**Bill item No.**

12.01

**Description**

Provide, place , water and compact, Natural Material for Base and subbase as per section 12 of the Specifications and as directed by the Engineer.

**Units**

M<sup>3</sup>

**Quantity**

**Rate build up**

a) Direct cost (DC)

i) Unit work price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price

Sum (1+2+3)

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost

c) Overheads and Profits

**Total Cost**

Sum (a+b+c) Carried forward to the BoQ

**Notes:**

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: <https://krb.go.ke/downloads>

I certify that the above information is correct

.....  
(Title)

.....  
(Signature)

.....  
(Date & Official Stamp)

(For use during Tender Evaluation)

### Form for Detailed Breakdown of Cost Comparison

**Bill item No.**

14.01

**Description**

Provide and spread cement stabilizer to natural gravel base and sub base; all in accordance with the specifications and in conformity with the Engineer's instructions.

**Units**

Ton

**Quantity**

**Rate build up**

a) Direct cost (DC)

i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price

Sum (1+2+3)

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost

c) Overheads and Profits

**Total Cost**

Sum (a+b+c) Carried forward to the BoQ

**Notes:**

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: <https://krb.go.ke/downloads>

I certify that the above information is correct

.....  
(Title)

.....  
(Signature)

.....  
(Date & Official Stamp)

(For use during Tender Evaluation)

### Form for Detailed Breakdown of Cost Comparison

**Bill item No.**

5,01

**Description**

Fill in soft material, including benching of shoulders and embankment and compact to 95% MDD (AASHTO T99) as directed by the Engineer

**Units**

M<sup>3</sup>

**Quantity**

**Rate build up**

a) Direct cost (DC)

i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price

Sum (1+2+3)

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost

c) Overheads and Profits

**Total Cost**

Sum (a+b+c) Carried forward to the BoQ



**Notes:**

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: <https://krb.go.ke/downloads>

I certify that the above information is correct

.....  
(Title)

.....  
(Signature)

.....  
(Date & Official Stamp)

(For use during Tender Evaluation)

### Form for Detailed Breakdown of Cost Comparison

**Bill item No.**

15.02

**Description**

Provide, spread and roll 10/14 mm precoated chipping

**Units**

M<sup>3</sup>

**Quantity**

**Rate build up**

*a) Direct cost (DC)*

i) Unit work  
Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price

Sum (1+2+3)

ii) Haulage Cost

Sub-totals of DC

*b) Indirect Cost*

*c) Overheads and Profits*

**Total Cost**

Sum (a+b+c) Carried forward to the BoQ

**Notes:**

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: <https://krb.go.ke/downloads>

I certify that the above information is correct

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(Title)

.....  
(Signature)

.....  
(Date & Official Stamp)

(For use during Tender Evaluation)

### Form for Detailed Breakdown of Cost Comparison

<b>Bill item No.</b>	15.03
<b>Description</b>	Provide, heat and spray 80/100 cut-back bitumen as a seal on carriageway at a rate of 1.0-1.2 Litres/m <sup>2</sup> .
<b>Units</b>	Litres
<b>Quantity</b>	

#### Rate build up

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost	
c) Overheads and Profits	
<b>Total Cost</b> Sum (a+b+c) Carried forward to the BoQ	

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### Form for Detailed Breakdown of Cost Comparison

<b>Bill item No.</b>	15.04
<b>Description</b>	Provide and Spray MC 30 cut-back bitumen as prime coat to carriageway, shoulders, busbays and junctions at rate 0.8-1.2 lts/m <sup>2</sup> as prime coat
<b>Units</b>	Litres
<b>Quantity</b>	

#### Rate build up

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost

c) Overheads and Profits

**Total Cost**  
Sum (a+b+c)  
Carried forward to the BoQ

**Notes:**

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### Form for Detailed Breakdown of Cost Comparison

<b>Bill item No.</b>	16.01
<b>Description</b>	Provide, lay and compact Asphalt Concrete Type 1 wearing course to carriageway
<b>Units</b>	M <sup>3</sup>
<b>Quantity</b>	

#### Rate build up

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost	
c) Overheads and Profits	
<b>Total Cost</b> Sum (a+b+c) Carried forward to the BoQ	



**Notes:**

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### Form for Detailed Breakdown of Cost Comparison

**Bill item No.**

16.02

**Description**

Provide and spray K-160 as tack coat at a rate of 0.8-1.0 L/m<sup>2</sup> as directed by the Engineer

**Units**

Litres

**Quantity**

**Rate build up**

a) Direct cost  
(DC)

i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price

Sum (1+2+3)

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost

c) Overheads and Profits

**Total Cost**

Sum (a+b+c)

Carried forward to the BoQ

**Notes:**

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
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(For use during Tender Evaluation)

### Form for Detailed Breakdown of Cost Comparison

<b>Bill item No.</b>	20.08
<b>Description</b>	Paint 0.1m wide thermoplastic white lines on the road as specified
<b>Units</b>	M <sup>2</sup>
<b>Quantity</b>	

#### Rate build up

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost	
c) Overheads and Profits	
<b>Total Cost</b> Sum (a+b+c) Carried forward to the BoQ	

**Notes:**

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: <https://krb.go.ke/downloads>

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(Title)

.....  
(Signature)

.....  
(Date& Official Stamp)

(For use during Tender Evaluation)

### Form for Detailed Breakdown of Cost Comparison

<b>Bill item No.</b>	5.02
<b>Description</b>	Fill in hard material and compact as directed by the Engineer
<b>Units</b>	M <sup>3</sup>
<b>Quantity</b>	

#### Rate build up

a) Direct cost (DC) i) Unit work Price

1) Material Cost

Description	Units	Quantity	Market Price	Amount
<b>Sub Total For Material</b>				

2) Labour Price

Personnel	No. Required	Rate /day	Amount
<b>Sub Total For Labor</b>			
Productivity ratio			

3) Machinery

Machinery type	No. Required	Rate /day	Amount	Hired/Owned
<b>Sub Total for Machinery</b>				
Productivity ratio				

Sub-total of unit price	
Sum (1+2+3)	

ii) Haulage Cost

Sub-totals of DC

b) Indirect Cost	
c) Overheads and Profits	
<b>Total Cost</b> Sum (a+b+c) Carried forward to the BoQ	

**Notes:**

- Attach current (atleast 30 days before tender opening date) proof of cost of materials e.g. Proforma invoices/quotations.
- This form has been based on the principles of Cost Estimation Manual. The Cost Estimation Manual can be downloaded from the following website: <https://krb.go.ke/downloads>

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(Signature)

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(Date& Official Stamp)

## SCHEDULE H:

### BASIC PRICES FOR MATERIALS AND LABOUR

Index Code*	Index Description*	Source of Index*	Base Value and Date*	Bidder's Weighting	Weighting Range
Fixed	Nonadjustable	KNBS 2019 Civil Engineering Cost Indices	28 days before tender opening date		A= 0.4
EQ	Equipment				B= 0.1– 0.25
LL	Labour				C= 0.09 ~ 0.18
MT	Materials				D= 0.14 – 0.26
TF	Transport & Fuel				E= 0.01 ~ 0.09
Total				1.0	

#### Notes:

- The Base year for the indices shall be 2019.
- Variation of Price will be applied on monthly financial statements and will become effective 12 months after commencement of the Works
- Tenderer to insert Bidder's weighting coefficients in column 5, within the range specified in column 6, for each index in the table above.
- Entered coefficients should add up to one for use in the variation of price formula.
- Refer to FIDIC clause 13.8 on adjustment for price.

I certify that the above information is correct.

.....  
(Title)

.....  
(Signature)

.....  
(Date)



## FORM OF TENDER SECURITY - DEMAND GUARANTEE

Beneficiary: \_\_\_\_\_

Invitation to Tender No: \_\_\_\_\_

Date: \_\_\_\_\_

TENDER GUARANTEE No.: \_\_\_\_\_

Guarantor: \_\_\_\_\_

We have been informed that \_\_\_\_\_ (herein after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (hereinafter called "the Tender") for the execution of under Invitation to Tender No. \_\_\_\_ ("the ITT").

Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ (\_\_\_\_\_) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

- a) Has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Form of Tender ("the Tender Validity Period"), or any extension there to be provided by the Applicant; or
- b) Having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension there to be provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance Security, in accordance with the Instructions to Tenderers ("ITT") of the Beneficiary's Tendering document.

This guarantee will expire:

- a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the performance Security and, issued to the Beneficiary in relation to such contract agreement; or
- b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) twenty-eight days after the end of the Tender Validity Period.

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

\_\_\_\_\_  
[signature(s)]

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## **PART 2 - WORKS' REQUIREMENTS**

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## **SECTION VI - 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. Payments will be made on completed milestones
5. 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.
6. 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.
7. Provisional sums (including Dayworks) in the Bills of Quantities shall be expended in whole or in part at the discretion of the Engineer in accordance with Sub-Clause 13.6 of Part I of the Conditions of Contract.
8. 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 (excluding VAT) 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.
9. Errors in the pricing of the Bills of Quantities will be corrected in accordance with ITT 31 of instructions to bidders.
10. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
11. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.
12. The method of measurement of completed work for payment shall be in accordance with Standard Specification for Road and Bridge Construction of the Ministry of Transport and Communications, 1986.
13. "Authorised" "Directed" or "Approved" shall mean the authority, direction or approval of the Engineer.
14. Unless otherwise stated, all measurements shall be net taken on the finished work carried out in accordance with the details shown on the drawings or instructed, with no allowance for extra cuts or fills, waste or additional thickness necessary to obtain the minimum finished

thickness or dimensions required in this contract. Any work performed in excess of the requirements of the plans and specifications will not be paid for, unless ordered in writing by the Engineer.

15. Units of Measurement and abbreviations used herein shall have the following meanings:

Unit	Abbreviation	Unit	Abbreviation
cubic meter	m <sup>3</sup> <i>or</i> cu m	millimeter	mm
hectare	ha	month	month
hour	hr	number	No.
kilogram	kg	provisional sum	P.S.
kilometre	km	square meter	m <sup>2</sup> <i>or</i> sq m
lump sum	L.S.	square millimeter	mm <sup>2</sup> <i>or</i> sq mm
meter	m	vehicle	veh
metric ton (1,000 kg)	t	week	wk
months	months		

**BILLS OF QUANTITIES FOR UPGRADING OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI ROAD PROJECT**

<b>Package:</b>	<b>UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP - CHEPSONOI (B12) ROAD</b>	
<b>SUMMARY BILL OF QUANTITIES</b>		
<b>BILL NO.</b>	<b>DESCRIPTION</b>	<b>TENDER AMOUNT (KSHS)</b>
A	GRAND SUMMARY FOR INSTRUCTED WORKS	
	<b>SUB TOTAL :2</b>	
	ADD: 16% VAT	
	ADD: 0.03% Public Procurement Capacity Building Levy	
	<b>Grand Total Carried to Form of Bid</b>	

<b>Package</b>	<b>UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP ~ CHEPSONOI (B12) ROAD</b>	
<b>Bill of Quantities</b>		
	<b>Summary on Instructed Works</b>	
<b>Bill No.</b>	<b>Description</b>	<b>Amount (KShs)</b>
1	GENERAL: Office administration and overheads/Preliminaries	
4	SITE CLEARANCE	
5	EARTHWORKS	
7	EXCAVATION AND FILLING FOR STRUCTURES	
8	CULVERT AND DRAINAGE WORKS	
9	PASSAGE OF TRAFFIC	
12	NATURAL MATERIAL BASES AND SUBBASE	
14	CEMENT TREATED BASE AND SUBBASE MATERIALS	
15	BITUMINOUS SURFACE TREATMENT AND SURFACE DRESSING	
16	BITUMINOUS MIXES	
17	CONCRETE WORKS	
20	ROAD FURNITURE REPAIR AND MAINTENANCE	
21	MISCELLANEOUS BRIDGE WORKS	
22	DAYWORKS	
25	HIV AIDS AWARENESS CAMPAIGN	
27	ROAD SAFETY AWARENESS CAMPAIGN	
	<b>Sub Total 1</b>	
	Add 2.5% Contingencies	
	Add 3% for VOP	
	<b>Sub Total A. Grand Summary for Instructed Works</b>	

<b>Bill No. 1</b>	<b>General: Office administration and overheads/Preliminaries</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Unit Bid Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Accommodation for the Engineer and his Staff</b>				
1.01	Provide, furnish and maintain accommodation for Engineer's staff in accordance with specification as follows:				
	(a) Engineer's senior staff				
	(i) House Type II - 6No.	no.	6.00		
	(b) Engineer's junior staff				
	(i) House Type III - 5No.	no.	5.00		
	(ii) House Type IV - 10No.	Mth	10.00		
	<b>Main Office for the Engineer</b>				
1.02	Provide or rent, furnish and maintain Engineers Representative office for the duration of contract as per Appendix to Bill No. 1.02	Item	1.00		
	<b>Survey equipment and accessories</b>				
	<b>Laboratory for the Engineer</b>				
1.03	Construct and maintain as per drawings and specifications the Engineer's Representative's main testing laboratory for the duration of the contract and as will be directed by the Engineer to revert back to the Employer	Item	1.00	8,000,000	8,000,000
1.04	Provide laboratory furniture, equipment and reagents for use by the Engineer's representative for the entire duration See attached Appendix to Bill No. 1.04	Item	1.00		
1.05	Provide and maintain for the duration of the contract survey equipment for use by the Engineer's Representative for the entire duration of the contract as per Appendix to Bill No. 1.05	Item	1.00		

	<b>Vehicles for the Engineer</b>				
1.08	Provide, fuel and maintain with drivers, (4 No) New 4WD double cabin (Odometer: 0 - 10000) for exclusive use by the Engineer inclusive of the first 4,000km per vehicle month in accordance with clause 138 of special specification	Veh/Month	156.00		
1.09	E.O Item 1.08 for mileages over 4000km per vehicle month.	Km	92,000		
1.10	Provide with driver and maintain One (1) by 14-seater capacity Van minimum 2.4 litre 4-wheel drive, single- cab pick-up vehicle (with canvas back seat) or similar approved, mobile telephone hands free headset and a two- way radio for the exclusive use of the Engineer to revert to the Contractor at the end of the Project. The vehicles are subject to approval by the Engineer	Veh/Month	40.00		
1.11	E.O Item 1.10 for mileages over 4000km per vehicle month.	Km	30,000		
	<b>Miscellaneous</b>				
1.12	Allow a prime cost sum of Ksh.6,000,000 for the Engineers miscellaneous account to be spent in whole or part against receipts as directed by the Engineer. (NB. The stated PC sum shall be used exclusively on project related activities)	PC SUM	6,000,000	1.00	6,000,000
1.13	E.O. item 1.12 for the contractor's overheads and profits	%	6,000,000		
1.14	Provide and erect publicity signs as directed by the Engineer	no.	2.00		
	<b>Relocation of utilities</b>				
1.15	Allow a Prime Cost (PC) Sum of KShs. 20,000,000 for removal and alteration of services inclusive of liaison with appropriate bodies in accordance with specifications. Such services include but not limited to water, sewer pipes overhead and underground powerlines/ telecommunication/fibre optic cables, as instructed by the Engineer.	Prov. Sum	1.00	20,000,000	20,000,000
1.16	E.O. item 1.15 for the contractor's overheads and profits	%	20,000,000		



	<b>Attendance to the Engineer</b>				
1.17	Allow a prime cost for attendance to the RE, s supervisory staff including overtime	L/sum	35,000,000	1.00	35,000,000
1.18	E.O. item 1.17 for the contractor's overheads and profits	%	35,000,000		
1.21	Allow a prime cost (P.C) sum for land acquisition as directed by the Engineer.	PC Sum	1.00	15,000,000	15,000,000
1.22	E.O. item 1.21 for the contractor's overheads and profit.	%		15,000,000	
1.23	Allow a Prime Cost (P.C) sum of KShs.10,000,000 for training of engineers, technicians and other support staff as maybe instructed by the Engineer.	PC Sum	1.00	10,000,000	10,000,000
1.24	E.O. item 1.23 for the contractor's overheads and profit.	%		10,000,000	
1.25	Allow a Prime Cost (P.C) sum of KShs.1,000,000 for equipment for Video and still coverage, including photography documentary and arhiving in the management tool for the entire project period.	Lump Sum	1	1,000,000	1,000,000
1.26	Allow provisional sum of KSh 3,000,000 for Quality Control material testing by the Material Testing and Research Division (MTRD) and carrying out confirmatory geotechnical investigations and tests at the proposed locations of major structures as directed by the Engineer.	Prov. Sum	1.00	3,000,000	3,000,000
1.27	E.O. item 1.26 for contractor's overhead and profit.	%		3,000,000	
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 4</b>	<b>Site Clearance</b>				
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Bid Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Site Clearance</b>				
4.01	Clear site on road reserve including removal of trees, hedges, bushes and othe vegetation or deterious organic material in accordance with the specification	Ha	19		
	<b>Topsoil Stripping</b>				
4.02	Remove top soil to maximum depth of 200mm as directed by the Engineer stockpile good material for later top soiling of slide slopes and landscaping of quarries and borrow pits	m <sup>3</sup>	38,000		
	<b>Removal of existing structures</b>				
4.03	Excavate, remove and dispose of or stockpile existing concrete pipe culverts of any diameter, including outlet and inlet structures as will be directed by the Engineer	No	140		
	<b>Total Carried Forward to Summary:</b>				



<b>Bill No. 5</b>	<b>Earthworks</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Fill in Soft Material</b>				
5.01	Fill in soft material, including benching of shoulders and embankment and compact to 95% MDD (AASHTO T99) as directed by the Engineer	m <sup>3</sup>	158,004		
	<b>Fill in Hard Material</b>				
5.02	Fill in hard material and compact as directed by the Engineer	m <sup>3</sup>	32,000		
	<b>Spoil in Soft Material</b>				
5.03	Cut to spoil in soft material or stockpile for reuse as directed by the Engineer	m <sup>3</sup>	52,800		
	<b>Improved Subgrade</b>				
5.04	Fill in soft material, for class S4 improved subgrade material to a thickness of 300mm in layers of 150mm compaction to 100% MDD (AASHTO T99)	m <sup>3</sup>	76,494		
5.05	Compaction to 150mm depth below formation in fills and cuts to 100% MDD (AASHTO T99)	m <sup>3</sup>	36,480		
	<b>Rockfill to Swampy areas</b>				
5.06	Provide, place and compact rockfill at swampy areas as per clause 507 of the specifications and as directed by the Engineer.	m <sup>3</sup>	15,360		
	<b>Grassing</b>				
5.07	Top soiling and grassing over side slopes, cuts and fills	m <sup>3</sup>	7,600		
5.08	Grassing on embankment or slopes as directed by the Engineer	m <sup>2</sup>	76,000		
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 7</b>	<b>Excavation and Filling for Structures</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Excavations</b>				
7.01	Excavate for structure in soft material as directed by the Engineer	m <sup>3</sup>	700.00		
7.02	Excavate for structure in hard material to any depth but not exceeding 4m as directed by the Engineer	m <sup>3</sup>	100.00		
	<b>Selected Porous Filter Material</b>				
7.03	Provide, haul as necessary and backfill; all in accordance with the specifications and in conformity with the Engineer's instructions	m <sup>3</sup>	400.00		
	<b>Excavations for gabions</b>				
7.04	Excavate and compact the surfaces to receive the gabions	m <sup>3</sup>	280		
	<b>Gabion mesh for boxes and mattresses</b>				
7.05	Provide and place gabion boxes and mattresses as specified or as directed by the Engineer	m <sup>2</sup>	2,420		
	<b>Rockfill to gabions</b>				
7.06	Provide and place rock fill to gabions and mattresses	m <sup>3</sup>	400		
	<b>River training</b>				
7.07	River training in soft material	m <sup>3</sup>	200		
	<b>Geotextile filter fabric</b>				
7.08	Provide and fix filter fabric behind porous filter material as per the Drawings and Specifications	m <sup>2</sup>	185		
7.09	Allow for grouting of the rock fill where necessary	m <sup>2</sup>	500		
7.10	Provide and place 200mm thick stone pitching including grouting to outfall drains as detailed in the drawing or directed by the Engineer	m <sup>2</sup>	7,500		
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 8</b>	<b>Culvert and Drainage Works</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
8.01	Provide and place A142 fabric mesh reinforcement	m <sup>2</sup>	1,500		
8.02	Excavate for inlet, out fall, catch water drains, mitre and cut-off drains in hard material	m <sup>3</sup>	4,275		
8.03	Excavation in soft material for pipe culverts, headwalls, wing walls, apron, toe walls and drop inlets and compact as specified or as directed by the engineer	m <sup>3</sup>	3,150		
8.04	Excavation in hard material for pipe culverts, headwalls, wing walls, apron, toe walls and drop inlets and compact as specified or as directed by the engineer	m <sup>3</sup>	420		
8.05	Excavate to remove and dispose damaged pipe culverts including demolition of inlet and outlets structures	No	50		
8.06	Provide and place class 15/20 concrete to culverts beds and blinding	m <sup>3</sup>	1,500		
8.07	Provide, lay and joint pipes				
	(a) 1200mm diameter	m	200.00		
	(b) 900mm diameter	m	700.00		
	(c) 600mm diameter	m	3,000.00		
8.08	Provide and place class 25/20 concrete to headwalls, wing walls, aprons, surrounds to walls, inlets and outlets to pipe culverts including reinforcement and formwork	m <sup>3</sup>	1,113		
8.09	Provide and place class 20/20 concrete scour checks including stone pitching upstream and downstream as directed by the Engineer	No	50.00		
8.10	In-situ lining with class 20/20 on drainage channels to be instructed by the Engineer as per the specifications, drawings and as directed by the Engineer.	m <sup>3</sup>	600.00		
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 9</b>	<b>Paved Roads - Passage of Traffic</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
9.01	Construct and maintain, including watering 8.0 m wide deviations, having a 150mm thick compacted gravel wearing course.	Km	19.00		
9.02	Provide, Place, maintain and remove Temporary signs and barriers, lights on deviations; all in accordance with specifications and as instructed by the Engineer	Km	19.00		
9.03	Allow for maintenance of deviations (grading and spot gravelling), including reinstatement of existing pavement layers and drainage along entire road project all in accordance with the specifications	Lsum	1.00	5,000,000.00	5,000,000.00
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 12</b>	<b>Natural Material Bases and Subbase</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Natural Material for Base and Subbase</b>				
12.01	Provide, place, water and compact, Natural Material for Base and subbase as per section 12 of the Specifications and as directed by the Engineer.	m <sup>3</sup>	72,105.00		
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 14</b>	<b>Cement Treated Base and Subbase Materials</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Cement Treated Materials - Natural Gravel</b>				
14.01	Provide and spread cement stabilizer to natural gravel Sub-base and base; all in accordance with the specifications and in conformity with the Engineer's instructions	Ton	4,032.24		
14.02	Mix-in stabilizer into natural gravel for Sub base	m <sup>3</sup>	54,150		
	<b>Curing and Maintenance of Treated Materials</b>				
14.03	Water and maintain curing system for cement and lime treated material; all in accordance with the specifications and as directed by the Engineer	m <sup>2</sup>	397,100		
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 15</b>	<b>Bituminous Surface Treatment and Surface Dressing</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
15.01	Provide, spread and roll 14/20 mm precoated chipping	m <sup>3</sup>	3,000.00		
15.02	Provide, heat and spray 80/100 cut-back bitumen as the first seal on carriageway at a rate of 1.0-1.2 Litres/m <sup>2</sup> .	Ltr	250,000.00		
15.03	Provide and Spray MC 30 cut-back bitumen as prime coat to carriageway, shoulders, busbays and junctions at rate 0.8-1.2 lts/m <sup>2</sup> as prime coat	Ltr	250,000.00		
	<b>Total Carried Forward to Summary:</b>				



<b>Bill No. 16</b>	<b>Bituminous Mixes</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Asphalt concrete surfacing</b>				
16.01	Provide, lay and compact superpave Asphalt Concrete for aggregate nominal size 20mm to carriageway	m <sup>3</sup>	8,990.00		
	<b>Tack coat</b>				
16.02	Provide and spray K-160 as tack coat at a rate of 0.8-1.0 L/sq metre as directed by the Engineer	Ltr	198,550.00		
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 17</b>	<b>Concrete Works</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Concrete class 15/20 for blinding</b>				
17.01	Provide place and compact concrete class 15/20 for blinding	m <sup>3</sup>	30.00		
	<b>Concrete class 25/20</b>				
17.02	Provide place and compact class 25/20 Concrete	m <sup>3</sup>	500.00		
	<b>Reinforcement</b>				
17.03	Provide, cut, bend and fix into position High Yield steel reinforcement of diameter above 16mm dia as per the drawing or as instructed by the Engineer	Ton	55.00		
17.04	Provide, cut, bend and fix into position High Yield steel reinforcement of diameter below 16mm dia as per the drawing or as instructed by the Engineer	Ton	30.00		
	<b>Formwork</b>				
17.05	Provide and erect vertical formwork of Class F2 Finish	m <sup>2</sup>	1,050.00		
17.06	Provide and erect horizontal formwork of Class F2 Finish	m <sup>2</sup>	400.00		
	<b>Total Carried Forward to Summary:</b>				

<b>Bill No. 20</b>	<b>Road Furniture Repair and Maintenance</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Kilometre marker posts</b>				
20.01	Provide and erect kilometre posts as shown in the contract drawing	No	50		
	<b>Edge marker posts</b>				
20.02	Provide and erect edge marker posts as shown in the contract drawing and concreting with concrete class 15/20	No	200		
	<b>Warning signs</b>				
20.03	Provide, excavate for and erect warning signs, including backfill				
	(a) 450 x 900 mm size	No	10		
	(b) 750 mm size	No	40		
	<b>Priority signs</b>				
20.05	Provide, excavate for and erect prohibitory signs diameter 600mm, including backfill and concreting with concrete class 15/20 to base	No	8		
20.04	Provide, excavate for and priority signs, including backfill and concreting with concrete class 15/20 to base				
	(a) 600 mm size	No	10		
	<b>Prohibitory signs</b>				
	<b>Standard informatory signs - All Provisional</b>				
	(a) 400 mm size	No	4		
20.07	<b>Non-Standard informatory signs (Provisional)</b>				
	Provide, excavate for and erect information signs, including backfill and concreting with concrete class 15/20 to base				
	(a) Non-Standard informatory signs less than 1m2	No	45		
	(b) As Item 20.07 (a) but equal or more than 1m2 but less than 2 m2	No	22		

	(d) As Item 20.12 (a) but equal to or more than 5m2 - Provisional	No	4		
	(d) As Item 20.12 (a) but equal to or more than 5m2 - Provisional	No	2		
	<b>Road marking in thermoplastic paint</b>				
20.08	Prepare road surface, supply approved tack coat and road thermoplastic paint, spray approved tack coat, mark out and paint				
	(a) White paint	m <sup>2</sup>	4,370		
	(b) Yellow paint	m <sup>2</sup>	2,185		
	<b>Reflective road studs (cat's eyes)</b>				
20.09	Provide, transport, handle and place approved reflective road studs	No	2,280		
	Road Hump and Rumble strips				
	Provide material, transport, and construct road hump and rumble strips as per drawing and Engineer's instruction	m	200		
	<b>Concrete road Kerbs</b>				
20.11	Provide material, transport, handle, mix and place raised precast road kerbs as specified in the drawings and as directed by the Engineer	m	5,000		
	Provide, lay and joint 125 x 100mm channel blocks to roads, footpaths and shoulders	m	5,000		
	<b>Quadrants</b>				
20.13	Allow provisional sum of KSh 3,000,000 for Quality Control material testing by the Material Testing and Research Division (MTRD) and carrying out confirmatory geotechnical investigations and tests at the proposed locations of major structures as directed by the Engineer.	No	500		
20.14	Provide and erect p.c.c bollards.	No.	100		
20.15	<b>Guardrails</b>				
	(a) Provide, transport materials, post, excavate, erect flexbeam guardrails	m	3,200		

	(b) Provide guardrail end pieces	No	60		
	<b>Service ducts</b>				
20.16	Provide all materials and construct 100mm PVC ducts under road	m	400		
	<b>Ducts marker posts</b>				
20.17	Provide duct marker posts in accordance with the drawings	No	30		
	<b>Culvert marker posts</b>				
20.18	Provide and erect culvert marker posts	No	100		
	<b>Planting trees</b>				
20.19	Provide, plant, water, look after until after the maintenance period, approved indigenous trees and shrubs at locations directed by the engineer	No	5000		
	<b>Road Reserve Boundary posts</b>				
20.20	Provide and erect road reserve boundary posts including painting and lettering	No	500		
	<b>Raised Zebra Crossings</b>				
20.21	Provide all material, lay and construct raised zebra crossing	No.	10		
	<b>High Mast Street Lighting</b>				
20.22	Allow a provisional sum of Kshs 6,000,000 for construction of 4 No. Solar powered High Mast Street Lighting as directed and instructed by the Engineer.	Prov. Sum	1		
20.23	E.O. item 20.22 for the contractor's overheads and profits	%	6,000,000		
<b>Total Carried Forward to Summary:</b>					

<b>Bill No. 21</b>	<b>Miscellaneous Bridge Works</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>Waterproofing</b>				
21.01	Waterproofing to structures - Provide and place bitumen emulsion or cutback bitumen or bitumen/rubber latex emulsions to all structural concrete in contact with fill material or cur soil	m <sup>2</sup>	1850		
21.02	Provide and fix 75mm diameter uPVC pipes to form weepholes in the structure. Rate to include filter fabric at inlet	No	240		
21.03	Provide all materials and fix 2.0m long, 75mm diameter uPVC drain pipes as shown on the Drawings	No	72		
	<b>Total Carried Forward to Summary:</b>				

Bill No. 22	Dayworks				
Item No.	Description	Units	Quantity	Rate (Ksh)	Amount (KSh)
	<b>PLANT AND EQUIPMENT</b>				
	The rates included herein are to include all operational and maintenance costs fuel, oil, grease, operator charges, wages, supervision, overheads and profits. Only time employed upon the work will be measured and the rates shall include for idle time spent travelling and overtime in accordance with clause 2202(a) of the specifications. All items of the plants must be priced				
<b>22.01</b>	<b>Crawler dozer with hydraulic ripper attachment</b>				
	a - 100-135 kw rated flywheel power	hr	28		
	b - 136-185 kw rated flywheel power	hr	28		
	c - 186-250 kw rated flywheel power	hr	28		
<b>22.02</b>	<b>Self-loading wheeled motor scraper of</b>		0		
	a - up to 16m3 heaped capacity	hr	28		
	b - 17 - 26m3 heaped capacity	hr	28		
<b>22.04</b>	<b>Rollers - Towed Vibratory Including Tractor</b>				
<b>22.03</b>	<b>Motor graders complete with scarifier</b>				
	a - 80 -110 kw rated flywheel power	hr	55		
	c - 121-160 kw rated flywheel power	hr	55		
	a - 6.5 - 8.8t unballasted weight	hr	55		
	b - 8.9 - 11.7t unballasted weight	hr	55		
	b - 111-120 kw rated flywheel power	hr	55		
	b - 8.6 - 10.5t unballasted weight	hr	55		
<b>22.06</b>	<b>Rollers - Rubber Tyred Self-Propelled</b>				
	a - upto 1.0t per wheel	hr	55		
	b - 1.1 - 2.0t per wheel	hr	55		
<b>22.07</b>	<b>Rollers - Vibratory Single Roll Rubber Tyred</b>		1		
	a - 8.3 - 10.5t unballasted weight	hr	55		
<b>22.08</b>	<b>Rollers - Vibratory Pedestrian Operated Twin Roller</b>		0		

	a - 651kg - 1.3t unballasted weight	hr	55		
<b>22.09</b>	<b>Vibrating Plate Compactor</b>				
	a - 114kg - 200kg operating weight	hr	55		
	<b>at about 7kg/cm2, complete with all tools, hoses, steel etc</b>				
	a - 6.0 - 7.4m3/min	hr	1		
	a - 20.0 - 28.0t max working load	hr	28		
	b - 28.1 - 36.0t max working load	hr	28		
	c - 26.1 - 56.0t max working load	hr	28		
<b>22.13</b>	<b>Small dumpers</b>				
	a - 750-1000kg maker's rated payload	hr	55		
<b>22.14</b>	<b>Excavator - hydraulic crawler or wheel mounted, full circle slew (back actor)</b>				
	a - 14.0 - 17.0 t nominal weight of machine	hr	55		
<b>22.15</b>	<b>Excavators - hydraulic wheeled dual purpose (backhoe loader)</b>				
	a - 0.6 - 0.8 m3 rated bucket capacity	hr	28		
	b- 0.81 - 1.0 m3 rated bucket capacity	hr	28		
<b>22.16</b>	<b>Pumps (inclusive of all hoses);</b>				
	a - 50 - 76mm delivery	hr	28		
	b - 77 - 101mm delivery	hr	28		
			0		
<b>22.17</b>	<b>Tractors - Rubber Tyred Including Trailer</b>		0		
	a - 50 - 76kw rated flywheel power	hr	28		
	<b>Loaders</b>				
	The basis of loader classification is the society of Automotive Engineers of America (SAE) rated capacity of the bucket. The classification is based on the largest general-purpose bucket by the manufacturer or the bucket size adopted by the Contractor which is approved by the Engineer.				
<b>22.18</b>	<b>Wheel Loaders - 4-wheel drive, articulated;</b>				
	a - 1.5 -2.00m3 SAE rated capacity	hr	55		
	b - 2.01 -3.40m3 SAE rated capacity	hr	55		
	c - 3.41 -5.35m3 SAE rated capacity	hr	55		



<b>22.19</b>	<b>Crawler Loaders;</b>				
	a - 0.8 - 1.30m <sup>3</sup> SAE rated capacity	hr	55		
	b - 1.31 - 1.90m <sup>3</sup> SAE rated capacity	hr	55		
	c - 1.91 - 2.5m <sup>3</sup> SAE rated capacity	hr	55		
<b>22.2</b>	<b>Concrete Mixers (wet capacity)</b>				
	a - upto 100 litres	hr	55		
	b - 151 - 200 litres	hr	55		
	c - 201 - 300 litres	hr	55		
<b>22.21</b>	Diesel Concrete vibrator - Poker Type	hr	55		
<b>22.22</b>	<b>Lorries - Ordinary</b>				
	a - upto 7.5 t gross vehicle weight	hr	55		
	b - 7.6 - 12.0 t gross vehicle weight	hr	55		
<b>22.23</b>	<b>Lorries - Tipper</b>				
	a - upto 11.0 t gross vehicle weight	hr	55		
	b - 11.1 - 17.0 t gross vehicle weight	hr	55		
	c - 17.1 - 25.5 t gross vehicle weight	hr	55		
<b>22.24</b>	<b>Van, Pick-up or Similar Utility Vehicle</b>				
	a - upto 1.0 t carrying capacity	hr	55		
	b - 1.11 - 2.66 t carrying capacity	hr	55		
<b>22.25</b>	<b>Water or Fuel Tanker - Self Propelled</b>				
	a - 3500 - 4550 litre capacity	hr	55		
	b - 4551 - 7000 litre capacity	hr	55		
	c - 7001 - 12000 litre capacity	hr	55		
<b>22.26</b>	<b>Pressure Bitumen Distributor</b>				
	a - 3500 - 4500 litre capacity	hr	55		
	b - 4501 - 9000 litre capacity	hr	55		
<b>22.27</b>	<b>Tipper (dump) truck</b>				
	a - 10-15 tonne gross weight	hr	28		
	b - 16-25 tonne gross weight	hr	28		
<b>22.28</b>	Mechanical bitumen hand sprayer	hr	28		
<b>22.29</b>	<b>Chipps Spreader</b>				
	Self-propelled chip spreader or equivalent	hr	28		
<b>22.30</b>	<b>Asphalt Paver</b>				
	Self-propelled asphalt paver	hr	28		
<b>22.31</b>	Mechanical broom	hr	28		
<b>22.32</b>	Pulvi-mixer	hr	28		

<b>22.33</b>	<b>Labour:</b>				
	Note: The rate included herein shall include all costs of labour, as well as overtime, travelling time and cost of accommodation, social security contributions, use and maintenance of small tools of trade, supervision insurance, overheads, profits and any other costs.				
	a - Labourer	hr	2,000		
	b - Artisan	hr	1,000		
	c - Plant Operator	hr	1,000		
	d - Driver	hr	1,000		
	e - Foreman	hr	1,000		
	f - Site Surveyor	hr	1,000		
	<b>MATERIALS</b>				
	All items of materials must be priced in accordance with the requirements of clause 2202 © of the specifications				
<b>22.34</b>	<b>Shuttering timber</b>				
	a - Class F1 finish	m <sup>2</sup>	63		
	b - Class F2 finish	m <sup>2</sup>	40		
	c - Class F3 finish	m <sup>2</sup>	40		
<b>22.35</b>	<b>Mild steel</b>				
	a - Upto and including 16 mm diameter	ton	7		
	b - Over 16 mm diameter size	ton	2		
<b>22.36</b>	<b>High yield steel</b>				
	a - Upto and including 16 mm diameter	ton	7		
	b - Over 16 mm diameter size	ton	2		
<b>22.37</b>	<b>Ordinary Portland Cement</b>				
	a - Ordinary Portland Cement	ton	7		
<b>22.38</b>	<b>Hydrated Lime</b>				
	a - Hydrated Lime	ton	7		
<b>22.39</b>	<b>Aggregates for Concrete</b>				
	a - fine	ton	7		
	b - course	ton	2		
<b>22.40</b>	<b>Bitumen and Emulsions</b>				
	a - MC-70	ltrs	1,671		
	b - 80/100	ltrs	1,250		

	c - K1-70	ltrs	1,250		
<b>22.41</b>	<b>Chippings</b>				
	a - class 3, nominal size 10/14	ton	7		
	b - class 3, nominal size 3/6	ton	2		
<b>22.42</b>	<b>Gabion mesh</b>				
	(2.0 x 1.0 x 1.0m)	m <sup>2</sup>	500		
<b>22.43</b>	Rock fill to gabions	m <sup>3</sup>	20		
<b>22.44</b>	Pentolite stick explosive or equivalent	kg	20		
<b>22.45</b>	Explosive fuse	m	-		
<b>22.46</b>	Detonating relay	No.	63		
<b>Total Carried Forward to Summary:</b>					

<b>Bill No. 25</b>	<b>Cross - cutting Issues</b>				
<b>Item No.</b>	<b>Description</b>	<b>Units</b>	<b>Quantity</b>	<b>Rate (Ksh)</b>	<b>Amount (KSh)</b>
	<b>HIV/AIDS</b>				
25.01	Allow a provisional sum of KSh9,600,000 for to institute and provide HIV/AIDS awareness, prevention campaign and training including presentation for monthly reports at site meeting in accordance with specifications to be approved by the Engineer.	Prov Sum	9,600,000		
25.02	E.O. item 25.01 for the contractor's overheads and profits	%	9,600,000.00		
	<b>Total Carried Forward to Summary:</b>				

<b>BILL NO. 27: ROAD SAFETY AWARENESS CAMPAIGN</b>					
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE (KShs)</b>	<b>AMOUNT (KShs)</b>
	Allow a Provisional Sum for instituting Road Safety Awareness and Accident Prevention Campaigns and Training including preparation and presentation of monthly reports at site meetings in accordance with the specifications to be approved by the Engineer for the entire contract period				
27.01	Instituting a Road Safety Awareness Campaign and Accident prevention	PC Sum	1	4,000,000.00	4,000,000.00
27.02	Extra over item 27.01 for Contractor's profit and overheads	%		4,000,000.00	
27.03	Allow for training of Road Safety Auditors (Engineers, Inspectors etc) as will be directed by the Engineer.	PC Sum	1	3,000,000.00	3,000,000.00
27.04	Extra over item 27.03 for Contractor's profit and overheads	%		3,000,000.00	
	<b>Total of Bill carried forward Summary</b>				

# APPENDIX TO BILL ITEM NO. 1.02

Item:	1.02: Furniture and Stationary for the office for the Supervisor's Representative				
Desc:	Provide and maintain furniture and stationary for the Engineer's Representative's office for the duration of the contract				
	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	<b>FURNITURE AND EQUIPMENT FOR THE ENGINEER'S OFFICE</b>				
	<b>OFFICE FURNITURE</b>				
102/1	Construct and maintain the RE's main office for the entire contract period in accordance with the specification. Measurements and payments to be done in accordance with clause 141 (d) of the standard specification.	Item	1		
102/2	Meeting table (3.0mx 1.2m) with 6 chairs	No.	1		
102/3	Executive Desk 2.2m x 0.9m with chair and 3 lock up drawers	No.	3		
102/4	Chairs with arm rests	No.	10		
102/5	Standard Table (1.5mx 0.9m) with 2 drawers and 2 chairs.	No.	4		
102/6	Typist's table with one chest of drawers and a chair	No.	2		
102/7	Plan tables and stools	No.	2		
102/8	Personal computers core i7 with minimum 1 TB hard disc drive,16GB RAM ,3.5 inch disc drive,52X DVD /CD-RW drive ,2serial and 1 parallel ports 21"SVGA Digital colour monitor and the latest windows operating system	No.	5		
102/9	Laptop computers core i7, minimum 500 GB hard disc drive,8GB RAM, 3.5 inch disc drive,52X DVD /CD-ROM drive , TFT colour screen	No.	4		
102/10	2No.HP portable Officejet colour printer compatible with the above laptops	No.	2		
102/11	1HP laserjet or equivalent A3-size printer compatible with the above personal computer.	No.	1		
102/12	The contractor shall supply A4 paper and consumables,for the Engineer's printers in a quantity sufficient to complete the contract.	Reams	850		
102/13	The contractor shall supply A3 size paper and consumables,for the Engineer's printers in a quantity sufficient to complete the contract.	Reams	75		
102/14	1no HP Deskjet 1220 cxi inkjet or equivalent colour printers or equivalent including consumables sufficient for the duration of the contract.	No.	1		
102/15	7no.s UPS (uninterrupted power supply) unit I KVA with surge protector capable to support and backup each PC	No.	7		
102/16	1NO HP scanjet 7450C scanner or equivalent with upto 2400-dpi resolution 50sheet automatic feeder ,fast SCSI and USB connectivity to PC	No.	1		
102/17	1NO.canon power shot G2 or equivalent digital cameras 20 mega pixels zoom 3xoptical ,2xdigital ,1 installed memory card,minimum 32GB	No.	1		
102/18	1NO.HP designjet 120 or equivalent ploter 36" media size with sufficient consumables to complete the contract.	No.	1		
102/19	1no.Complete set of latest editions of soft ware complete with manuals and CDs of a type compatible with the personal computer disc drives ,windows 7 operating system ,MS office professional suit,microsoft project and the Latest version AUTOCAD/CIVIL 3D		2		
102/20	1no.Safe for cash and valuables min.size approx.0.8mx0.5mx.4m to be concreted in place (either wall or floor mounted) complete with lock and keys.	No.	1		
102/21	1 Drawing table stools	No.	1		
102/22	1 set plan drawers (6 drawers)	No.	1		
102/23	1 two drawer Steel lockable filing cabinet	No.	1		
102/24	Set of transparent plastic curve guides ,metric.	No.	1		
102/25	8no.Electronic Calculator in number and type HP48GX or equivalent.	No.	8		
102/26	Fire extinguisher	No.	3		

102/27	First aid kit	No.	2		
102/28	Snake bite kit	No.	2		
102/29	Stapling machines	No.	8		
102/30	Paper punches	No.	8		
102/31	A3 size Colour photocopy machine with accessories and supplies sufficient to complete the project	No.	1		
102/32	1no.spiral binding machine with consumables sufficient to complete the contract.	No.	1		
102/33	Water filters	No.	6		
102/34	Thermos jug 4.5 litres capacity	No.	8		
102/35	25 cups,25 glasses and 5 coffee sets	Set	1		
Total					

APPENDIX TO BILL ITEM 1.04: PROVIDE AND MAINTAIN FURNITURE AND EQUIPMENT FOR THE ENGINEER'S LABORATORY					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE - KSHS	AMOUNT -KSHS
	<b>1. FURNITURE</b>				
104/1.01	Desk 2.2x0.9 m with chair and lockup drawers	No	2		
104/1.02	Desk chair (standard)	No	6		
104/1.03	Stationery cupboard, 1.2 m <sup>3</sup> , lockable	No	1		
104/1.04	Steel filing cabinet, 4 drawers, lockable	No	1		
104/1.05	Steel filing cabinet, 2 drawers, lockable	No	1		
104/1.06	Bookshelf, 3 shelves 1.2 m long (to hold box files)	No	1		
104/1.07	Table - 6 m <sup>2</sup> with 6 Chairs	No	1		
104/1.08	Two Plate electric heater	No	1		
104/1.09	Fire extinguisher, 10 litre capacity, CO <sub>2</sub> type	No	2		
104/1.10	Complete first aid kit	No	1		
	<b>EQUIPMENT</b>				
<i>(The following equipment shall be purpose made for use in the Engineer's laboratories and shall comply with the relevant British (BS) or American (AASHTO) Standard)</i>					
	<b>2. General Equipment</b>				
104/2.01	Compaction mould complete with base plate and extension collar, 101.6 mm dia x116.43 mm high	No	5		
104/2.02	2.49kg. Compaction hammer, drop regulated to 304.8mm	No	5		
104/2.03	4.535kg compaction hammer drop regulated to 457.2mm	No	5		
104/2.04	Electric vibrating Kango Hammer fitted with steel tamper(BS 1377) with support frame	No	1		
104/2.05	Straight edge 300 mm long with handles	No	6		
104/2.06	Steel Tamper (BS1377) compatible with Kango hammer	No	4		
104/2.07	Compaction mould 152.4 mm. dia x 116.43 mm complete with base plate and extension collar, 101.6 mm	No	3		
	<b>Page 1 C/Forward to Sub Bill Summary</b>				

104/2.08	Galvanized metal tray 1m x 0.5m x 75 mm deep	No	6		
104/2.09	75mm brush	No	10		
104/2.10	Semi-automatic balance, 25kg Capacity accurate to 1g, including weights	No	1		
104/2.11	20mm BS Sieve, 300mm diameter	No	2		
104/2.12	Stop Clock	No	3		
104/2.13	Thermostatically controlled electric oven 105-110°C, capacity 0.225 m <sup>3</sup>	No	2		
104/2.14	As above but gas heated	No	1		
104/2.15	Moisture content tins, 75 mm dia, Cadmium or aluminium plated	No	100		
104/2.16	Cone penetrometer with gauge and automatically controlled test cup	No	2		
	<b>3. Density (Sand replacement method BS 1377)</b>				
104/3.01	Metal containers 450mm diameter	No	4		
104/3.02	Stainless steel tray 305mm diameter	No	4		
104/3.03	Metal tray with 150 mm diameter hole in the centre, 300mmx300 mm square or equivalent area, 40mm deep	No	6		
104/3.04	Metal tray with 200mm diameter hole in the centre, 500mm x 500 mm square, 50 mm deep	No	3		
104/3.05	Steel pegs for fixing tray in position	No	100		
104/3.06	Sand pouring cylinder, 150 mm diameter	No	3		
104/3.07	Sand pouring cylinder, 215 mm diameter	No	3		
104/3.08	Cold steel chisel 20mm x 300mm	No	12		
104/3.09	Cold steel chisel 10mm x 250mm	No	6		
104/3.10	1.5kg hammer	No	3		
104/3.11	Scoop for removing excavated material from hole, 250 mm long handle	No	10		
104/3.12	100mm brush, soft	No	10		
104/3.13	50mm brush, soft	No	6		
104/3.14	Primus gas stove	No	3		
104/3.15	Calibrating can 150 mm diameter x 150 mm deep	No	4		
104/3.16	Ditto but 200 mm diameter x 250 mm deep	No	4		



	<b>4. Density (Nuclear Density method AASHTO T238)</b>				
104/4.01	Nuclear moisture/density gauge (Troxler 3411B or similar approved)	No	1		
104/4.02	Hole forming device (drill rod)	No	3		
104/4.03	Guide for above	No	3		
	<b>5. CBR (AASHTO T193)</b>				
104/5.01	CBR mould, 152.4 mm dia x 178 mm high, complete with perforated base plate and extension collar 50.8 mm high that can be fitted to either side of mould	No	60		
104/5.02	Perforated swell plate 150 mm dia with an adjustable centre post of rust proof metal provided with a lock-nut	No	60		
104/5.03	2.25 kg split surcharge weight	No	50		
104/5.04	Set of annular surcharge weights	No	50		
104/5.05	Solid base plate for CBR mould	No	4		
104/5.06	Static compaction displacer discs 1 No x 61.4 mm, 1 No x 50.8 mm and 2 No x 38.8 mm thick	set	2		
104/5.07	Disc lifting handle	No	2		
104/5.08	Central extruder, complete with 29kN hydraulic jack and accessories	No	1		
104/5.09	Automatic CBR Proctor Compaction press, 50 tonnes capacity with an adjustable distance between platens of 530mm-250mm, rammer weights and automatic count selector	No	1		
104/5.10	Set of guards for above press.	No	1		
104/5.11	CBR load frame (electric and hand operated)	No	1		
104/5.12	Stabilising bar for the above	No	1		
104/5.13	Proving ring for the above	No	2		
104/5.14	Proving ring for above, 10 kN and 28 kN capacity	set	2		
104/5.15	Penetration gauge range 0 - 25mm	No	2		
104/5.16	CBR piston including bracket	No	2		
104/5.17	Swell measurement tripod complete with gauge calibrated in 0.01 mm divisions	No	3		
104/5.18	Soaking tank for CBR mould sufficient for 50 moulds	No	1		
	<b>6. Relative Density of Aggregates (BS 812)</b>				
104/6.01	Wire mesh basket with apertures not greater than 6.5 mm large enough to contain 2.5 kg of aggregate	No	2		

104/6.02	A stout watertight container in which the basket can be freely suspended	No	2		
104/6.03	Soft absorbent cloth (tea towel)	No	40		
104/6.04	Shallow tray of area not less than 0.065 m <sup>2</sup>	No	2		
104/6.05	An airtight container of similar capacity to the basket	No	2		
104/6.06	Pycnometer of 1 litre capacity	No	4		
104/6.07	Semi-automatic 5 kg balance accurate to 0.1g to be of size and type to permit the basket containing the sample to be suspended in water (to be supplied with weights)	No	1		
104/6.08	Hairdrier (electric)	No	2		
	<b>7. Flakiness (BS 812)</b>				
104/7.01	Thickness gauge (various sizes)	No	2		
	<b>8. Sieve Analysis (BS 1377)</b>				
104/8.01	BS Sieve 300mm diameter in sizes 75, 63, 50, 37.5, 28, 20, 14, 10, 6.3, 5 and 4 mm, plus lid and receiver	Set	2		
104/8.02	BS Sieve 200mm diameter in sizes 2, 1, 0.6, 0.5, 0.425, 0.300, 0.150 and 0.075 mm, plus lid and receiver	Set	2		
104/8.03	Electric sieve shaker	No	1		
104/8.04	BS sieve 200mm diameter 0.425 and 0.075 mm	set	1		
104/8.05	1 m x 1 m x 75mm deep galvanized metal tray	No	10		
104/8.06	Riffle box with 50mm slots (BS 1377)	No	2		
	<b>9. Miscellaneous Equipment</b>				
104/9.01	Wheel barrow	No	4		
104/9.02	Dustpan and brush	No	4		
104/9.03	Shovel	No	6		
104/9.04	Pick axe with handle	No	6		
104/9.05	Metal scoop, large (150mm wide)	No	4		
104/9.06	Metal scoop, medium (100mm wide)	No	6		
104/9.07	Garden trowel	No	6		
104/9.08	Steel tray 0.3m x 0.3m x 0.01m deep	No	20		
104/9.09	3.5 kg hammer	No	2		
104/9.10	7kg hammer	No	2		
104/9.11	Rubber mallet (1kg)	No	4		
104/9.12	Cold chisel	No	12		

104/9.13	Oven, electric thermostatically controlled to any temperature between 100 and 1500C, 0.225 cu.m. minimum capacity including dial thermometer range 0-1600 ° C (BS 1377)	No	1		
104/9.14	3 metre straight-edge including calibrated wedges	No	2		
104/9.15	500mm x 500mm x 10mm plate glass (BS 1377)	No	4		
104/9.16	Steel rod 75mm long x 3.2mm diameter	No	4		
104/9.17	Palette knife 200mm long blade	No	3		
104/9.18	Palette knife 100mm long blade	No	4		
104/9.19	BS sieve 450mm diameter, 37.5mm	No	1		
104/9.20	BS sieve 450mm diameter, 20mm	No	1		
104/9.21	BS sieve 450mm diameter, 5mm	No	1		
104/9.22	BS sieve 450mm diameter, 0.425mm	No	2		
104/9.23	BS sieve 450mm diameter, 0.3mm	No	2		
104/9.24	BS sieve 450mm diameter, 0.075mm	No	2		
104/9.25	Set of lid and receiver for metal scoop and steel trays	No	2		
104/9.26	BS Sieve brush	No	10		
104/9.27	Measuring cylinder set, 25 ml, 100 ml, 500 ml, 1000 ml, 2000 ml	set	3		
104/9.28	Glass jar capacity 5 litres with lid	No	10		
104/9.29	200mm x 200mm x 20mm cadmium plated or aluminium tin	No	30		
104/9.30	Electronic balance capacity 1000 g, accurate to 0.01gm.	No	1		
104/9.31	Balance 2000 g capacity accuracy to 0.1g (manual), including weights	No	1		
104/9.32	Balance 50kg capacity accurate to 10gm including weights	No	1		
104/9.33	Still for producing distilled water	No	1		
104/9.34	Polythene or glass 20 litres storage vessel with tap at bottom	No	3		
104/9.35	Stiff broom	No	5		
104/9.36	Vernier calipers, 150mm	No	2		
104/9.37	Vernier calipers, 250mm	No	2		
104/9.38	Pestle and mortar	No	2		
104/9.39	Linear shrinkage mould (BS 1377)	No	8		

104/9.40	Liquid Limit Device	No	2		
104/9.41	Average least dimension gauge	No	2		
104/9.42	Lockable tool box containing: 1 pr "Molegrips", 2 x 150mm screwdriver, 2 x 200 mm screwdriver, 2 x 300 mm screwdriver, (1 standard and 1 Phillips head of each) adjustable spanners 200 mm and 300 mm, 1 pair round nosed pliers, 1 pair general purpose pliers,	No	1		
104/9.43	Plastic or metal bucket including lid, 10 litres capacity	No	10		
104/9.44	Polythene wash bottle (500 ml)	No	6		
104/9.45	A4 size clipboard	No	6		
104/9.46	Thermometer, range -10°C to 150°C, glass (BS 593)	No	4		
104/9.47	Laboratory thermometer, range + 0°C to + 250°C (BS 593)	No	2		
104/9.48	Maximum and minimum thermometer (BS 692)	No	2		
104/9.49	Rain gauge	No	5		
104/9.50	Portable dial thermometer + 50°C to +250°C accurate to $\pm 3\%$	No	3		
104/9.51	Ditto with 0.75m long stem	No	1		
104/9.52	Pocket thermometer + 50°C to +250°C accurate to $\pm 3\%$ with 0.1 m stem	No	2		
104/9.53	5 litre capacity steel storage containers with leak and dust proof lids for storage of bitumen samples	No	100		
104/9.54	Hotplate 200mm diameter with Simmerstat heat control unit.	No	2		
104/9.55	450mm diameter x 150mm deep metal mason's basin	No	10		
	<b>10. Standard Specifications</b> ( <i>Copies of each of the latest editions of the following Standards</i> )				
104/10.01	BS 598	No	1		
104/10.02	BS 812	No	1		
104/10.03	BS 882	No	1		
104/10.04	BS 1377	No	1		
104/10.05	BS 1881	No	1		
104/10.06	BS 1924	No	1		
104/10.07	Standard Specifications for Transportation Material and Methods of Sampling and Testing (AASHTO) Parts I and II, 14th Edition	Set	1		
104/10.08	ASTM D1559	No	1		

104/10.09	Asphalt Institute, Superpave Manual Series No.2 (SP-2)	No	1		
104/10.10	Overseas Road Note 19	No	1		
104/10.11	BS 5911 Part 1 &3	No	1		
104/10.12	BS 4449	No	1		
	<b>11. Concrete: Slump and Cube Manufacture (BS 1881)</b>				
104/11.01	Slump cone, tamping rod and base	set	3		
104/11.02	Concrete cube mould, 150mm cube	No	30		
104/11.03	Soaking tank for cubes (capacity 50 No.)	No	1		
104/11.04	Cube tamping bars	No	3		
	<b>12. Concrete: Cube Compression Testing</b>				
104/12.01	Concrete compression machine to BS1610 Grade A with 300 mm gauge, rectangular platens, capacity 1560 kN with load pacer	No	1		
104/12.02	Safety guard for above	No	1		
104/12.03	50mm distance piece	No	1		
104/12.04	70mm distance piece	No	1		
104/12.05	Electro-mechanical load pacer, 100 mm or equivalent distance piece	No	1		
	<b>13. Aggregate and Chippings</b>				
104/13.01	Sand equivalent to AASHTO T176 including graduated plastic cylinder, rubber stopper, irrigation tube weighted foot assembly, siphon assembly, 85ml tin box (57mm dia.), 100 mm dia wide mouth funnel, stop clock, mechanical shaker and 10 litre jar	Set	1		
104/13.02	Beaker 250ml	No	2		
104/13.03	Aggregate Crushing Value Apparatus, 130 mm nominal diameter , including plunger and base plate	No	1		
104/13.04	Tamping rod and metal measure for above	Set	2		
104/13.05	Los Angeles Abrasion to ASTM standards	No	1		
104/13.06	Set of 12 abrasive charges	No	1		
104/13.07	Thermometer, 0°C to +50°C	No	2		
104/13.08	Thermometer, 0°C to +250°C	No	2		

104/13.09	Reagent grade Silica gel, 500g container	No	100		
104/13.10	Aggregate Crushing Value apparatus, 150mm nominal diameter, including plunger and base plate	No	1		
104/13.11	Tamping rod and metal measure for above (BS 812)	set	1		
104/13.12	Transverse distribution of spray test for bitumen distributor ( tray test to BS 1707) equipment	set	1		
104/13.13	Steel tray 20 mm deep x 0.1 m <sup>2</sup> (for measuring bitumen spray quantity)	No	6		
104/13.14	Purpose-made detachable handle 1.5m long to pick above trays	No	4		
	<b>14. Bitumen Spray Test (BS 1707) and Penetration Test</b>				
104/14.1	Transverse distribution of spray test bitumen distributor (depot tray test to BS 1707) or equivalent.	Set	1		
104/14.02	Steel tray 20 mm deep x 0.1m <sup>2</sup> (for measuring bitumen spray rates) with purpose made detachable handle 1.5m long.	No.	4		
104/14.03	(a) ELE - Automatic bitumen penetrometer (EL 46-5380/01) with accessories with IP 38°C thermometer	No.	1		
	(b) Penetration test cup	No.	3		
	(c) Certified bitumen penetration needle	No.	3		
	<b>15. Marshall Test (ASTM D 1559)</b>				
104/15.01	Petrol driven 100mm diameter core cutter with all accessories and one spare kit	No	2		
104/15.02	Specimen mould + base plate + extension collar	No	3		
104/15.03	Specimen extractor	No	2		
104/15.04	Compaction hammer	No	2		
104/15.05	Compaction pedestal + specimen mould holder	No	2		
104/15.06	Breaking head mould	No	3		
104/15.07	Electrical 30KN Marshall compression testing machine	No	1		
104/15.08	Suitable electrically operated laboratory mixer, 10 liters capacity	No	1		
104/15.09	Proving ring 28KN capacity graduated in 0.0025mm	No	1		

104/15.10	Flow meter	No	1		
104/15.11	Suitable mechanical mixer	No	1		
104/15.12	Water bath minimum 150mm deep, thermostatically controlled to maintain water temperature at 60°C + 1°C with perforated false bottom or equipped with shelf to support specimen 50mm above the bottom of bath etc.	No	1		
104/15.13	Isomantle electric heater for mixing bowl of laboratory mixer	No	1		
104/15.14	Thermometer (50°C - 250°C), 50mm diameter with 180mm stainless steel stem	No	2		
	<b>16. Bitumen Extraction Test</b>				
	<b>A) Extractor Bottle Method BS 598 Part 2</b>				
104/16.01	Electronic top pan balance 4kg capacity, sensitive to 0.1gm	NO.	1		
104/16.02	Flat bottomed scoop	NO.	3		
104/16.03	Steel garden trowel	NO.	2		
104/16.04	Large steel spoon	NO.	2		
104/16.05	Heat resistant gloves	pair	10		
104/16.06	Foot pump for pressurising air water assemblies up to a maximum of 700KN/m <sup>2</sup> and fitted with flexible hose approximately 1.2m long and connector	NO.	2		
104/16.07	Steel bottle 600ml capacity with 49mm rubber stopper	NO.	2		
104/16.08	Steel bottle 2500ml capacity with 71mm rubber stopper	NO.	2		
104/16.09	Steel bottle 7000ml capacity with 71mm rubber stopper	NO.	2		
104/16.10	Flask funnel for fitting to the 700ml steel bottle with rim of funnel retaining sieve 200mm nominal diameter	NO.	2		
104/16.11	Bottle roller compact bench mounted unit designed to rotate 2 bottles simultaneously about longitudinal axis	NO.	1		
104/16.12	Pressure filter complete with cutting tool for making hole in the filter paper	NO.	1		
104/16.13	Filter funnel to take 200mm nominal diameter sieves	NO.	2		
104/16.14	Centrifuge complying with BS 598	NO.	1		
104/16.15	Binder recovery	NO.	1		
104/16.16	Volumetric flask 250ml, 500ml, 1000ml and 2000ml capacity	set	2		
104/16.17	Recovery still for Dichloromethane	NO.	1		

	<b>B) Hot Extractor Method BS 598 Part 2</b>				
104/16.18	Hot extractor complete with wire gauze container gasket, cork lid and support assembly	No	2		
104/16.19	Dean and Stark receiver with condenser to suite Trichloroethylene	No	2		
104/16.20	Gyratory compactor ELE Servo Pac or equivalent with 1 x 100mm and 1 x 150mm moulds	No	1		
104/16.21	PRD Vibrating hammer compactor complete with 6 moulds, 7 base plates from ELE	No	1		
104/16.22	Tamping foot 104mm diameter and 146mm diameter and shanks to fit the supplied vibratory hammer	set	2		
	<b>17. Consumables</b>				
104/17.01	Paraffin wax	Kg	50		
104/17.02	Gas	Kg	1000		
104/17.03	Gunny sack	No	400		
104/17.04	Plastic bag 900x450x1000 gauge	No	2000		
104/17.05	Plastic bag 450x300x1000 gauge	No	2000		
104/17.06	Filter paper 150mm diameter Whatman No. 5 (Boxes of 100)	No	40		
104/17.07	Filter paper 400mm diameter Whatman No. 5 (Boxes of 100)	No	20		
104/17.08	Filter paper 100mm diameter Whatman No. 5 (Boxes of 100)	No	20		
104/17.09	Filter paper 400mm diameter Whatman No. 54 (Boxes of 100)	No	5		
104/17.10	Filter paper 270mm diameter with 33 diameter hole at centre Whatman No. 5 (Boxes of 100)	No	15		
104/17.11	Trichloroethylene	kg	1000		
104/17.12	Dichloromethane	kg	1000		
104/17.13	Cotton waste	kg	400		
104/17.14	Gas cylinders compatible with supplied stoves	No	10		
104/17.15	Sodium sulphate 3kg pack	No	15		
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# APPENDIX TO BILL ITEM NO. 1.05

Desc:	Allow a prime cost sum to purchase and provide survey equipment and accessories in accordance with the specifications and as will be directed by the Engineer				
	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
105/1.01	<b>SURVEY EQUIPMENT</b> Leica Viva TS12 P 2" R1000 Performance Robotic Package Smart Station (0,6 mgon) R1000 type with PowerSearch, automatic target aiming, reflectorless R1000 EDM, electronic guide light EGL, laser plummet, 1 keyboard with 1/4 VGA colour touch screen, Bluetooth / RS232 / CF card interface, RadioHandle interface, user manual and container, complete with RH15, RadioHandle with integrated radio modem, antenna, user manual (frequency range 2400-2483 MHz); CS10 Radio Field Controller, Ruggedized WinCE field controller with full VGA touch display, 1GB Flash Memory, 512MB SDRAM, CF/SD card slot and 2MP camera. Includes bluetooth, internal WLAN module,internal TPS radio module, numeric keypad, stylus and all other ancillary accessories such as batteries,rapid charger, etc	No.	1		
105/1.02	Tripods wild GST/20 or equivalent	No.	6		
105/1.03	Levels wild NAK2 or equivalent	No.	2		
105/1.04	Metal (Aluminium) levelling stave (5m)- foldable	No.	4		
105/1.05	Steel tape 50m	No.	4		
105/1.06	Steel tape 25m	No.	6		
105/1.07	Fibre glass tapes 50m	No.	5		
105/1.08	Trumeter or equivalent wheeled measuring metre	No.	1		
105/1.09	Ranging rods 2.5m	No.	10		
105/1.10	Ranging rods 2.5m (metal,joinable)	No.	10		
105/1.11	Optical squares	No.	4		
105/1.12	Spare batteries	No.	4		
105/1.13	Rapid charger	No.	1		
105/1.14	Reflectors with mounts	No.	6		
105/1.15	Triple prism mount with reflectors	No.	2		
105/1.16	Tribrachs	No.	4		
105/1.17	Steel hammer (4kg)	No.	4		
105/1.18	Spirit level for staves	No.	4		
105/1.19	Metal pocket rulers (5m)	No.	12		
105/1.20	Surveying umbrella	No.	2		
105/1.21	Reflective road safety vests	No.	15		
105/1.22	Drawing boards (field book frames A4)	No.	10		
105/1.23	Size metal/wood with plastic cover	No.	10		
105/1.24	Repair and maintain survey equipment for the entire project duration	Lsum	1		
105/1.25	GNSS equipment Real time accuracy SBAS, Post Processing accuracy, 4GB internal memory NAND Flash. 32.6 Wh (2200mAh), Battery life 10 hrs. With all accessories and external radio	No.	1		
	<b>Sub Total carried forward to the BoQ</b>				

## **SECTION VII: SPECIFICATIONS**

## **SECTION VI1A: 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

## **SECTION VIB: SPECIAL SPECIFICATIONS**

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## SECTION 1 ~ GENERAL

### 100 SPECIAL SPECIFICATIONS

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

### 101 LOCATION OF THE PROJECT

The project road is located in Kakamega and Nandi Counties and is approximately 19 Km long.

The upgrading project road starts at Kakamega Airstrip through Murhanda market, Shinyalu market, Virhembe market and terminates at the end of Kakamega forest. Graveling works then continues for maintenance of the road till end at Chepsonoi (Junc B128). It passes through agricultural potential areas with mainly maize, sugarcane and tea as main cash crops while the main food crops include maize, bananas and beans. The road is a gravel/earth road of 5.0 to 6.0 m carriageway width, with shoulders. The road has a generally good gravel-riding surface with adequate side drainage.

The site of the works shall be the area within the road reserve and any other places as may be designated in the Contract. The works involve construction of the project roads, junctions and any other works as directed by the Engineer.

### 102 SCOPE OF WORKS

The works to be executed under the contract consist of, but are not limited to, the following:

1. Provision of Resident Engineer's Offices and Laboratory
2. Provision of Resident Engineer's Junior and Senior Staff Housing
3. Construction and Maintenance of deviation roads, improvement and maintenance of the existing road, and provision of traffic through the works.
4. General Construction is as follows:
  - i) Site clearance and Top Soil Removal
  - ii) Construction of Embankment (Earthworks) using S3 quality material with minimum CBR of 10% and maximum swell of 1%,
  - iii) Construction of 300mm thick improved sub-grade in 2no. layers, using S4 quality material with minimum CBR of 14% and maximum swell of 1%,
  - iv) Construction of 150mm thick approximately 3% cement improved gravel Sub-base (Plant Mixed and Paver Laid, Type of cement is CEM II, 42.5N),
  - v) Construction of 150mm thick approximately 4% cement improved gravel base (Plant Mixed and Paver Laid, Type of cement is CEM II, 42.5N),
  - vi) Laying of 50mm thick asphalt concrete (SUPERPAVE) covering both the 6.5 m wide carriageway and 35mm thick asphalt concrete

- on the road shoulders sealed with single seal surface dressing (class 2, 10/14mm, pre-coated chippings) for surfacing;
- vii) Construction of Pipe, and Box Culverts,
- viii) Demolition of existing reinforced concrete culverts and other concrete structures;
- ix) Protection works using stone pitching and gabions as necessary
- x) Relocation of services as necessary;
- xi) Provision of road furniture, including road marking and traffic signs
- xii) Maintenance of works during construction and during the defects liability period
- xiii) Any other operation ancillary to the main works

The Works detailed above are only indicative of the Scope of Works associated with this contract and the Engineer may, where necessary, substitute some of the Works with others within the project area without substantially altering the overall Scope of the Works. Work shall be measured and paid using the relevant rates and prices in the Bill of Quantities.

The works will also include for any operations necessary for the safe and convenient passage of through and local traffic at all times

## 103 CONTRACT DRAWINGS

Contract drawings have been bound in a book of drawings accompanying these Contract Documents as a separate volume. Additional copies of these drawings that may be required by the Contractor can be obtained from the Engineer, in which case the Contractor will be required to reimburse the cost of producing such additional copies

The Engineer may from time to time, in order to enable the satisfactory completion of the works, revise, amend or supersede any of these drawings. It shall be the Contractor's responsibility to construct all works in conformity with the latest revision, amendment or superseding drawings, provided that the Engineer has given to the Contractor in writing such reasonable prior notices of intention to revise, amend or supersede as the nature of the intended change requires, and the relevant drawings have been issued to the Contractor.

The changed drawings shall entitle the Contractor such reasonable additional payments as provided for in the Contract, including any abortive work carried out by the Contractor prior to notice of intent to undertake changes having been given. The Contractor may be required to demolish, alter and/or correctly rebuild at his own expense any part of the Works not in conformity with the current drawings issued to him within a reasonable prior notice.

### **Documents**

The following manuals that are important and relevant to the contract, will not be issued with the tender documents but will be available for inspection during

normal working hours at the offices of the Director (Highway Planning and Design), Kenya National Highways Authority, P.O. Box 49712 - 0100, Nairobi, Kenya.

Road Design Manual:

Part 1: Geometric Design of Rural Roads

Part 3: Materials and Pavement Design for New Roads

Manual for Traffic Signs:

Part 1: Road Markings

Part 2: Traffic Signs

**104 PROGRAMMES OF EXECUTION OF THE WORKS**

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

The programme shall be coordinated 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.

The Contractor shall allow in his programme for construction of trial sections and carrying out tests upon them as directed by the Engineer in accordance with the provisions of Clause 129 of the Standard Specification. The time for completion of the Contract shall not be extended because of the time taken to carry out tests and evaluate trial sections.

**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 complete work is achieved.

**107 TAKING OVER CERTIFICATE**

The minimum length of the road for which a certificate will be issued is as provided in the appendix to the form of tender, the entire length of the road segment to be taken over shall be substantially complete.

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.

111

## **NATIONAL SPECIFICATIONS**

**Add the following at the end of this clause**

“The Contractor shall provide all such specifications not more than 60 days after commencement of contract and at least 14 days before the execution of work to which the specification is applicable.”

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.

121

## **DIVERSION OF SERVICES**

- (a) The Contractor shall acquaint himself with the location of all existing services such as telephone lines, electricity cables, water pipes, sewers etc., before execution of any works that may affect the services. The cost of determining the location of the existing services together with making good

or repairing of any damage caused all to the satisfaction of the Engineer shall be included in the BID rates.

- (b) Subject to the agreement with the Engineer, the Contractor shall be responsible for removal of alteration and relocation of existing services.
- (c) The Contractor shall indemnify the Employer against claims originating from damage to existing services or works.

## **123           LIAISON WITH GOVERNMENT AND POLICE OFFICIALS**

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

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

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

Notwithstanding Clause 120 of the Standard Specifications, the Contractor shall be required to appoint 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.

## **125           WATER SUPPLY**

Add the following sub-clauses:

The proposed water sources for construction are:

- (a) Boreholes. The quality of water from boreholes along the project road was investigated and found to be suitable for road construction. If instructed by the Engineer, the Contractor shall make arrangements for sinking of the boreholes for use by the contractor and the community. These arrangements shall include but not limited to carrying out hydro geological investigations, sinking the boreholes, construction of supply tanks and all associated works and operation of the boreholes for the period or part of the contract period. The boreholes shall be handed over to the Employer at the completion of the contract

- (b) Water pans constructed at the edge of the road reserve placed appropriately to collect surface runoff during rains at locations proposed by the Contractor and approved by the Engineer to supplement borehole water. These water pans shall be made safe by fencing. A committee of six responsible for developing water sharing guidelines between the local community and the Contractor shall be formed at the onset of the construction works comprising, the Site Agent, the Resident Engineer, Social Expert (from Consultant), 2no. Village Elders and the local Assistant Chief.

## **127 INFORMATION FROM EXPLORATORY BORINGS AND TEST PITS**

Omit the content of Clause 127 and substitute the following Sub-Clauses: -

### **127.1 Factual Materials Report**

The Factual Materials Report for this Contract does not form part of the Contract Documents. However, the Report will be made available for the Contractor's information only, and any conclusions on issues such as suitability of materials, location of borrow pits, material quantities etc., made by the Contractor on basis of the Factual Materials Report, will be at his own risk.

### **127.2 Trial Sections**

The Contractor shall allow in his programme for constructing trial sections and carrying out tests upon them as directed by the Engineer. Trials would normally be required at the start of each pavement layer and if changes of materials, method or equipment deem it necessary as directed by the Engineer.

The time for completion of the Contract shall not be extended because of the time needed to construct trial sections and evaluate the tests on them.

At least fourteen days before the work of laying any pavement layer is commenced, the contractor shall construct trial sections of at least 100 m in length and to the full construction width and the specified pavement layer thickness. For each trial section, the Contractor shall use the materials, mix proportions, mixing, laying, compaction plants and construction procedure that he proposes to use for the main work. The main work of laying the pavement layer shall not be commenced until this trial has been tested and approved by the Engineer.

No variation in the construction procedure, mix proportions, size, grading or source of any of the constituents shall be made without the agreement of the Engineer who may first require new trial sections to be carried out.

Trial sections, if found satisfactory, will be paid for under the rates in the Bill of Quantities for the appropriate items, as if the trial sections were part of the

normal work. No separate payment will be made for trial sections and testing and the Contractor shall be deemed to have provided for this in his rates.

The Contractor shall make good, at his own expense, any trial sections that fail to meet the specified standards. The standards shall include, but not be limited to, material quality, layer thickness, levels and compaction.

## **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.

## **130 PROJECT DOCUMENTATION AND PROGRESS PHOTOGRAPHS**

Notwithstanding the provision of Clause 130 of the Standard Specifications, the Contractor shall not be responsible for taking of progress photographs. Progress Photographs shall be taken by the Engineer's Representative and relevant costs charged to the Contractor who will be reimbursed under Miscellaneous Accounts. The Engineer's Representative shall organize and undertake project documentation through videography and prepare a video documentary of the project before construction, during and after.

## **131 SIGNBOARDS**

The Contractor shall provide and erect **four (4)** publicity signboards on each of the road links as directed by the Engineer. The Engineer shall, as shown in the Drawings, direct the minimum dimensions of the boards. The signs shall be printed reflective Vinyl Stickers on galvanised steel plates min 350mm high. Posts shall be galvanised steel. Main headings lettering shall be Yellow and min 80mm high, while subheadings lettering shall be White and min 60mm high as per the drawings.



**132            HOUSING ACCOMMODATION FOR THE RESIDENT ENGINEER AND HIS STAFF,  
OFFICE AND LABORATORY INCLUDING FURNITURE**

**132.1        HOUSING ACCOMMODATION FOR ENGINEER'S STAFF**

The Contractor shall provide and maintain furnished houses as indicated in the drawing or as approved by the Engineer.

**132.2        LIST OF FURNITURE FOR ENGINEER'S STAFF HOUSES**

Each house shall be provided with new furniture, equipment and fittings to the approval of the Engineer as listed below respectively:

All the houses and furniture mentioned above shall revert to the Employer after the completion of the contract.

Payments shall be made under the relevant provisions in the Bills of Quantities.

Item Description	Quantity per House Type				
	Type I	Type II	Type III	Type IV	Type V
Double Bed (5x6) with “Slumberland” Mattress	3	3	2	0	0
Single Bed (3 ½ x 6) with “Slumberland” Mattress	0	0	0	1	1
Dressing table with mirror and stool	0	0	0	0	0
Chest of 5No. drawers with mirror	3	2	1	0	0
Wardrobe (movable)	3	2	2	1	1
Resident table	3	2	1	1	0
Bedroom chair	2	1	0	0	0
600mm x 450mm high medicine cabinet with mirror	2	1	1	1	1
Bathroom stool	0	0	0	0	0
Towel Rail	2	1	1	1	1
Dining Table (2m x 1m approx.)	1	1	1	1	1
Dining Chairs	6	4	4	0	0
Side Board	2	1	1	0	0
3-piece lounge chairs	2	1	1	1	1
Armchair with cushions	2	2	2	0	0
Coffee table 40 x 45cm high	2	1	1	1	1
Occasional tables, 70x70x45 cm high	1	1	1	0	0
Book case (2m long with 3 shelves)	1	1	1	1	1
Writing Desk with chair	1	1	1	1	1
Kitchen shelves (per sq. m)	1	1	1	1	1
Kitchen table (2m x 0.8m approx.)	3	2	2	1	1
Kitchen chair	3	3	3	1	1
Refrigerator (at least 19 cu.ft.) including a freeze compartment of about 3 cu.ft. capacity	1	0	0	0	0
Refrigerator (at least 7 cu.ft) including a freezer compartment	0	1	1	1	1
Cold water storage tank of at least 400 L capacity	1	1	1	1	1
Water filter at least 15 L capacity	1	1	1	1	1
Table lamps	3	2	2	1	0
Electric fan	1	1	1	1	1
Gas or Electric hot water unit for kitchen	1	1	1	1	1
Gas or Electric hot water unit for bathroom	1	1	1	1	1
Electric & Gas cooker with 4 burners, a grill and an oven	0	0	0	0	0
Electric cooker 2 elements	1	1	1	1	1
Primus stove	1	1	1	1	1
Solar lump	2	2	2	1	1
Dustbin	1	1	1	1	1
Waste paper basket	3	1	2	2	2
Fire extinguisher at least 9L capacity	1	1	1	1	1
Air conditioner unit (medium size)	8	8	3	1	0
2m x 1.5m high curtain with lining	8	8	4	2	0
1m x 1.5m high curtain with lining	12	12	6	3	1

### 132.3

#### **ENGINEER'S MAIN OFFICE**

The contractor shall provide a furnished and equipped main office of plan area not smaller than 155 metre square that is equivalent of the MoPW Standard Resident Engineer's Office. This office shall be of weatherproof construction, provided with mosquito proof and burglar-proof windows and lockable doors and suitably insulated against heat and cold, fitted with air conditioning units, all to the satisfaction of the Engineer. The room to be occupied by the Engineer's Representative and its front office shall be provided with a floor carpet to be approved by the Engineer. All other floors shall be given a PVC tile finish using approved adhesive including 150mm wood skirting or superior finish. The windows shall be fitted with curtains and blinders.

A telephone shall also be provided for the Resident Engineer's office for his exclusive use. All the charges and fees related to the installation, maintenance and operation of the telephone including provision of internet services shall be deemed to have been included in the rates for providing and maintaining the Main Office.

The offices shall be provided with day and night watchmen and security lights, the cost of which shall be deemed to have been included in the rates for the offices.

The office for the Resident Engineer shall be completely separate from that of the Contractor.

Latrines and washrooms graded to staff seniority, together with a drinkable water supply and waterborne sewage disposal shall be provided for the office. The Contractor shall also provide 24 hours a day security and electricity supply to the offices and shall allow for any water and electricity consumed and for any statutory charges associated.

Measurement and payment for the Engineers office and laboratory shall be as specified in the standard specifications. The rate inserted for provision of the main office shall include the cost of complying with the requirements of clauses 117, 124, 125, 132, 133, 134, 135, 136 and 137 of the standard specifications. The office building shall revert to the Contractor at the end of the project.

The Contractor may be instructed by the Engineer under clause 58 of the General Conditions of Contract to make payments of general receipted accounts for such items as stationery, stores, furniture and equipment, claims and allowances for supervision personnel and any miscellaneous claims or the Engineer may direct the Contractor to purchase or pay for the above. The Contractor will, on provision of receipts, be paid under appropriate bill items in the BoQ.

The Contractor, when instructed, shall provide and install at the Engineer's office the Equipment specified below with a dealer's certificate and warranty:

a) **Photocopying Machine** 2No.

Digital copier with the following minimum specifications:

Color: Black & white  
Copy Speed A4: 41 - 50 PPM  
Print Speed A3: 20 PPM, A4 – 40PPM  
Resolution: 600 x 600 dpi  
2 x 500 sheet paper cassettes Standard  
200 sheets Multipurpose Bypass Standard  
Copier Memory 1024MB Standard Min - (Max 2GB) + 80 GB Standard  
Printer Memory 1024MB Standard Min (Max 2GB) + 80 GB Shared with copier  
25%- 400% Zoom  
Paper size A6 – A3  
Recommended monthly volume 6000 copies  
Type: Free Standing

(a)

(b) **Personal Computer (PC)** 2 No.

The rate inserted for the PCs shall include for the provision of the UPS, a Printer and the software specified below for each PC.

1. Processor Intel Core i7 – 2600 (3.4GHZ, 8MB cache, 4 Cores)
2. RAM 16GB - DDR SDRAM
4. Hard Disk SATA, 1 TB, and Min 7200 RPM
5. Display 17” TFT Colour SVGA with NVidia or Radeon graphics accelerator with min 1GB video RAM
6. Motherboard FSB speed: 1GHz
8. Expansion slots 4No.
9. Ports 6 USB ports (minimum)
10. Operating system Windows 10
11. Fully multimedia 4 speed CD ROM 52X (minimum) with sound card and two external speakers 10W minimum.
12. Network Network Ready, Wi-Fi
13. Blu-Ray Drive, not anything less than DVD superdrive
14. 2 years’ warranty

(c) **Laptop** 8No.

The rate inserted for the Laptop shall include for the provision of a Printer and the software specified below for each laptop.

1. Processor Intel Core i7 or higher
2. RAM DDR SDRAM 1GHz speed, 16GB (minimum)
3. Disk Cache 1024 MB (minimum)

4. Hard Drive 1 TB 5400 rpm SATA
5. Video Graphics – NVIDIA GeForce 940M (2GB DDR3L dedicated)
6. Keyboard Full-size island-style backlit with numeric keypad
7. Expansion slots - 1 multi format-SD media card reader, 1 HDMI, 1 headphone/microphone combo, 1 RJ45
8. Ports 4 USB ports 3.0 (1 USB Boost)
9. Operating system Windows 11(or latest)
10. Pointing Device - Imagepad with multi-touch gesture support
11. Network card Integrated 10/100/1000 Gigabit Ethernet LAN
12. Wireless Connectivity – 802.11a/b/g/n/ac and Bluetooth 4.0 combo
13. Sound - Bang & Olufsen with 4 speakers and 1 subwoofer
14. Optical Drive - SuperMulti DVD burner
15. Two years' warranty
16. Battery life: min 6 hours
17. Built-in webcam min 2MP

*Laser jet Printer specifications*

1. Speed 20ppm
2. Memory 32MB expandable to 80MB
3. Resolution 1200Xx1200dpi
4. Compatibility MS Windows 95/98/2000/XP/Vista
5. Power input 220-240V
6. Paper size A6 – A4 (A3 for 1No. printer)

1No. Laptop shall be supplied with a printer capable of printing in A3 paper size. While the rest PCs and laptops to be supplied with A4 LaserJet printers of model Hp2050 or better approved.

*UPS specifications*

1. Rating 650 VAC (minimum)
2. Input Voltage 220-240V (minimum)
3. Output 220-240V (minimum)
4. Output frequency 50-60HZ
5. Battery module minimum 60 minutes' backup time on 50% rated
  - a. Sealed Lead-acid
  - b. Short recharge time (max. 5 hours for 100%)
6. Protection Output overload  
Input output short-circuit

*Software*

1. Microsoft Office 2024 Professional or later with licence
2. Autodesk Civil3D 2024 or latest Version (with licence)
3. Antivirus: McAfee Virus Scan Professional (Latest Version)

Prior to purchase of the computers, laptops and printers, the contractor shall submit the specifications of the same to the Engineer for approval. The Personal Computers, Laptops, printers, UPSs and Photocopying Machine shall revert to the Employer at the end of the Contract. The contractor shall be paid for these items under appropriate bill items in the BoQ.

**LIST OF FURNITURE FOR ENGINEER'S OFFICE**

ITEM	DESCRIPTION	No.
1	Executive office desk	2
2	Executive office chair	2
3	Conference table 12 seater	1
4	Standard office desk 2.2x0.9 lockable drawers	6
5	Standard office chairs	3
6	Office desks 1.4x0.9 lockable drawers	10
7	Office chairs	22
8	Office desks 3x1 drawers	9
10	Filing cabinets 6 drawers	8
11	Filing cabinets 4 drawers	3
12	Curtains	As applicable
13	Office cupboard	3
14	Refrigerator min. capacity 1.0 m <sup>3</sup>	1
15	Water dispenser (hot and cold)	2
16	Waste paper basket	10
17	Stapling machine (ofrex) and pins	3
18	Paper punch	3
19	Scientific calculator (fx 992s)	10
20	Fully equipped first Aid Kit	2
21	Electric heater fans	4
22	Wall clocks battery powered	5
23	Filing trays	12

All furniture and equipment bought under the Contract shall revert to the Employer. Payment for provision of the office **including the furniture mentioned above** shall be paid against the appropriate bill items in the BOQ.

**Note:** No separate payment shall be made for provision and maintaining of the above furniture for both the RE's office and houses. This will be deemed to have been included in the rate for provision of the same under the appropriate bill items.

**ENGINEER'S LABORATORY AND SURVEY EQUIPMENT**

The Contractor shall provide and maintain for the duration of the contract the Engineer's laboratory as shown in the Book of Drawings and provide all the laboratory equipment, reagents and survey equipment as required by the Engineer. The Contractor shall be paid under appropriate bill items in the Bills of Quantities or on provision of receipts as required by the Engineer.

The laboratory shall be sited adjacent to the Resident Engineer's main office and shall revert to the contractor at the end of the contract.

The laboratory shall have piped potable water supply and a continuous electricity supply adequate for lighting, heating and operating the laboratory equipment.

The laboratory shall have a height from floor to ceiling of not less than 2.75 metres and all rooms shall be fitted with electric lighting and power points as instructed by the Engineer's Representative, and each door shall be fitted with a good quality mortise lock and provide with two keys.

Soaking tanks for CBR specimens shall be provided at floor level in the laboratory. Concrete cube curing tanks of adequate size shall also be provided. Both the CBR tanks and concrete cube curing shall have drainage pipes built-in.

The following rooms and facilities shall be provided in the Laboratory: -

**(i) Office**

This room shall have a total floor area of not less than 14 square metres and a total window area of not less than 2 square meters. The door and windows shall be fitted with fly screens covered with mosquito gauze. The floor shall be of concrete with a float finish. The walls shall be lined and ceiling provided.

A display board of soft board or similar approved material, with a minimum surface area of 3 square metres shall be provided and securely fixed to the wall.

**(ii) Main Laboratory**

This room shall have a total area of not less than 55 square meters and a total window area of not less than 7 square metres. The external entrance shall be a double door and single doors shall be provided for access to the adjacent offices. The external door and all windows shall be fitted with fly screens covered with mosquito gauze.

The floor shall be of concrete and float finished. The room shall be fitted out as indicated by the Engineer's Representative with three rigidly constructed work benches each minimum 2 metres long by 1-metre-wide by 1 metre high and with top comprising either metal lined hard wood or steel float finished concrete at least 75mm thick and suitably reinforced, with a sink minimum

size 600mm long by 450mm wide by 300mm deep fitted with a tap and waste pipe. Wall shelves, 450mm in width and having a surface area of at least 6 square metres, shall be provided and securely fitted.

Two display boards of soft board or similar approved material, each with minimum area of 3 square metres, shall be securely affixed to the walls as directed by the Engineer's Representative.

**(iii) Small Laboratory Room**

This room shall have a total floor area of not less than 20 square metres and a total window area of not less than 2 square metres. The windows shall be fitted with fly screens covered with mosquito gauze. A single door shall provide access to the main laboratory room. The floor shall be fitted out as indicated by the Engineer's Representative with two rigidly constructed work benches each of minimum dimensions 2 metres long by 1-metre-wide by 1 metre high with a top comprising either metal lined hardwood or a steel float concrete finish of at least 75mm thickness and suitably reinforced, with a sink of minimum size 600mm long by 450mm wide by 300mm deep fitted with a tap and waste pipe and concreted to the water supply for the main laboratory room. An approved air extractor fan shall be fitted through an outside wall.

**(iv) Store Rooms**

These rooms having a total floor area of not less than 20 square metres shall be provided adjacent to the main laboratory building in a position to be indicated by the Engineer's Representative.

**(v) Concrete Slab for Sample Drying**

A reinforced concrete slab 100mm thick and of total area not less than 20 square metres shall be provided adjacent to the main laboratory building in a position to be indicated by the Engineer's Representative. The slab shall have a smooth finish to the satisfaction of the Engineer.

The contractor may be directed to pay for stationery, equipment or reagents that are foresaid and also pay for servicing and repair of the laboratory equipment being used on the project.

The equipment shall be of approved manufacture, and shall be made available to the Engineer for the Engineer's exclusive use throughout the Contract, not later than three (3) weeks after the Engineer's order to supply. All equipment shall be ready to use and complete to perform the tests. The equipment shall revert to the Employer on completion of the Contract

Any delays to the Contractor or the Contractor's activities caused by the Engineer being unable to perform survey work, field or laboratory tests due to the contractor's failure to supply and/or maintain the said equipment shall be deemed to have been caused entirely by the Contractors own actions, and any consequences of such delays shall be interpreted as such.



The payment to comply with this requirement is provided in the Bill of Quantities and ownership of all equipment shall revert to the Employer after the completion of the Works.

Failure by the Contractor to provide or maintain the equipment shall make him responsible to bear all costs that may be incurred as a result of the Engineer's staff using alternative means of communication, including delays in supervision and approval of Works by the Engineer.

#### **132.5 MOBILE PHONES FOR ENGINEER'S STAFF AND OFFICE**

The Contractor shall, if so instructed by the Engineer provide, connect and maintain mobile phones for the exclusive use by the Engineer and for the duration of the contract. The Contractor shall provide air-time for these mobile phones as directed by the Engineer and be reimbursed under appropriate items in the Bills of Quantities.

#### **133 TIME FOR ERECTION OF THE ENGINEER'S OFFICE AND LABORATORY**

As per standard Specifications

#### **135 MAINTENANCE OF THE ENGINEER'S STAFF HOUSES, OFFICES LABORATORIES, FURNITURE AND EQUIPMENT**

Until the issue of the Taking-over certificate for the whole of the Works, and if required for a period thereafter until the Contractor has completed any outstanding work."

##### **135.1 Provision of Maintenance and Security**

The Contractor shall maintain all furniture and equipment provided by him in a useable state of repair and shall replace promptly any item that becomes unserviceable or is lost.

The Contractor shall provide cleaners, grounds men, and day and night watchmen for housing camp and offices as directed or instructed by the Engineer on site, the cost of which shall be included in the rates for providing houses, offices and laboratory.

Additional armed security shall also be provided as instructed by the Engineer and payment done under the appropriate item in the Bill of Quantities.

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

The Contractor shall pay wages (including all overtime) and provide housing for all attendant staff to fulfill the requirements of Clause 137 of the Standard Specifications. Such payments shall be made **NOT LATER** than the 5<sup>th</sup> day of the subsequent month. Failure to make prompt payment will result in a surcharge of 10% on the amount due.

The number of junior support staff required by the Engineer shall be as indicated in the Bill of Quantities or as instructed by the Engineer. The Contractor will be paid on a prime cost basis plus a percentage for overheads and profits under appropriate items in the Bills of Quantities. The payment referred to in this clause shall exclude the cost of maintaining the offices in compliance with clause 137, paragraphs 1, 2 and 4 of the standard specifications which are deemed to be included in the rates for providing the Office.

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

The Contractor shall when instructed to do so provide and maintain in good working condition for the exclusive use of the Engineer and his staff throughout the contract, brand new vehicles, as described in the Bill of Quantities.

The Contractor shall insure comprehensively the vehicles for any licensed drivers and shall provide competent drivers during normal working hours and whenever required by the Engineer including recognized days of rest.

Should any vehicle supplied not be in road worthy condition, the Contractor shall provide an acceptable equivalent replacement vehicle until such time as the original vehicle is repaired to the satisfaction of the Engineer and returned for use.

Payment for the vehicles (up to 4,000Km per veh.month), shall be by vehicle months. Payment for mileage above 4,000Km per vehicle month, shall be made at a rate per Kilometre. These payments shall be inclusive of all fuels, lubricants, servicing, insurance, maintenance, drivers and repairs. The rate shall include any overtime the drivers might be due or any other allowances in addition to the normal working hours. Payment shall be made under appropriate items in the Bills of Quantities.

The vehicles shall revert to the Contractor at the end of the contract.

**139 RECEIPTED ACCOUNTS**

The Contractor may be instructed by the Engineer to make payments of general miscellaneous accounts for such items as stationary, stores and equipment and miscellaneous supervision personnel and claims or the Engineer may direct the Contractor to purchase or pay for the above. The Contractor will be paid on a prime cost basis plus a percentage for overheads and profits under appropriate items in the Bills of Quantities.

**140 PAYMENT OF OVERTIME FOR ENGINEER'S JUNIOR STAFF**

In the last line delete the words “shall be at the Contractor’s expense” and substitute with “including the approved percentage for administrative overheads shall be paid by the Contractor to the Engineer”.

If the Contractor wishes to execute permanent works outside the Engineer’s normal working hours as stated in Clause 45.1 of the Conditions of Contract, then the payment for overtime for the Engineer’s junior staff shall be reimbursed in full by the Contractor to the Engineer plus a 20 percent additional amount to cover for the Engineer’s administrative overheads.

If the Contractor wishes to execute the works on regular basis outside the Engineer’s normal working hours, over a prolonged period, the Engineer may, if he deems it necessary, employ additional supervisory staff for which the required salaries, plus twenty (20%) percent additional amount to cover for the Engineer’s administrative overheads shall be reimbursed in full by the Contractor to the Engineer. In addition, the Contractor shall provide the required accommodation for such staff at his own cost. The Contractor shall not be reimbursed any of these costs.

## **141 MEASUREMENT AND PAYMENT**

Delete Sub-Clause 141 (a) entirely and substitute with: -

- a) No Preliminary item has been included in this Contract. All Contractor’s mobilization and general costs shall therefore be included in relevant rates in the Bill of Quantities.

Delete Sub-Clause 141 (m) entirely

## **142 ENVIRONMENTAL PROTECTION**

Further to the requirements of Clause 19.1 of the Conditions of Contract, the Contractor shall be responsible for the following measures to protect the environment:

- 1) Compliance with national and local statutes and regulations relating to protection of the environment. The Contractor will be responsible for familiarizing himself with all existing national and local legislation in this regard.
- 2) All construction activities shall be carried out using the best possible means to reduce environmental pollution such as noise, dust and smoke. All vehicles and plant shall be regularly serviced in accordance with the manufacturer’s recommendations to ensure that they operate efficiently and without excessive noxious emissions. The Engineer will have the authority to instruct the Contractor to temporarily cease operations and/or remove from the site vehicles or plant which do not comply with this requirement, until such time that he is satisfied that best practicable means to reduce environmental pollution to a minimum are being used.

- 3) The Contractor shall at all times maintain all sites under his control in a clean and tidy condition and shall provide appropriate and adequate facilities for the temporary storage of all waste prior to proper approved disposal.
- 4) The Contractor shall be responsible for the safe transportation and disposal of all waste generated as a result of his activities in such a manner as will not give rise to environmental pollution in any form, or hazard to human or animal health. In the event of any third party being employed to dispose of waste, the Contractor shall be considered to have discharged his responsibilities under this clause from the time at which waste leaves sites under his control, providing that he has satisfied himself that the proposed transportation and disposal arrangements are such as will not give rise to pollution or health hazard.
- 5) The Contractor shall be responsible for the provision of adequate sanitary facilities for his workforce, and that of his sub-contractors, at all construction and ancillary sites. The Contractor shall not allow the discharge of any untreated sanitary waste to groundwater or any surface watercourse.

Prior to the mobilization of the workforce the Contractor shall provide details of proposed sanitary arrangements to the Engineer for approval, such as will allow him to assess whether or not the proposed facilities are adequate and are unlikely to pollute water resources, and also that the facilities will be properly operated and maintained.

- 6) All concrete and asphalt plants shall be operated and maintained in accordance with the original manufacturer's specifications and manuals, and in such a manner as to minimize emissions of hydrocarbons and particulates. If, in the opinion of the Engineer, the operation of such plant is causing, or is likely to cause nuisance or health problems to site staff or the general public, the Contractor shall carry out such work as is necessary to reduce emissions to an acceptable level within a time-scale agreed with the Engineer.
- 7) The Contractor shall regularly douse with water all exposed dirt surfaces to reduce dust levels.
- 8) The Contractor shall take all reasonable measures, at all sites under his control, to prevent spillage and leakage of materials likely to cause pollution of water resources. Such measures shall include, but not be limited to the provision of bunds around fuel, oil and bitumen storage facilities, and provision of oil and grease traps for servicing and fuelling areas. Prior to construction of such facilities, the Contractor shall submit details of pollution prevention measures to the Engineer for his approval.
- 9) The Contractor shall be responsible for ensuring that exposed surfaces are re-vegetated as construction progresses, all to the satisfaction of the Engineer.

- 10) The removal of trees shall be kept to the minimum necessary to accommodate the Permanent Works.

Prior to the removal of any trees the Contractor shall inform the Engineer of the intended operation and obtain the permission of the Engineer for the removal of the trees. If any tree is removed without permission the Contractor shall replant another approved tree at no additional cost to the Employer.

- 11) The Contractor shall ensure that fires, except for controlled fires for burning rubbish, do not start within the Site or in the environs thereto as a result of the works or from the actions of his employees. The burning of waste, such as vehicle tyres causing noxious emissions is prohibited. The Contractor shall have available at all times trained fire-fighting personnel provided with adequate fire-fighting equipment to deal with all fires. The Contractor shall additionally at all times provide sufficient fire protection and fighting equipment local to parts of the Works which constitute particular fire hazards.
- 12) 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 standards. The contractor shall obtain Environmental mitigation license for the same and also comply with Environmental Management Coordination Act (EMCA) 1999, and Environmental Impact Assessment (EIA) and Environmental Audit (EA) Regulations 2003.

No separate payment shall be made in respect of this Clause 142 and the Contractor shall be deemed to have allowed in his general rates and prices for the cost of complying with the requirements of this Clauses.

#### **144 COPIES OF ORDERS AND REQUISITIONS**

The Contractor shall provide the Engineer with copies of all orders for supply of materials and goods required in connection with the works as the Engineer may require.

#### **145 SHORTAGE OF BITUMEN AND OTHER MATERIALS**

The Contractor shall make provisions for obtaining bitumen and other materials required for the Contract if they are not available locally. In particular, the Employer shall not be liable for any additional costs due to local lack of bitumen or any other materials.

Add the following Section after 145

This specification sets out the Contractor's obligations with regard to instituting a baseline study for social and economic impact for the project within the area.

## 146A

**GENERAL REQUIREMENTS****(a) Social and Economic impact studies**

The Contractor shall institute Social and Economic impact studies through a consultant so as to conduct a baseline survey, midterm evaluation and impact evaluation to all the component of the project.

The exercise in baseline survey and impact evaluation will be carried out in coordination with the Authority's for capacity development and technical assistance.

**(b) Objective**

The objective of the assignment is to establish baseline data on the agreed indicators between the Authority and the consultant in reference to the project appraisal result framework covering the project road section and other impact areas. The baseline data will be monitored bi-annually during project implementation and evaluated at midterm and end term.

Thereafter using the collected data the project will be subjected to impact evaluation assess the benefits and draw lessons learnt from the project.

The impact study findings shall be used for planning and packaging future projects and guiding the impact assessment on target groups. The specific tasks for the consultancy services on the study shall include:

**(c) Scope of the Study**

Road development or improvement is geared towards improving the general welfare of the country and directly to the communities within the project impact area. To quantify change with respect to the project intervention to address the identified issues such as inadequate transport capacity, road crashes and high road user cost along Project road and its environs, the consultant shall conduct a study to document the current status on the identified socioeconomic information or pillars, carrying a follow up surveys to analyze the pre and post-intervention change at mid-term (after 2 years of implementation or 50% time elapse of contractual work project whichever is earlier) and end term evaluation of the project (1-2 years after project completion), the consult will incorporate the non – project area Project road section as a controlled section to assist in comparative analysis at the end of the project.

The end-line survey for project impact study is expected to develop household and community questionnaires, focus group interviews and key informant

discussions for quantitative impact evaluation, and implement the survey in the field (must refer the baseline survey questionnaire).

All survey instruments should be based on a thorough review of relevant literature and existing questionnaires, such as the Kenya Census Survey 2019, Kenya Integrated Household and Budget Surveys (KIHBS), Demographic and Health Surveys (DHS) and the Micro, Small and Medium Enterprise Study. The end-line survey should, therefore, be designed to capture not only project outputs (e.g. roads length built, employment etc) and outcomes (e.g. market prices, agricultural productivity, access to markets and services, travel times, traffic volume and travel costs) but also impacts/final welfare outcomes (e.g. income/expenditure, health and women's empowerment) and institutional capacity development in the Authority under training component.

#### **Contractor Responsibilities**

The Contractor will employ and designate a qualified Consultant to be approved by the Engineer, who will work closely with the Client and other relevant bodies so as to undertake the exercise.

#### **Reporting**

The Consultant shall prepare a draft report which shall summarize the findings, analysis, results and recommendations of the socio-economic baseline and shall contain all supporting materials to be submitted as will be directed by the Engineer. The Consultant will therefore be required to make adequate provision for documentation at Inception, during midterm and Final End Term report.

#### **Payment**

Payment shall be made as per the program approved by the Engineer.

## **SECTION 2 ~ MATERIALS AND TESTING OF MATERIALS**

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

### **205 SOILS AND GRAVEL**

Whenever in the Contract Document a minimum California Bearing Ratio (CBR) is specified, the CBR of the material shall be determined at the specified state of compaction;

- a) After four days soaking in the case of neat materials and
- b) After seven days curing plus seven days soaking in the case of cement/lime improved materials

### **211 BITUMINOUS BINDERS**

#### **a) Requirements**

Straight run bitumen in addition to the requirements of the Standard Specification the ash content of penetration grade bitumen shall not exceed 5% by weight

#### **b) Types of Bitumen**

Prime coat shall be type MC30 unless otherwise stated. Tack coat shall be K1-70 emulsion. For surface dressing the binder shall be 80/100 pen grade bitumen cut back or straight run while binder for asphalt concrete shall be 60/70 pen grade bitumen

### **228 WORKMANSHIP AND QUALITY CONTROL**

The Contractor shall, not later than 4 weeks after the notice to commence the Works, submit a project specific Quality Management System, including the Work Method Statements and Quality Audit for major items of work, showing how all the Contractor's systems will ensure that all the works will conform to the Contract documents. The onus rests with the Contractor to produce work which conforms in quality and accuracy of detail to all the requirements of the Specifications and Drawings, and the Contractor shall, at his/her own expense, institute a quality control system and provide experienced engineers, foremen, surveyors, materials technicians, other technicians and other technical staff, together with all transport, instruments and equipment, to ensure adequate supervision and positive control of the Works at all times. The Contractor shall provide chainmen and labourers as necessary for the Engineer to carry out checks on the Works

The Contractor shall conduct tests or have them conducted continually on a regular basis, to check the properties of natural materials and processed natural materials and of products manufactured on the site, such as concrete and asphalt. The Contractor shall remain fully responsible for any defective material or equipment provided by him. Similarly, the quality of all elements of the Works shall be checked on a regular basis so as to ensure compliance with the specified requirements



The intensity of control and of tests to be conducted by the Contractor in terms of these obligations shall be adequate to ensure that proper control is being exercised.

Where any natural materials or products made from natural materials are supplied, and upon completion of each element of the construction work, the Contractor shall test and check such materials, products and/or elements for compliance with the specified requirements and shall submit his results to the Engineer for approval. Such submission shall include all his measurements and test results and shall furnish adequate proof of compliance with the specified requirements

No specific pay items are provided as compensation for the above obligations, including the provision of all samples delivered to the Engineer, the repair of places from which samples were taken, and the provision of the necessary personnel and testing apparatus and facilities, for which compensation shall be included in the bid rates of the Contractor for the various items of work to which these obligations apply.

The Contractor shall submit to the Engineer for examination, the results of all relevant tests, measurements and levels indicating compliance with the Specifications on completion of every part of the Work

## 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 centerline 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 coordinated 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.

### 302 TOLERANCES

Add the following:

(e) **Pavement Widths**

For Pavement widths for subbase, base and wearing course, the allowable tolerances shall be 0 to +50 mm.

(f) **Pipe Culverts**

The maximum deviation from the specified line of a drainage pipe shall be: -

Horizontal	~	25mm in 3.0 m
Vertical	~	30 mm in 10.0 m

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

### **401 SITE CLEARANCE**

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

Add the following as the last paragraph in Sub-clause (a):

Site clearance is not required over the gravelled width of existing road and shoulders. No measurement and payment for site clearance will be made for this width. The remaining area within the road reserve including sides of existing embankments and cuttings shall be cleared as instructed by the Engineer. This operation shall also include the removal of all trees, except for some trees as directed by the Engineer. The Contractor shall provide paint and all the assistance the Engineer may require to mark the trees which **should not** be removed during site clearance.

The Contractor shall take care not to uproot or damage trees which are within the road reserve but outside the construction width. After the Contractor has staked out the extent of the road, the Engineer, with the assistance of the Contractor, shall mark out the trees to be removed. After removal, the trunks and branches of these trees shall be cut up into pieces not more than 2.0m in length, transported and neatly stored at the nearest Ministry of Roads camp or otherwise in a position to be indicated by the Engineer. No additional payment shall be made for complying with these requirements and it is deemed the Contractor will have included its cost in the rates for site clearance.

### **402 REMOVAL OF TOPSOIL**

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

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

When instructed by the Engineer, the Contractor shall demolish or remove any structure. Measurement for the works shall be done on dayworks basis and payments made under the appropriate item in the Bills of Quantities.

## **SECTION 5 – EARTHWORKS**

### **501 SCOPE OF SECTION**

The scope of this section includes all earthworks associated with the Contract, including roadside amenities, service roads, walkways and any widenings

### **504 PREPARATION PRIOR TO FORMING EMBANKMENT**

In cuttings, the contractor shall excavate to a level that would accommodate the 300mm subgrade and the existing ground below this **MUST** be processed and compacted in accordance with clause 504 of the standard specifications.

Where benching is required to existing pavement to accommodate new cross section, the rate for compaction of resultant 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. This shall be confirmed through proof-rolling.

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 in embankments. Soft fill material shall comply with the following requirements:

- Organic matter less than 5% by weight
- CBR of not less than 10% for carriageway and shoulders measured after 4-day soak on a laboratory mix compacted to a dry density of 95% (AASHTO T 99)
- Swell less than 1% on the laboratory mixed sample

Subgrade is defined on the Drawings, and subgrade material shall comply with the requirements of Clause 505 except that the CBR shall have a value of not less than 14% measured after a four (4) day soak on a laboratory mix compacted to a dry density of 95% MDD (AASHTO T180)

Improved subgrade layer is defined on the Drawings and shall comply with the following requirements:

- CBR of not less than 14% measured after 4day soak on a laboratory mix compacted to a dry density of 100% (AASHTO T 99)

- Plasticity Index less than 30%
- Swell less than 1% on the laboratory mix sample.
- Placed in layers not exceeding 150mm thick

Improved Subgrade shall mean the upper 450mm of earthworks, either in-situ or in fill and subgrade shall be provided as part of the earthwork operation, and payment shall be made as fill.

No extra payment will be made for haulage of suitable material from borrow pits as the overhaul costs shall be deemed to have been factored in the rates inserted in the Bills of Quantities

## **508                    COMPACTION OF EARTHWORKS**

At pipe culverts, all fill above ground level around the culverts shall be compacted to density of 97% MDD (AASHTO T180) 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 (up to 100m away from structure), all fill above ground level up to the underside of the subgrade shall be compacted to density of 95% MDD (AASHTO T180). 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, the material shall have a CBR greater than 14% and this shall be compacted and finished to the same standards and tolerances as those required for normal subgrade and clauses in the specifications applying to normal subgrade shall also apply.

## **509                    MASS-HAUL DIAGRAM**

Delete Clause 509 entirely and substitute “No Mass-Haul diagram has been provided with the Documents. The Contractor shall be responsible for locating suitable materials for constructing earthworks along the alignment and elsewhere and shall include in his rates for fill, spoil and for the cost of haulage”.

## **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.

**515                    SIDE DRAINS**

Whenever excavation works in side drains constitutes a separate operation from the bulk earthworks, such excavation shall be classified as catchwater drains under Section 8 of the Specifications

**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 (97% MDD AASHTO T180)

Quantities for embankment widening shall be measured using the final compacted volume of fill material over the existing embankment after removal of topsoil. Payment for fill for widening shall be made under Item 5.01 of the Bill of Quantities. No payment shall be made to the Contractor for any additional earthworks resulting from his construction methods, or for working space for his construction plant and equipment, or for complying with the requirements of Clause 504. The Contractor shall include the cost of benching in his rates and prices.

The rate for cut to spoil shall also allow for cutting to spoil in any waterlogged areas.

No separate payment shall be made for overhaul, and the cost of haulage shall be included in the Contractor's rates and prices for earthworks.

The rates in the Bill of Quantities shall also include for earthworks associated with roadside amenities, service roads, walkways and any widenings

## **SECTION 6 - QUARRIES, BORROW PITTS, 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 the 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 utilize this 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 97% MDD (AASHTO T180) immediately before structures are constructed.

Paragraph 4, last line: - Replace "95%" with "97%" and "T99" with "T180"

### **707 BACKFILLING FOR STRUCTURES**

All backfilling material shall be selected backfill complying with the requirements for a natural subbase material given in Clause 1203. Unless otherwise instructed by the Engineer, all backfilling material shall be compacted to a minimum of 97% MDD (AASHTO T180).

Porous filter material shall be clean, uniform, sand or crushed aggregate with a d50 between 0.4mm and 1.2mm and less than 5% particles finer than 75micron sieve. The d100 must be lower than 5mm

### **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. Cement mortar 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 cement shall be mixed with sand in the ratio of 1:3 by volume to form the grout.

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 minimized 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 minimize 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 KeNHA's Regional Director's offices

#### **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 95% MDD compaction (AASHTO T180)

#### **714 BACKFILL BELOW STRUCTURES**

All backfilling material shall be selected backfill complying with the requirements for a natural subbase material given in Clause 1203. Unless otherwise instructed by the Engineer, all backfilling material shall be compacted to a minimum of 97% MDD (AASHTO T180).



## **SECTION 8 ~ CULVERTS AND DRAINAGE WORKS**

All concrete works for culverts and other drainage structures shall be done in accordance with Section 17 of the specifications

### **801 SCOPE OF SECTION**

Amend as follows:

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 600 mm, 900 mm or 1200 mm diameter pipe culverts using the balloon casting technology or precast pipes rings.
- ~ Desilting and cleaning of existing pipes and outfall drains to make them free flowing.

### **804 EXCAVATION FOR CULVERTS AND DRAINAGE WORKS**

The Standard Specifications are amended as follows:

- (a) In paragraph 6, line 3, and in paragraph 7, line 5 and in paragraph 11, line 6, "95% MDD (AASHTO T99)" and insert "97% MDD (AASHTO T180)".
- (b) Removal of Existing Pipe Culverts

Where instructed by the Engineer, the Contractor shall excavate and remove existing culvert pipes and the void left after removal of culvert pipes shall be widened as necessary to accommodate new concrete bedding, pipe and haunching.

The void left by removal of pipes and end-structures shall be carefully preserved in order to accommodate replacement with 600 mm, 900 mm or 1200 mm diameter pipe culverts as directed by the Engineer.

Regarding backfill, reference is made to Clause 812.

- (c) 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% MDD (AASHTO T99)" and insert "97% MDD (AASHTO T180)".

In sub-clause 809(a), paragraph 1, line 1, substitute "95% MDD (AASHTO T99)" with "97% MDD (AASHTO T180)".

In sub-clause 809(c), paragraph 2, line 4, between the words "compacted" and "and shaped" insert the words "to 97% MDD (AASHTO T180)".

Hard material is material, which 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 0.2m<sup>3</sup> occurring in soft material shall be classified as hard material.

## **809 BEDDING AND LAYING OF PIPE CULVERTS**

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

Amend sub-clause 809(b), paragraph 1 as follows:

Where pipes are laid on a concrete bed the pipes shall be bedded on class 15/20 concrete at least 50mm thick, and extending the full width and length of the pipe barrel.

In sub-clause 809(c), paragraph 2, line 4, between the words "compacted" and "and shaped" insert the words "to 97% MDD (AASHTO T180)".

Add the following Sub-Clause 809(d):

**Bedding, Laying and Surround for Concrete Pipe Culverts Cast In-Situ**

In addition to the requirements of the Standard Specification, where the inflatable balloon method of casting culverts in-situ is used, thorough pre-construction trials shall be carried out and the necessary adjustments made to ensure that: -

- (i) Line and grade of the culverts is achievable
- (ii) The balloons and the pressure gauge/machine are in good working conditions
- (iii) The inner concrete barrel surface immediately in contact with the inflated balloon form shall achieve class F3 finish.

Besides this the following amendments shall be made; -

- (a) Where inflatable balloons are used, the surround shall be 200mm.
- (b) Concrete surround shall be "class 20/20".
- (c) BRC A193 mesh will be provided within the surround and bed as provided for in the drawings or as instructed by the engineer

The Contractor may propose an alternative method of casting culverts in-situ, which shall be subject to the approval of the Engineer. Culverts shall be constructed to conform with dimensions shown on the drawings.

Measurement and payment for culverts cast in-situ by use of balloon method or any other approved method shall be made per linear meter under the existing bill items. The rates inserted shall allow for compaction of the bottom of excavation to 100% MDD (AASHTO T.99) and the BRC mesh used.

## **810 JOINTING CONCRETE PIPES**

Add as follows:

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.

## **811 CONCRETE BEDS, SURROUNDS AND HAUNCHES**

Amend the Standard Specification line 1 of the second paragraph, to read as follows:-

All concrete for beds shall be of class 15/20 whilst concrete for surrounds and haunches shall be of class 20/20 for cross drain culverts, complying with Section 17 of this Specification formed to the dimensions shown on the drawings or as instructed by the Engineer.

## **812 BACKFILLING**

In the Standard Specifications, clause 812

Delete paragraph 6 "for pipe culverts depth of 150mm", entirely.

Wherever the expression "dry density of 95% MDD (AASHTO T. 99)" occurs delete and replace with "dry density of 97% MDD (AASHTO T180)".

The rates entered for laying of pipe culverts shall allow for backfilling to pipe culverts and compacting to 97% MDD (AASHTO T180) and these works shall **not** be measured and paid for separately.

### **812.1 Filter fabric for backfilling behind structures, drains and revetment works**

Where filter fabric is specified, it shall be durable non-woven geotextiles or synthetic fibres, unaffected by soil acidity, soil alkalinity and bacteria. The fabric shall be made

by an approved, reputable manufacturer and shall have a mass and strength at least equal to the following criteria:

	Mass g/m <sup>2</sup>	Wide Strip Tensile Strength kN/m <sup>2</sup>	Mullen Burst Strength kPa
Under and For Drainage Material	180	Mean 12/12	2160
Behind bridges, Box culverts, Under Gabions, Gabion Mattresses or Grouted Rip – Rap	250	Mean 18/18	3040
Under Rip-Rap and Rockfill	300	Mean 21/21	4200

The mesh size of the fabric shall be sufficient to effectively retain the material on which it is placed but shall not be greater than 150 microns.

The fabric shall be installed in accordance with the manufacturer's instructions. The fabric shall be placed on levelled ground, with sharp rocks and other objects which are likely to damage the fabric being removed and all pits and depressions being backfilled and compacted.

The fabric shall be overlapped by a minimum of 300 mm and stitched at joints in such a manner that the strength of the joints is at least 50 per cent of the strength of the fabric.

Rip-rap or gabions or other materials, as applicable, shall be placed carefully on the filter fabric in such a way as to avoid damage to the fabric. In any event construction procedures shall ensure no damage to the filter fabric or impairment of its design function. Should the filter fabric be damaged, it shall be replaced, including removal of the overlay material, in a manner approved by the Engineer.

No mechanical plant shall traffic over filter fabric unless a minimum thickness of 200 mm of fill material has been placed over the fabric.

## **813 PRECAST CONCRETE OPEN CHANNELS**

Add the following to the standard specification clause 813: -

### **813.1 Half Round Open Channels**

These shall be provided as directed by the Engineer and in compliance with sections 813 and 820 of the standard specifications.

### **813.2 Invert Block Open Channels**

These shall be provided as directed by the Engineer and in compliance with sections 813 and 820 of the standard specifications.

Where directed by the Engineer, the Contractor shall excavate in any material provide and place concrete for the bedding, backfill and remove surplus material to spoil, provide, lay and joint precast concrete invert blocks, side slabs, slotted drains and gulley chambers.

Precast concrete invert block side drains and gulley chambers shall comply with the requirements of BS 340, and shall be laid in accordance with the drawings.

Precast concrete invert block drains and side slabs shall be formed of concrete of the class specified and to the dimensions shown on the drawing. Drains shall not normally be laid to a radius of a curvature less than 10 times the bed width or a diameter of the drain.

Invert block drains shall be constructed in the positions and to the levels and dimensions shown on the drawings or as directed by the Engineer. The earth sides to such channels shall be neatly finished to a slope of 1: 1 or such other slope as the Engineer may direct. Invert block drains and side slabs shall be laid on 100 mm thick compacted approved gravel material and neatly jointed with mortar consisting of 1:3 cement: sand by volume.

### **813.3 Invert Block drain**

Where instructed, the Contractor shall excavate, compact the excavated bed to 97% MDD AASHTO (T180), backfill as necessary with selected material compacted to 97% MDD AASHTO (T180) lay and joint invert block drains of 300mm diameter with two side slabs.

## **814 SUBSOIL DRAINS**

Add the following:

In the event of excavation for repairs exposing local seepage, springs or 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 as specified in Clause 814 of the Standard Specification. Where these drains lie within the carriageway, the carriageway shall be reinstated with compacted graded crushed stone or stabilized gravel and surfaced with hot asphalt or a surface dressing as instructed by the Engineer.

Payment will be made in accordance with Clause 820 of the Standard Specification.

### **814.1 Filter Fabric to Sub-Soil Drains**

A filter fabric shall be placed under, around and over rock fill of the sub-soil drains. The provisions and placing of the fabric shall be in accordance with Clause 814 of the

Standard Specification and Clause 822 of the Special Specification. Payment shall be in square metre of the fabric used.

## **817 MITRE DRAINS, CUT-OFF DRAINS, CATCHWATER DRAINS, SIDE DRAINS, CULVERT OUTFALL DRAINS AND EARTH DAMS**

Add the following Sub-Clauses:

### **817.1 Cleaning 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.

No extra payment will be made for cleaning of existing chains, and the costs shall be included in other Bill items.

### **817.2 Channels**

The Engineer may instruct that the Contractor provides open channels in place of existing sub drains where the latter may be damaged or in any other place. The rates entered by the Contractor in the Bill of Quantities must include for removal and disposal of any sub drain 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 80 mm thickness and lengths or widths not exceeding 1000 mm. Joints shall be at least 15 mm 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 specifications, unless suitable for re-use, and deposit of the material in a spoil dump to be approved by the Engineer.

## **819 CLEANING AND MAINTENANCE**

Add the following:

### **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.

No separate payment will be made for such work and provision should be included in the rates.

## **820 MEASUREMENT AND PAYMENT**

Add Sub-Clause 823(r): ~

Item : Concrete for balloon cast pipes/culverts  
cast in-situ  
Unit : m<sup>3</sup>

The rate for concrete for each size of culvert instructed shall include for the surround and for the bedding as instructed including the A193 BRC mesh and shuttering, calculated from the dimensions given in the drawings or as directed by the Engineer.

The rate shall also include for the cost of providing and placing the concrete and complying with the requirements of Clauses 809, 810, 814, 819 and 1713 of the Standard Specification.

No extra payment shall be made for provision of inflatable forms/balloons and other requirements for casting culverts in-situ and the Contractor shall be deemed to have provided for these in his rates and prices.

Add Sub-Clause 823(s): ~

Item : Invert Block Drain  
Unit : m

The payment for the invert block drain shall include the cost of the bottom drain and two side slabs and shall be measured in a linear metre.

Add Sub-Clause 823(t): ~

Item : Geotextile  
Unit : m<sup>2</sup>

The payment for the geotextile shall be in square metres and shall include the cost of providing and placing as per the specifications or as instructed by the engineer

## SECTION 9 ~ PASSAGE OF TRAFFIC

### 901 TRAFFIC CONTROL AND DEVIATIONS

#### a) Programme for the Control of Traffic

Following the award of the contract, the Contractor shall submit to the Engineer a detailed Traffic Control Plan. Such plan shall be approved by the Engineer, and where necessary, by the appropriate statutory authority, before the Contractor commences work. The plan shall but is not limited to, the method of protection of the public and give details of the duration and hours of operation, location, type and numbers of traffic safety devices, barricades, warning signs, flag men equipped with two way radios and the like. The Traffic Control Plan shall be in accordance with and complimentary to the Programme of Works submitted under Clause 104

During the preparation of this Traffic Control Plan, the Contractor shall take into consideration the following;

- i) The Contractor shall conduct his operations in such a manner that no greater length or amount of work is undertaken than he can efficiently carry out having due regard to the rights and conveniences of the public and the requirements of this Section.
- ii) If the Contractor proposes a road closure, he shall provide an alternative routing of the traffic, which must be approved by the Engineer.
- iii) No revisions shall be made to the Traffic Control Plan without the prior written approval of the Engineer and the Contractor shall allow fourteen (14) days for the Engineer to review any request for revision of the Traffic Control Plan.
- iv) The Traffic Control Plan shall conform in all respects with the requirements of this Specification.

#### b) Penalty to comply with the requirements of Section 9

The failure or refusal to comply on part of the Contractor and or maintain the deviation, improve and maintain the existing road ahead of the works at the proper time, or to take the necessary actions for the safety and convenience of the public traffic as required by the statutory authorities, or as instructed by the Engineer, shall be sufficient cause for the Employer to apply a deduction of Kshs. One Hundred and Fifty Thousand (150,000) per day from any monies due to the Contractor, until all provisions prescribed have been complied with to the satisfaction of the Engineer.

#### c) Contractor's inspection of the site

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 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.

**(d) Standard of Construction works**

The standard of all works carried out under this Section shall comply with the requirements of the appropriate sections of these Specifications

**903 MAINTENANCE OF EXISTING ROAD**

The Employer shall hand-over the existing road to the contractor at the commencement of the Contract. The Contractor shall be responsible for all repairs and maintenance during the duration of the Contract. Where the existing road is gravel, the Contractor shall maintain it with suitable approved gravel of properties detailed in 904 (c) below.

Where the existing road is paved, the contractor shall maintain it by repairing the potholes and edge breaks asphalt concrete. The work shall include, but not limited to, excavating and trimming around the pothole or edge break and removing deleterious material

The Contractor shall regularly inspect the road and carry out such repairs and maintenance to the satisfaction of the Engineer. If at any time, the Engineer draws the Contractor's attention to a road section which requires maintenance, the contractor shall promptly repair the section. The contractor shall be legally responsible for any accident or damage attributable to his failure to maintain the road.

**904 CONSTRUCTION OF DEVIATIONS**

**a) General**

In addition to requirement of this clause, the maximum length of deviation road shall be restricted to 2Kms 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 2Km 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 2Km till he has completed first 4Km of the road and has it opened to traffic

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

**b) Geometry**

The carriageway width of the deviations shall not be less than 6.5m wide and suitable for 2-way lorry traffic unless otherwise specified.

**c) Construction**

Unless otherwise instructed gravel wearing course for the deviation shall be 150mm compacted thickness. The materials shall have a minimum CBR of 20% at "97% MDD

(AASHTO T180"), Plasticity Index of less than 15% and grading class 1 as per 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 ~ 1.4 litres/m<sup>2</sup> in regular interval to minimize 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. The contractor shall be reimbursed in accordance with the standard specifications.

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

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

The Contractor shall provide signs, barriers and lights as shown in the 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 reflectorized 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, the 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) Maintenance of existing road**

The Contractor will be paid by the cubic metre of compacted gravel used to maintain existing road.

##### **(c) 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 installments 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 installments 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.

**(d) 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 11 – SHOUDERS**

### **1101            GENERAL**

1.0m wide shoulders whose construction approach is detailed in the drawings shall be constructed in accordance with sections 5, 12, 15 and 16 of the specifications as appropriate

## SECTION 12 ~ NATURAL MATERIAL SUBBASE AND BASE

### 1203 MATERIAL REQUIREMENTS

Natural materials for base and subbase shall conform to the specifications given in Section 12 of the Standard Specifications for cement or lime improved base and subbase.

### 1209 MEASUREMENT AND PAYMENT

Natural material for subbase and base shall be measured by the cubic metre placed and compacted upon the road calculated as the product of the compacted sectional area laid and the length.

The method of measurement shall be “method - A” as in the standard specifications.

No extra payment will be made for haulage of gravel material as the overhaul costs shall be deemed to have been factored in the rates inserted in the Bills of Quantities

## SECTION 13 ~ CEMENT TREATED GRADED CRUSHED STONE (GCS) FOR BASE~COURSE

Treatment of GCS shall be carried out in accordance with Section 14 of the specifications with the following additional guidelines

### 1303 MATERIAL REQUIREMENTS

#### a) Graded Crushed Stone

##### **Properties**

Graded Crushed Stone shall comply in all respects comply with Section 13 of the Standard Specifications and shall be stone Class B in accordance with Clause 1303(b)

##### **Grading**

The Maximum Aggregate Size of the material shall be 0/30mm in accordance with Clause 1303(c)

#### b) Cement

Cement for treatment shall be CEM II, 42.5N Portland Cement manufactured to KS EAS 18-1: 2001 ~ Part 1, KS 1725: 2001 standards. The cement content of the treated material shall be 2% by weight of the GCS

c) **Mixing**

The material to be treated and the cement shall be mixed in an approved batching plant

d) **Laying and compaction**

**Laying**

Treated GCS shall be placed by using a self-propelled spreader finisher fitted with an electronic level control device, and level control shall be from a tensioned wire supported at every 5m intervals. The graded crushed stone shall be finished to the tolerances given for base in Section 3 of these Specifications

**Compaction**

The moisture content of the treated material shall be as directed by the Engineer but nevertheless within the range of 90% to 100% of the Optimum Moisture Content (Vibrating Hammer Method). Minimum compaction shall be 97% MDD (Vibrating Hammer Method)

**1309 PROTECTION AND CURING**

Protection and curing shall be carried out in accordance with the provisions of Clause 1409 (i) of the Standard Specification. The treated GCS layer shall be kept continuously damp by spraying with water for seven days after laying to be followed by application of MC70 prime coat

**1310 MEASUREMENT AND PAYMENT**

**Stabilizer**

The provision of the stabilizer shall be measured by the tonne calculated as the specific weight of stabilizer added to the material

## **SECTION 14 - CEMENT TREATED MATERIALS**

### **1401 CEMENT TREATMENT**

#### **1401.1 Cement**

Cement for improvement shall be CEM II, 42.5N Portland Cement manufactured to KS EAS 18-1: 2001 - Part 1, KS 1725: 2001 standards. The cement content for the treated material shall be between 2-3% of the total weight of gravel to be improved. In adopting the cement content for improvement care shall be taken to ensure that base quality improved gravel for sub-base is avoided. The Engineer shall exercise his discretion to any variation in the rate of application of the cement, which he may see fit to order from time to time

#### **1401.2 Lime treatment**

Lime treatment will be as outlined in the Standard Specifications for road and bridge construction. The lime content of the stabilized material shall be as indicated by the Engineer.

#### **1401.3 Moisture content and Compaction**

The moisture content of the treated material shall be as directed by the Engineer but nevertheless within the range of 95% to 105% of the Optimum Moisture Content (AASHTO T180). Minimum compaction shall be 97% MDD (AASHTO T180")

#### **1401.4 Mixing**

The material to be treated and the cement shall be mixed in an approved batching plant

#### **1401.5 Laying and compaction**

##### **Laying**

Treated gravel shall be placed by using a self-propelled spreader finisher fitted with an electronic level control device, and level control shall be from a tensioned wire supported at every 5m intervals. The graded crushed stone shall be finished to the tolerances given for base in Section 3 of these Specifications

##### **Compaction**

The moisture content of the treated material shall be as directed by the Engineer but nevertheless within the range of 95% to 105% of the Optimum Moisture Content (AASHTO T 180). Minimum compaction shall be 95% MDD (AASHTO T 180)

### **1409 PROTECTION AND CURING**

Protection and curing shall be carried out in accordance with the provisions of Clause 1409 (i) of the Standard Specification. The treated sub-base layer shall be kept continuously damp by spraying with water for seven days after laying to be followed by laying of GCS base-Course

### **1412 MEASUREMENT AND PAYMENT**

### **Stabilizer**

The provision of the stabilizer shall be measured by the tonne calculated as the specific weight of stabilizer added to the material

### **Mix-in stabilizer**

Mixing stabilizer into the material shall be measured by the cubic metre of treated material calculated as the product of the compacted sectional area treated and the length.

## **SECTION 15 ~ BITUMINOUS SURFACE TREATMENTS**

### **PART A ~ GENERAL**

#### **1501A GENERAL**

Quality control, workmanship and equipment shall be to current international best practice. Bituminous surface treatments shall be carefully designed by the Contractor, taking into account traffic volumes, ALD of the chippings, surface conditions and requirements for specific locations. Application rates of the bitumen spray and the chippings will be approved by the Engineer prior to any trial sections of the work, but the under listed is anticipated and can be used for guidance purpose i.e;

a) Chippings

10/14mm size pre-coated chippings at a spread rate of 80-100 square meters per cubic meter as single seal.

b) Bitumen Spray Rates

0.8 - 1.2 l/m<sup>2</sup> of 80/100 penetration grade bitumen (cut back or straight run) for the single seal

### **PART B ~ PRIME COAT AND TACK COAT**

#### **1502B MATERIALS FOR PRIME COAT AND TACK COAT.**

For prime coat, the binder shall be a medium-curing cutback MC30 unless otherwise directed by the Engineer

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

The rates of spray of the prime coat shall be as instructed by the Engineer and shall generally be within the range 1.0-1.2 litres/square metre

Prime coat shall be applied to all gravel surfaces that are to receive asphalt concrete

The tack coat shall consist of bitumen emulsion K1-60 unless otherwise directed by the Engineer.



The rates of spray of the tack coat shall be as instructed by the Engineer and shall generally be within the range 0.5 - 0.8 litres/square metre

## **PART C – SURFACE DRESSING**

### **1502C MATERIALS FOR SURFACE DRESSING**

#### Binder

The bituminous binder shall be 80/100 penetration grade bitumen (cut-back with kerosene fuel in accordance with prevailing road temperatures or straight run), and conforming to Clause 211 of the Standard Specification

The Contractor jointly with the Engineer shall carry out a minimum of five (5) bitumen affinity tests on each single size aggregate stockpiles to be used into the works and if any result is less than 95% coverage, then the binder shall be blended with **ColAmin** or similar approved adhesive additive as per manufacturer's instructions at 0.2 - 0.5% by mass of binder. The Contractor shall propose optimum dosage of the adhesive additive by carrying out bitumen affinity tests on the crushed aggregates for approval by the Engineer

#### Chippings

Chippings shall be of class 2 material and shall comply in all respects with Clause 1502C of the Standard Specification. The contractor's attention is drawn to the requirements of Clause 1502C and 1504C of the Standard Specification with regard to cleanliness and dust content of chippings for surface dressing. Should it prove necessary in the Engineer's opinion to wash chippings, no extra payment will be made to the contractor for this operation

### **1503C SPRAY AND SPREAD RATES OF BITUMEN AND CHIPPINGS**

Spray and Spread Rates for bitumen and chippings cannot be calculated until samples of the chippings to be used are available for test

After submission of samples and completion of laboratory tests on chippings and binder, the Contractor shall in the presence of the Engineer and the Chief Materials Engineer or representatives, lay trial sections of seal at various rates of spray and spread as directed by the Engineer and in accordance with clause 1503C of the Standard Specification.

Should any change occur in nature of source of chippings or bitumen, the Contractor shall advise the Engineer accordingly who will then decide if any revisions are required to the spray and spread rates

If any changes are required, the Contractor shall carry out further trials as instructed by the Engineer

Payment for binder and chippings will be based on the instructed spray and spread rates used which may not necessarily be those specified. The Engineer will specify the spray rates of bitumen as residual bitumen per square meter. Actual spray rates used by the Contractor must be adjusted to compensate for any cutter added

## **1505C PRECOATED CHIPPINGS**

Chippings utilized for surface dressing works under this contract shall be pre-coated in accordance with clause 1505C of the Standard Specification. The binder used for pre-coating chippings shall be MC30 cut-back bitumen

The amount of bituminous binder used to pre-coat chippings will be as instructed by the Engineer and will normally be between 0.4% and 1.0% residual bitumen as percentage of the total dry weight.

Prior to laying any pre-coated chippings the Contractor shall prepare trial mixes of bitumen and chippings in the presence of the Engineer. After completion of trial mixes the Engineer shall issue written instructions to the Contractor indicating the amount of binder to be added in pre-coated chippings. The Contractor shall maintain this proportion unless the surface or nature of the chippings changes when the Contractor shall repeat the trials and the Engineer will issue revised instruction.

No separate payments shall be made for the pre-coating exercise. The contractor shall have included in his rates the cost of complying with this clause

## **1511C MEASUREMENT AND PAYMENT**

### **(a) Seal coat**

Seal coats shall be measured by the litre, for each type of bituminous binder for each seal coat, calculated as the product of the area in square metres sprayed and the rate of application in litres/square metres instructed, corrected to 15.6 °C

### **(b) Chippings**

Chippings shall be measured by the cubic metre of each nominal size for each class calculated as the product of the area in square metres covered and the reciprocal of the instructed rate of application in square metres/cubic metre or the actual rate of application in square metres/cubic metre whichever calculation gives the lower volume

## **SECTION 16 - BITUMINOUS MIX BASES, BINDER COURSES AND WEARING COURSES**

All Bituminous mixes works shall be done in accordance with the standard specifications.

## **PART A – GENERAL**

### **1603A CONSTRUCTION PLANT**

#### **(d) Compaction plant**

To achieve specified densities, it is expected that vibrating rollers will be required. To achieve satisfactory results it is essential that thorough preconstruction trials be carried out to ensure that the vibrating rollers are set up at the optimum amplitude

and frequency for the material being laid, that they do not break down aggregate particles and that the optimum compaction temperatures are established to allow compaction without creating ripple effects or other distortions of the surfacing.

#### **1605A DESIGN AND WORKING MIXES**

**Delete the second paragraph and insert the following:**

At least two months, prior to laying asphalt concrete, the contractor jointly with the Engineer shall carry out design mixes STRICTLY complying with SUPERPAVE requirements (clause 1602B, 1603B & 1604B) using approved constituent materials.

The design process shall be phased as follows:

Phase1: Testing of constituent materials to confirm compliance

Phase 2: Laboratory mix designs complying with all the specifications

Phase3: Plant mixing to confirm compliance with laboratory parameters

Phase 4: Site trials

Should any changes occur in the nature or source of the constituent materials, the Contractor shall advice the Engineer and a new mix design shall be established using the procedure set above

#### **1606A SITE TRIALS**

**Delete the second paragraph and insert the following:**

“ The trials shall be carried out to: -

- a) Test materials designed in the laboratory so that a workable mix, which satisfies the specification requirements, can be selected.
- b) To enable the Contractor to demonstrate the suitability of his mixing and compaction equipment to provide and compact the material to the specified density and to confirm that the other specified requirements of the completed asphalt pavement layer can be achieved.”

**Renumber paragraph 5 from “(v) –(vi)” to read “(v)-(viii)”**

#### **1607A MIXING OF AGGREGATES AND BITUMEN**

**Delete the second and third paragraphs, then add the following:**

The aggregates, minus the filler, prepared as specified above, shall be accurately weighed and conveyed into the mixer in proportionate amounts of each aggregate size required to meet the Job-Mix Formula. The required amount of bitumen for each batch shall be introduced into the mixer. In batch mixing, the bitumen shall be added after the aggregates have been introduced into the mixer and mixed for 5 to 10 seconds. The filler shall be added after the bitumen and mixing shall continue after addition of the filler for at least the time recommended by the plant manufacturer, or as much extra time as is necessary to obtain a homogeneous mixture, but for no longer.

Aggregate and bitumen shall each be heated to enter the mixing chamber at temperatures selected within the range 150 to 170°C. The temperature of the stone at entry to the mixing chamber shall not be more than 15°C higher than that of the bitumen; the temperature of the bitumen shall be such that on entry to the mixer its kinematic viscosity is in the range 150 – 300 centistokes. The temperature of the aggregate and bitumen at entry into the mixing chamber shall be chosen within the above limits and having regard to the prevailing air temperature and haulage distance to ensure that the temperature of the mix is between 135°C and 165°C when it is laid and not less than 120°C when rolling is commenced. If excessive displacement occurs under the roller the minimum rolling temperature may be reduced at the sole discretion of the Engineer.

The volume of the aggregate and bitumen shall not be so great as to extend above the tips of the mixer blades when the blades are in vertical position. All overheated and carbonised mixtures, which foam or show indication of moisture, will be rejected. When moisture is detected in the finished mixture, all aggregates in the bins shall be removed and returned to the stockpiles.

#### **1608A            TRANSPORTING THE MIXTURE**

**Delete entire clause and insert the following:**

The mix shall be transported from the mixing plant to the spreader in trucks having tight, clean, smooth beds, which have been treated to prevent adhesion of the mixture to the truck bodies. Gasoline, kerosene, diesel fuel or other solvents shall not be used for this purpose. Loads shall be covered by waterproof canvas or metal sheets during wet weather. Vehicles shall be insulated when the air temperature and/or length of haul make this necessary to maintain the temperature between the specified limits. Any loads wetted excessively by rain will be rejected. Hauling over freshly laid material will not be permitted.

#### **1609A            LAYING THE MIXTURE**

**Add the following**

Mixtures that have a temperature of less than 135°C when dumped into the spreader, will be rejected. The spreader shall be adjusted and the speed regulated so that the

surface of the course will be smooth and the course of such depth that, when compacted, it will conform to the cross-section shown on the Drawings. Lanes shall be parallel to the road centreline.

**Add the following:**

All joints shall present the same texture, density and smoothness as other areas of the surfacing. The joints between old and new lanes or sections shall be carefully formed in such manner as to ensure a continuous bond between the old and new pavement. All contact surfaces at cold joints, joints with manholes, pits, etc. shall be coated with a thin, uniform coat of MC70 or other medium curing bitumen.

## **1610A          COMPACTION**

### **Add the following:**

Tests for conformity with the smoothness and levels specified shall be made by the Contractor immediately after initial compaction and any deviations in excess of the specified tolerances shall be corrected by loosening the hot surface with rakes and removing or adding material as necessary before continuing the rolling. The speed of the rollers shall not exceed 5 km/h and shall at all times be slow enough to avoid displacement of the hot mixture. Any displacement of the mixture occurring as a result of reversing the direction of the roller, or from any other cause, shall be corrected at once by loosening the surface with rakes and re-rolling. Rolling of the surfacing shall be continued until all roller marks are eliminated and the required density is obtained.

The rollers shall not be permitted to stand on surfacing which has not been fully compacted. Precautions shall be taken to prevent the dropping of oil, grease, gasoline, or other foreign matter on any layer. The Contractor shall provide competent workmen who are capable of performing all work incidental to the correction of all surfacing irregularities.

After final rolling, no vehicular traffic of any kind shall be permitted for at least 24 hours.

## **1611A          FINISHING, JOINTS AND EDGES**

### **Add the following:**

Construction joints in the various pavement layers shall be staggered by at least the following distances:

- (a) Joints in binder course relative to joints in wearing course: 500mm
- (b) Joints in DBM base relative to joints in wearing course: 400mm

The Contractor shall produce a plan showing the position of all pavement construction joints for approval by the Engineer before pavement construction commences.

Transverse joints in DBM base, binder and wearing course shall be staggered by at least 500mm. The roller shall pass over the unprotected end of the freshly laid mixture only when laying of the surfacing is to be discontinued for such length of time as to permit the mixture to become cold. Otherwise 500mm at the end of the lane shall be left uncompacted.

Cold transverse joints shall be cut back to expose an even, vertical surface for the full compacted thickness of the course and painted with medium curing cutback bitumen

as specified above. The fresh mixture shall be raked uniformly against the joint, and carefully compacted to ensure a good bond with the cold material.

The Contractor shall adjust any kerbs, gulley pots and chambers in accordance with final finished road level before laying the final wearing course.

#### 1614A TOLERANCES

Add the following at the end of the second paragraph:

Passing sieves between 1.0 mm and 0.075 mm sieves	± 3% (by total weight of dry aggregate including mineral filler)
Passing 0.075 mm sieve	± 2% (by total weight of dry aggregate including mineral filler)

#### 1615A ROAD REINFORCEMENT GRID

Where shown on the drawings or where directed by the Engineer, asphalt reinforcement in form of geotextile shall be used to reduce reflective cracking and/or to act as water barrier.

Paving geotextile reinforcement composite shall consist of 'ARMAPAL' reinforcement geosynthetic or similar approved. It shall meet the following physical requirements.

Property	Units	Requirements	Test method
Tensile strength	KN/m	50	SABS 02210 - 88
Elongation at break	%	<7	SABS 02210 - 88
Melting point	°C	260	ASTM D276
Bitumen Retention	l/m <sup>2</sup>	1.2	

Where the use of reinforcing for asphalt has been specified, the Contractor shall, at least three months before the material is to be used, submit samples of the type he/she intends to use, together with complete specifications of the material, load-strain relationship of the material, as well as the manufacturer's instructions for use, to the Engineer for approval. Where the material does not carry the mark of an acknowledged standards authority, the Engineer may instruct the Contractor to have the material tested by an approved laboratory and to submit the results.

#### 1616A MEASUREMENT AND PAYMENT FOR ROAD REINFORCEMENT

Item: Geogrid reinforcement netting  
Unit: square metres (m<sup>2</sup>)

The rate shall include for supplying, cutting, place in accordance with the manufacturer's specification, a geotextile reinforcement on the existing surfacing or new surface before laying the dense bitumen macadam or other overlay material. The rate shall include for tacking the material, with tack coat if required and any clout nails.

## **PART B ~ ASPHALT CONCRETE FOR SURFACING**

### **1601B DEFINITION**

The Asphalt concrete shall be SUPERPAVE (SUPERior PERforming Asphalt PAVement). Modifications to the Standard Specification have been made below to correspond with SHRP SUPERPAVE system recommendations on the design of Hot Mix Asphalt (HMA). The design of hot mixes shall be in accordance with the procedure detailed in Overseas Road Note 19- "A guide to the design of hot mix asphalt in tropical and subtropical countries" and MS2 – "Asphalt Mix Design Methods, 7<sup>th</sup> Edition by Asphalt Institute". The Contractor shall provide copies of ORN 19 and MS2 to the Engineer at the start of the Project. The salient features with reference to Standard Specification are summarized below

### **1602B MATERIALS FOR ASPHALT CONCRETE**

#### **a) Penetration Grade Bitumen**

Delete Sub-Section (a) and replace with:

The bitumen shall be penetration grade, and shall meet the requirements of Table 4.3 in ORN 19 as summarized below

TEST		Test Method (ASTM)	Pen 40/50	Pen 60/70	Pen 80/100
Based on original bitumen penetration					
at 25°C		D5	40-50	60-70	80-100
Softening point (°C)		D36	49-59	46-56	42-51
Flash point (°C)	Min	D92	232	232	219
Solubility in trichloroethylene (%)	Min	D 2042	99	99	99
TFOT heating for 5 hr at 163°C		D 1754			
<b>a) Loss by mass (%)</b>	Max		0.5	0.5	0.5
<b>b) Penetration (% of original)</b>	Min	D5	58	54	50
<b>c) Ductility at 25°C</b>	Min	D 113	~	50	75

The bitumen for asphalt concrete works shall be 80/100 penetration grade. The Contractor jointly with the Engineer shall carry out a minimum of five (5) bitumen



affinity tests on each single size aggregate stockpiles to be used into the works and if any result is less than 95% coverage, then the binder shall be blended with **ColAmin** or similar approved adhesive additive as per manufacturer's instructions at 0.2 - 0.5% by mass of binder. The Contactor shall propose optimum dosage of the adhesive additive by carrying out bitumen affinity tests on the crushed aggregates for approval by the Engineer

**b) Aggregate**

The coarse aggregate shall be entirely crushed rock from a source which is known to give high values of stability (>9kN) in the Marshall test. Crushed river gravel shall not be used. Aggregates shall meet the requirements given in Table 16B-1(b) below (Extracted from ORN 19, Table 4.1)

**Table 16 B-1(b) Requirements of Aggregate**

Property	Test	Property
Cleanliness	Sand equivalent for 4.75mm fraction <sup>1</sup>	> 40
	Plasticity index for materials passing 0.425mm sieve <sup>2</sup>	<4
	Linear shrinkage for materials passing 0.425mm sieve, %	<2
Particle shape	Flakiness Index (FI) <sup>3</sup>	<25
Strength	Aggregate Crushing Value, (ACV) <sup>4</sup>	< 25
	Aggregate Impact Value, (AIV) <sup>4</sup>	<25
	10% FACT (dry) kN <sup>4</sup>	> 160
	Los Angeles Abrasion, (LAA) <sup>5</sup>	<30
Abrasion	Aggregate Abrasion Value <sup>4</sup>	< 14
Soundness <sup>7</sup>	Sodium Sulphate Soundness (SSS) Coarse aggregate	<10
	Sodium Sulphate Soundness (SSS) Fine aggregate	<16
5cycles	Magnesium Sulphate Soundness (MSS) Coarse aggregate	<15
% loss	Magnesium Sulphate Soundness (MSS) Fine aggregate	<20
Polishing	Polished Stone Value	>57
Water absorption	Water absorption , % <sup>6</sup>	<2
Bitumen affinity	Immersion Mechanical Test: Index of retained Marshall stability ,% <sup>8</sup>	>75
	Static Immersion Test, % coating retained <sup>9</sup>	>95
	Retained Indirect Tensile Strength % at 7% VIM <sup>10</sup>	>79

1. AASHTO T176
2. British Standard 1377: Part 2
3. British Standard 812: Part 105
4. British Standard 812: Part 110 to 114
5. ASTM C131 and C 535
6. British Standard 812: Part 2
7. AASHTO T104

8. D Whiteoak (1990)
9. AASHTO T 182
10. AASHTO T 283

Fine aggregate (passing a 6.3mm sieve) shall consist of entirely crushed rock produced from stone having a Los Angeles Abrasion of not more than 40%

Aggregates for bituminous mixes shall be stored in single size in separate bins or on areas covered with tightly laid wood planks, sheet metal, hard compacted gravel, concrete or other hard and clean surfaces. The surface shall be self draining, and in such a manner that will preclude the inclusion of foreign material. Aggregates of different grades and sizes and from different sources shall be stored in separate piles, and if these piles are close together they shall be separated by bulk heads

### **1603B GRADING REQUIREMENTS**

The grading of the mixture of coarse and fine aggregate shall be as per the particle size distribution for SUPERPAVE Gradation Requirements detailed under table 6.3 of MS2

For better workability of asphalt concrete designed to refusal density and for laying thickness of 50mm, the Maximum Aggregate Size (MAS) shall be limited to 19mm

The Contractor shall investigate number of grading so that a workable mix, which also retains a minimum of 3% voids at refusal density, is identified. Restricted Zone boundaries shown under table 3.3 of MS2 shall be used as guidance towards identifying a such a grading

### **1604B REQUIREMENTS FOR ASPHALT CONCRETE**

The mixture shall comply with the requirements given in table 6.5, MS2. Adopt 20-year ESAL (in millions) as 4.9

In addition, under Marshall Mix Design Criteria, the mixture shall comply with the requirements given in table 7.2, MS2

The proportion, by weight of total mixture, of bitumen shall be 4.5 - 6.0 % for 19mm MAS. This shall be termed the nominal binder content. The binder content of the working mix will be instructed by the Engineer following laboratory and site trials.

In order to determine the suitability of a coarse aggregate source, a Marshall test programme shall be carried out. It will be advantageous to use crushed rock, which is known from past experience to give good results

Having established the suitability of the aggregate source several grading shall be tested in the laboratory, including that used for the Marshall test. The blended grading shall include coarse, intermediate and fine grading that pass below the restricted zone, which shall increase the degree of interlock. For each mix, samples shall be made up to a range of bitumen contents at reducing interval of 0.25% from the nominal binder content and compacted using a gyratory compactor. Compaction to refusal shall be by vibratory hammer in accordance with the

procedure described in BS 598 (Part 104: 1989), to establish relationships between bitumen content and VIM at refusal density for all the grading

It should first be confirmed that compaction on one face of the sample gives the same refusal density as when the same compaction cycle is applied to both faces of the same sample. The procedure, which gives the highest density, must be used and shall be submitted to the Engineer for approval

From the above bitumen content - VIM @ refusal density relationship, it shall be possible to identify a bitumen content which corresponds to VIM of 3% for each grading.

To determine the workability of the mix, compaction trials should be undertaken in these gradings with designed binder content @ 3% VIM. It is advisable to establish two or more gradings for compaction trials

The compaction trials will identify a workable mix which can be made to a bitumen content which gives 3% VIM at refusal density and meeting the SUPERPAVE mixture requirements. The mixes identified in compaction trials should be manufactured to the laboratory design bitumen content and to two other bitumen contents. Cores will be cut to determine the density of the compacted material, this core will then be reheated to  $145 \pm 5^{\circ}\text{C}$  in the appropriate mould and compacted to refusal using the vibrating hammer. To be acceptable the cores cut from the compaction trial must have a density equivalent to at least 95% of refusal density

The results of all the mix design options, laboratory and site trials for the adopted mix and the Contractor's recommendations are to be submitted to the Engineer for approval

#### **1605B MIXING AND LAYING ASPHALT**

The temperature of the bitumen and aggregates when mixed shall be  $110 \pm 3^{\circ}\text{C}$  above the softening point (Ring and Ball) of the bitumen

Compaction should commence as soon as the mix can support the roller without undue displacement of material and with the temperature of the mix  $>120^{\circ}\text{C}$ , and completed before the temperature of the mix falls below  $90^{\circ}\text{C}$ .

#### **1606B COMPACTION**

Rolling shall be continued until compaction of the completed layer attains a minimum mean value of 95% of refusal density (no value less than 93%) and until the voids measured in the compacted layer are within the specified range as appropriate

#### **1608B SEALING BITUMINOUS SURFACE**

After the wearing course has been trafficked and bitumen has hardened, the wearing course shall be sealed with class 2, 10/14 mm pre-coated chippings in accordance with Clause 1505C. The period of hardening will depend on the traffic level and should be such that the chippings will not become embedded in the wearing surface. The Contractor will propose and the Engineer will approve a section to be ready for sealing

## **PART C – DENSE BITUMEN MACADAM FOR BASE**

### **1601C     DEFINITION**

Dense bitumen macadam produced from fresh materials shall comply with the “SUPERPAVE” requirements given in clauses 1602B, 1603B, 1604B, 1605B, 1606B and 1608B of these Special Specifications, except where modified below.

### **1603C     REQUIREMENTS FOR DENSE BITUMEN MACADAM**

The nominal binder content shall be 4.0 - 5.0 % for 37.5mm MAS. The binder content of the working mix will be instructed by the Engineer following laboratory and site trials

For Marshall Mix Design Criteria, Modified Marshal Method for large aggregates shall be adopted as detailed under section 7.5 of MS2

The Maximum Aggregate Size (MAS) shall be limited to 37.5mm

## **SECTION 17 - CONCRETE WORKS**

### **1703            MATERIALS FOR CONCRETE**

All materials shall comply with the requirements of Section 1703 of the standard specifications.

Cement for all concrete works shall be CEM I, 42.5N Portland Cement manufactured to KS EAS 18-1: 2001 - Part 1, KS 1725: 2001 standards

### **1703            DESIGN OF CONCRETE MIXES**

The following classes of concrete shall be designed and mix proportions approved for use as follows:

- Class 15/20 for all blinding to structures and precast pipe culvert beds and surrounds
- Class 25/20 for all culvert headwalls, wingwalls, aprons, toewalls
- Class 30/20 for bridge all bridge members: abutments, piers, beams and deck

Specifications for construction materials and quality control shall be in accordance with the standard specifications.

### **1713            FINISHES ON UNFORMED SURFACES**

All unformed finishes shall be as follows:

- (i) All unformed surfaces in contact with water or the eye shall be finished to class UF 3 Finish in accordance with the standard specifications
- (ii) All unformed surfaces in contact with soil or on which asphaltic concrete is to be laid shall be finished to class UF 2 Finish in accordance with the standard specifications

The payment for such finishes shall be paid in accordance with the standard specifications and as captured in the bills items.

## **1725 SURFACE FINISHES**

All formed finishes shall be as follows:

- (i) All formed finishes in contact with water or the eye shall be finished to class F3 finish in accordance with the standard specifications.
- (ii) All formed surfaces in contact with soil shall be finished to class F 2 Finish in accordance with the standard specifications

The payment for such finishes shall be paid in accordance with the standard specifications and as captured in the bills items.

## **1728 REINFORCEMENT FOR CONCRETE**

All reinforcement to concrete shall be hot rolled high yield deformed bars complying with BS 4449 and steel mesh fabric to BS 4483

## **1741 MEASUREMENT AND PAYMENT**

### **a) Item: Concrete**

Amend clause 1741 (a) (iv) of standard specifications to read “class UF 3 finish”

### **b) Item: formwork for formed surface finishes**

Amend the following to Clause 1741 (e) of the Standard Specification:

Unit m<sup>2</sup> of formwork shall cover inclined formwork of all slopes and angles.

## **SECTION 19 – STRUCTURAL STEEL**

### **1901. APPLICABLE STANDARDS.**

The latest applicable corresponding standards shall be applicable in lieu of those indicated in the Standard Specifications. In particular the following standards shall be applicable:

#### **a) Steel**

EN 10021, EN 10025-1, EN 10025-2  
EN 10025-3  
EN 10025-4  
EN 10029 EN 10034 EN 10051  
EN 10056-2 EN 10163-1  
EN 10163-2 EN 10163-3  
EN 10204 BS 4-1

#### **(b) Bolts, Anchor rods, Nuts and Washers**

EN ISO 898-1  
EN 20898-2  
EN 14399-1, EN 14399-2  
EN 14399-4  
EN 14399-6  
EN ISO 4017  
EN ISO 4034, EN ISO 4032  
DIN 7989-1  
EN ISO 4026 DIN 976-1 DIN 125 DIN 529

#### **(c) Galvanizing**

EN ISO 1461, EN ISO 10684

#### **(d) Elastomer**

EN 1337-3  
Structural bearings - Part 3: Elastomeric Bearings.

## **SECTION 20 ~ ROAD FURNITURE**

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

Road reserve boundary posts shall be provided as directed by the Engineer and in compliance with Standard Specification clause 2001. They shall be placed at 100m intervals along the boundary of the road reserve.

### **2003 EDGE MARKER POSTS**

Edge marker posts shall be Verge Master MK 111 plastic posts manufactured by Glasdon Ltd. of Blackpool UK or equivalent approved by the Engineer. They shall be provided as directed by the Engineer and in compliance with the requirements of Standard Specification clause 2003

### **2004 PERMANENT ROAD SIGNS**

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

The posts for the signs shall be cylindrical galvanised wrought iron tubes of minimum 75mm diameter and vandal-proofed by in-filling with concrete class 15/20.

The sign plates shall be made from approved metal or plastic sheet 3mm thick and vandal-proofed by the drilling of 3mm diameter holes at 100mm centres

The rate inserted for the signs shall include for all the costs of complying with this clause.

### **2004B EXISTING ROAD SIGNS**

Where directed by the Engineer, the Contractor shall take down road signs including all posts, nuts, bolts and fittings, and remove and dispose of the concrete foundation and backfill the post holes. The signs shall be stored as directed by the Engineer.

Measurement and payment for taking down road signs shall be made by the number of signs of any type and size taken down, cleaned and stored as directed.

### **2005 ROAD MARKING**

Paint for road marking shall be internally reflectorized hot applied thermoplastic material in accordance with Clause 219 of the Standard Specification complying to BS 3262 and BS 6088.

The rates inserted in the Bills of Quantities for road marking shall include for prior application of approved tack coat.

**2006**

**GUARDRAILS**

Guardrail posts shall be concrete 210 x 210 mm set vertically at least 1.2m into the shoulder as per the drawings and as directed by the Engineer.

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

"Swareflex" ART 3240 or similar approved guardrail reflectors two way reflective one side red and another white shall be installed on the flex beams every 4m.

The rate inserted shall include for provision of the flex beams, posts, Swareflex reflectors, flex beam end bits and installation in accordance with the standard specifications and drawings.

**2007**

**KERBS**

**(a) Vertical Joints**

Vertical joints between adjacent kerbs shall not be greater than 5 mm in width and shall mortar consisting of 1:3 cement: sand by volume.

**(b) Transition between flush and raised kerbs**

The transition between flush and raised kerbs (e.g. at bus bays) shall be termed as ramped kerbs and shall occur within a length of 2.0m

**2008**

**KILOMETRE MARKER POSTS**

Kilometre marker posts shall be provided as directed by the Engineer and in compliance with Standard Specification Clause 2008.

**2011**

**BOLLARDS**

Where directed by the Engineer, the contractor shall provide and install class 20/20 200mm diameter reinforced concrete bollards concreted 300mm into the ground.



## **SECTION 21 - MISCELLANEOUS BRIDGE WORKS**

### **2102 BRIDGE BEARINGS**

Add the following

The bridge bearings shall be laminated elastomeric bearings to BS EN 1337-3 Structural bearings - Part 3: Elastomeric Bearings.

The contractor shall have the source of the bearings approved by Engineer and shall provide the engineer with a sample as shall be instructed for destructive testing. Upon importation of the bearings the engineer shall do random sampling for another sample for destructive testing to confirm the quality of the bearings to be used on the bridge.

The contractor shall make provision for the samples and their testing in his rates for other bearings since no separate payment shall be made for the test samples and their testing.

### **2105 GUARDRAILS TO BRIDGES**

Delete and replace with the following:

The bridge crush barriers shall be of reinforced concrete as shown on drawings and shall be of the same concrete specification as for the concrete deck slab.

Their measurement and payment shall be in cubic metres under the relevant item under bill number 17.

### **2106 SURFACING TO BRIDGES**

The surfacing to bridges shall consist of 50 mm thick Asphalt Concrete laid to the tolerances given in Section 3 of the Standard Specification.

## **SECTION 22-DAYWORKS**

### **2202 MEASUREMENTS AND PAYMENT**

#### **(a) Plant**

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

reduction in power rating below that specified above.

## **SECTION 25 - HIV/AIDS, GENDER ISSUES, SOCIAL ISSUES AND LOCAL PARTICIPATION**

### **2501 SCOPE**

This specification sets out the Contractor's obligations with regard to on-site HIV/AIDS awareness campaign and preventive measures which are to be instituted.

### **2502 INTERPRETATION AND DOCUMENTATION**

The following documents shall inter-alia be read in conjunction with this specification:

- The Instructions to Bidders;
- The Conditions of Contract;
- The Drawings;

### **2503 GENERAL REQUIREMENTS**

#### **(a) HIV/AIDS Awareness Campaign**

The Contractor shall institute an HIV/AIDS awareness campaign amongst his workers for the duration of the contract. As part of the campaign the Contractor will be required to display AIDS awareness posters in all buildings frequented by workers employed on the contract, where such buildings fall under the control of the Contractor. In addition, at least ten (10) of the Contractor's vehicles, regularly used on site shall display HIV/AIDS awareness posters. The posters shall be printed on gloss paper and shall be at least A1 size on buildings and A3 size, or other approved size on vehicles. The message on the posters shall be supplied by the Employer through the Engineer before the posters are printed.

Aids awareness shall also be included in the orientation process of all workers employed on the contract.

#### **(b) AIDS Prevention Campaign**

The Contractor shall institute an HIV/AIDS prevention campaign amongst his workers for the duration of the contract. As part of the campaign the Contractor will be required to make condoms available to workers. The condoms shall be from an approved manufacturer and comply with the current ISO Standards or WHO/UNAIDS Specifications and Guidelines for Condoms, 1998, or any more recent publication. The Contractor shall make available at least 4,000 condoms every month, through dispensing machines or other approved method of distribution. The Contractor shall at all times keep the site adequately supplied with condoms.

**(c) HIV/AIDS Training**

**Introduction**

HIV/AIDS is having a significant and increasing impact in Kenya. Interventions that stimulate the movement of people increase both the exposure to the HIV virus and the spread of the virus. Road construction has been identified as one such intervention.

KeNHA policy is to integrate HIV/AIDS awareness and prevention into all road construction and rehabilitation programmes. This is in accordance with the Third National Strategic Plan (2000-5) for HIV/AIDS prevention and control as approved by the Government of Kenya, International Bank for Reconstruction and Development (IBRD) and other organisations.

The project will involve both local labour and other contractor's labour. It is a contractual requirement for the Contractor to carry out HIV/AIDS awareness and prevention activities during the construction period as stipulated in this specification.

**Objective**

The objective of the HIV/AIDS training programme is to reduce the risk of exposure to and spread of the HIV virus in the area influenced by the construction. The target group will be local labourers and their supervisors employed by the works contractors. The wider community will benefit indirectly through their normal day-to-day interaction with the target group.

**Scope of activities**

Activities for HIV/AIDS awareness and prevention will be broad-based, targeting both individuals and groups. They may consist of:

- (i) Information posters in public places, both on and offsite (eating houses, bars, guest houses, etc.) and on contractor's vehicles.
- (ii) Availability of socially marketed condoms.
- (iii) Peer educators (reference people) drawn from the local labour and educated in HIV/AIDS issues for discussions with colleagues (estimate 1 per 50 employees).
- (iv) Small focus group discussions to disseminate information covering key issues.
- (v) Theatre groups and video presentations.
- (vi) Promotional events (such as football matches) to encourage openness and discussion of HIV/AIDS issues.
- (vii) Promotional bill boards to raise awareness of the integration of construction and HIV/AIDS activities.
- (viii) Inclusion of HIV/AIDS activities at site meetings with the District Aids Committee and other approved representatives.

- (ix) Availability of promotional materials such as T-shirts, caps, bumper stickers, key rings, etc.

The scope of activities may be tailored as required to meet the perceived needs and priorities of the labourers, and should involve participatory approaches to ensure that they are appropriate and have a public health impact. The scale and frequency of activities may also be adjusted to suit requirements of the target group. Education will cover:

- (a) preventive behaviors including partner reduction, condom use, awareness and appreciation of the importance of treatment of sexually transmitted infections (STIs);
- (b) skills including negotiating safer sex, correct condom use, purchase of condoms without embarrassment; and
- (c) referral to local health centres and available services.

Tasks to be undertaken to support the above activities include:

- (a) Establishing the status and focus of all current and planned HIV/AIDS activities in the area to ensure complementarity and determining potential involvement in project activities.
- (b) Carrying out a brief review of regional activities combining road construction with HIV/AIDS campaigns to determine options, best practice key issues, constraints, etc.
- (c) Reviewing of Information, Education and Communication (IEC) materials available and their relevance to road construction, making recommendations for future development of IEC materials.
- (d) Providing education and training for site personnel, supervisors and peer educators for the scope of activities as above.
- (e) Providing supervision for peer educators to ensure sustained quality of education. Incentives for their continual work may be small promotional items such as T-shirts, caps, etc.
- (f) Providing mechanisms for the social marketing of condoms and distribution of materials.
- (g) Monitoring activities regularly to assess effectiveness and impact. This should include an initial, interim and final assessment of basic knowledge, attitude and practices (KAP) taking account of existing data sources and recognising the limitations due to the short time-frame to show behaviour change. The KAP will be supported by qualitative information from focus group discussions.

### **Collaboration**

HIV/AIDS activities are co-ordinated nationally by the National Aids Control Council (NACC). KeNHA, in consultation with NACC and the Ministry of Health (MOH), will co-ordinate with the provincial, district and local representatives. Representatives of local health

authorities will be invited to attend training and communication activities.

Activities on the construction site will be linked as far as possible with on-going HIV/AIDS awareness and prevention in the area. This will ensure complementarity of approaches, reinforcing education and minimising duplication. In addition, these links will ensure that the target group will have access to continued information after the end of the construction period.

### **Contractor Responsibilities**

The Contractor will employ and designate a qualified HIV/AIDS expert fulltime, to be approved by the Engineer, who will work closely with the Client, MOH and other implementing agencies to support the HIV/AIDS awareness and prevention activities. This will ensure maximum effectiveness and integration with construction activities. Specific, but not exclusive, issues to be addressed by the Contractor are:

- (i) Scheduling appropriate timing and durations of the implementation of HIV/AIDS activities as part of work plan for labourers and supervisors. Designated rest times such as lunch breaks and pay days should be excluded.
- (ii) Identification of suitable individuals from recruitment records for education with the implementing organization.
- (iii) Provision of suitable sites for communication activities and for condom distribution.
- (iv) Monitoring of the implementation of peer educator activities.
- (v) Provision of support as necessary to the implementing organization.

### **Inputs**

An organization experienced in the provision of HIV/AIDS awareness and prevention activities will be selected as a subcontractor to provide the above scope of activities on behalf of the main Contractor.

### **Reporting**

The implementing organization will produce the following reports to be submitted to the Contractor, The Engineer, KeNHA and NACC:

- monthly progress briefs for inclusion in site meetings.
- quarterly reports detailing activities carried out, issues, follow up, etc.
- a review report of activities in the road construction sector,
- a review report of existing IEC materials with recommendations for development of materials specifically for the road sector.
- a final report detailing the methodology and activities carried out under this project including lessons learnt, impact, liaison with the Contractor and other parties, etc.

In addition, a report with the recommended approach for integration of HIV/AIDS awareness and prevention activities in the road construction sector will be produced. This will be a synthesis of project activities including contractual approaches, communication activities, availability of materials, liaison with existing organisations, etc. It will be developed with all parties involved in the construction activities to ensure the wide range of views and experiences is gained.

The final report and recommended approach will be presented to KURA, NACC and other interested organisations including private sector, funding agencies and NGO's.

**Timing**

Activities shall commence at the start of the construction period and continue through-out the 24 months to ensure a sustained impact. Reporting and dissemination activities shall continue for three months after the project is completed to ensure integration into current practice.

**2504 MEASUREMENT AND PAYMENT**

The payment items in this clause shall include full compensation for all work associated with the provision of HIV/AIDS related services as specified.

**Item: Instituting an HIV/AIDS awareness and prevention campaign**

**Unit: months**

The unit of measurement shall be the calendar month or part thereof, measured over the duration of the campaign. The tendered rate shall include full compensation for equipment, labour, materials including the procurement and distribution of condoms and full compensation for transport, meals, accommodation and any other reasonable allowances for the Participation of local health authorities, provincial director of health and NACC and other resources required for the provision of the service in compliance with clause 2503 (a) & (b) above.

**Item: Instituting an HIV/AIDS Training – Engagement of specialist HIV/AIDS sub-contractor**

**Unit: Provisional Sum**

Compensation for HIV/AIDS Specialists and resources for the implementation of Clause 2503(c). Any amount required under this item will be paid as per the programme approved by the Engineer and the Client (KeNHA) prior to expenditure.

## **SECTION VIII: DRAWINGS**

1. Set of design drawings is annexed separately (Book of Drawings)
2. Standard drawings will be used where applicable
3. Materials Factual Report
4. Engineering Report

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### **PART 3 ~ CONDITIONS OF CONTRACT**

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## SECTION IX: GENERAL CONDITIONS

## SECTION IX CONDITIONS OF CONTRACT PART I: GENERAL CONDITIONS OF CONTRACT

### Red Book:

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The Conditions of Contract are the “General Conditions” which form part of the “Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer (“Red book”) First Edition 1999” published by the Federation Internationale Des Ingenieurs – Conseils (FIDIC) and the following “Particular Conditions” which comprise of the amendments and additions to such General Conditions.

An original copy of the above FIDIC publication i.e. “*Conditions of Contract for Building and Engineering Works Designed by the Employer*” must be obtained from FIDIC.

### International Federation of Consulting Engineers (FIDIC)

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## **SECTION X: PARTICULAR CONDITIONS OF CONTRACT**

### **SECTION IX: CONDITIONS OF CONTRACT PART II: (CONDITIONS OF PARTICULAR APPLICATION)**

#### **PART A – CONTRACT DATA**

Refer to appendix to form Tender

#### **PART B – SPECIAL PROVISIONS**

The following Special Provisions 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 Condition of Contract to which it relates.

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## CONDITIONS OF CONTRACT PART II (CONDITIONS OF PARTICULAR APPLICATION)

### SUB-CLAUSE 1.1: DEFINITIONS

*Amend these sub-clause as follows:*

1.1.1.3 Amend the paragraph by adding the following: Letter of Acceptance is synonymous with Notification of Award.

1.1.1.4: Amend the paragraph by adding the following words at the end: The words Letter of Tender is synonymous with Form of Tender.

1.1.1.7: Insert in line 4 after the prices”, the following, “entered by the Contractor (whether or not such rate be employed in computation of the Accepted Contract Amount),”

1.1.1.8: Amend the paragraph by adding the following words at the end:  
The word “Tender” is synonymous with “bid”

1.1.1.9 Amend the paragraph by adding the following words at the end: The words Appendix to Tender or Appendix to Form of Tender is synonymous with Contract Data.

1.1.2.5 Amend the paragraph by adding the following words at the end: The words Contractor’s representative is synonymous with Site Agent or Road Manager.

### SUB-CLAUSE 1.4: LANGUAGE AND LAW

*Insert:*

The Contract shall be drawn up in the ENGLISH LANGUAGE. Communication between both Parties shall be in this given language.

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

### SUB-CLAUSE 1.5: PRIORITY OF DOCUMENTS

*Delete the documents listed (a) – (h) and substitute with the following:*

- a) The Contract Agreement (if completed)
- b) The Letter of Acceptance
- c) The Form of Tender
- d) Appendix to Form of Tender
- e) The Particular Conditions
- f) These General Conditions
- g) The Special Specifications
- h) The Standard Specification for Road and Bridge Construction, 1986
- i) The PBC Guidelines Edition 1.1 of February 2016
- j) Road Maintenance Manual, May 2010 Edition and Performance Based Contract Manuals.
- k) The Drawings;
- l) The priced Bills of Quantities
- m) Other documents forming part of the Contract

### SUB-CLAUSE 1.6: CONTRACT AGREEMENT

*Replace the first sentence of the first paragraph with:*

The parties shall sign a Contract Agreement within the period stipulated in the Appendix to Tender.

### SUB-CLAUSE 3.1: ENGINEER’S DUTIES AND AUTHORITY

*With reference to Sub-Clause 3.1, the following shall also apply:*

The Engineer shall obtain the specific approval of the Employer before taking any of the following actions:

- d) Consenting to the subcontracting of any part of the works under Clause 4.4
- e) Determining an extension of time under Sub-clause 8.4
- f) Certifying additional cost determined under Clause 12
- g) Issuing a Variation under Clause 13

### SUB-CLAUSE 4.2: PERFORMANCE SECURITY

*Replace the text of the first and second Paragraph under Sub-clause 4.2 with the following:*

“The Contractor shall provide the Performance Security to the Employer within 28 days after receipt of the Letter of Acceptance. The Performance Security shall be in the form of a bank guarantee as stipulated by the Employer in the Appendix to Tender. 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.

*Replace the text of the first sentence under the third paragraph under Sub-clause 4.2 with the following:*

The Contractor shall ensure that the Performance Security is valid and enforceable until a date 28 days after the date of issue of the Performance Certificate.

***Add the following after the fifth paragraph:***

The Employer shall be at liberty to claim part or the entire performance Security without informing or notifying the Contractor provided that the conditions necessitating the claim are contractual.

#### **SUB-CLAUSE 4.3: CONTRACTOR’S REPRESENTATIVE**

*Add the following at the end of the second paragraph:*

The Contractor’s Agent or Representative on the site shall have a minimum qualification of a Registered Professional Engineer (Highways), BSc in Civil Engineering, have a Current / Valid Registration by EBK and shall be able to read and write English fluently.

The Contractor shall also submit a specimen signature of his proposed Site Agent / Road Manager who **SHALL** be the only signatory to payment of certificates/Monthly statements from the Contractor.

#### **SUB-CLAUSE 4.4: SUBCONTRACTORS**

*Add after paragraph one the following:*

The maximum allowable accumulated value of work subcontracted shall be as stated in the appendix to form of tender.

#### **SUB-CLAUSE 4.8: SAFETY PROCEDURES**

*Add:*

Notwithstanding the Contractor’s obligation under Sub-Clause-paragraph (a) – (g) of Sub-Clause 4.8 of the Conditions of Contract, the Contractor shall observe the following measures with a view to enhance Road Safety to the Road Users and Site Workers:

1. Prepare and submit a comprehensive Road Safety Implementation Plan within 28 days after receipt of Order to Commence for the Engineer’s Approval. The plan shall include but not limited to the following:
  - Night driving
  - Safety of workers
  - Diversions
  - Traffic management Plan
  - Towing of stalled vehicle
2. The Contractor should identify, evaluate and monitor potential traffic and road safety risks to workers and road users throughout the Contract life cycle and develop measures and plans to address them.
3. The Contractor shall install and maintain standard approved traffic warning signs, directional signs, secure the working areas and deploy flagmen at active construction sites.
4. The Contractor shall assess each phase of the works, monitor incidents and accidents indicating the mitigation measures undertaken and prepare monthly reports to be submitted to the Resident Engineer.
5. The Contractor shall factor the cost of implementation of the Road Safety Plan in the rates for the Works.

Failure by the Contractor to observe the above safety features shall be deemed to be a violation of the Contractor’s Obligations and shall be grounds for Suspension and/or Termination.

#### **SUB-CLAUSE 4.18: PROTECTION OF THE ENVIRONMENT**

*Add:*

Notwithstanding the Contractor’s obligation under Sub-Clause-paragraph (a), (b) and (c) of Sub-Clause 1 of 4.18 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:

1. All quarries and borrow pits shall be filled and landscaped to their original state after extraction of construction material
2. 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
3. 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
4. Spillage of oils, fuels and lubricants shall be avoided and if spilt, shall be collected and disposed of in such a way as not to adversely affect the environment
5. 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 6.1: ENGAGEMENT OF STAFF AND LABOUR**

*Add the following at the end of clause 6.1:*

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

Any additional unskilled labour which is required by the Contractor for the works, and which is not in his employment schedule at the time of the acceptance of the Tender shall be recruited by the Contractor from the Labour Exchange or Exchange or Exchanges nearest to the site or sites of the work.

#### **SUB-CLAUSE 6.5: WORKING HOURS**

*Add at the end of Sub-Clause 6.5 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 6.7: HEALTH AND SAFETY**

*Add under the first paragraph:*

The Contractor shall compensate for loss of 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 is in accordance with the Workmen’s Compensation Act of the Laws of Kenya

The Contractor shall ensure adequate safety program with respect to all work under the contract is complied with, whether performed by the Contractor or subcontractor is formulated and enforced. additionally, all records of health, safety and welfare shall be maintained as the Engineer may from time to time prescribe. Reports of accidents shall be submitted to the Engineer.

*Add after the last paragraph:*

In addition, the Contractor shall notify the Engineer and any relevant Authority the occurrence of these accidents

#### **SUB-CLAUSE 7.4 TESTING**

*Add at the end of Sub-Clause 7.4 the following:*

The Contractor shall submit to the Engineer, Project Specific Quality Management Plan for approval 28 days after issuance of order to commence. The Plan shall include but not limited to:

1. Key staff that will be involved in the project and their role in quality management
2. Resources (Human and machinery) and Resource allocation in quality management
3. Processes and procedures to be followed in quality management

4. Controls to be put in place to ensure that the quality management plan is adhered to.
5. Reporting methodology on quality Management
6. Methodology on inspection, testing, monitoring and measuring to ensure conformity to quality requirement in accordance with the contract.
7. Description on correction action to be undertaken on non-conforming outputs and corrective action to avoid recurrence.

#### **SUBCLAUSE 8.3: PROGRAMME**

Replace the text of Sub-clause 8.3 with the following:

Within the date mentioned in the Appendix to the Form of Bid of the date of the Letter of Acceptance, the Contractor shall submit to the Engineer for consent a detailed Programme showing the order, procedure, and method for carrying out the Works. The Programme shall include:

The Contractor's methodology and arrangements for executing the Works, including plant, manpower, resources, and temporary works.

- A detailed Construction Schedule (Level 4 Programme) developed using Primavera Project Planner.
- A Progress Curve/Project Cash Flow.
- A Critical Resources Usage Chart.
- A Detailed Method Statement.
- A Schedule of Submittals and Shop Drawings.
- Any other details as specified by the Engineer.

The submission and consent of the Programme shall not relieve the Contractor of any duties or responsibilities under the Contract.

If the Contractor fails to submit the Programme or a revised Programme within **28 days**, the Employer may deduct **Kshs. 50,000 per day** as liquidated damages until the Programme is submitted.

The Contractor shall programme, coordinate, and phase all Works, including those of other contractors if any, to ensure compliance with the Contract completion dates.

The Engineer may instruct the Contractor to amend the Programme to reflect site conditions. The Contractor shall comply with such instructions within **14 days**.

The Programme shall be in Critical Path Method (CPM) format, identifying critical activities and showing the relationship between early and late start/finish dates. The Programme shall align with the specified Project end date.

The Contractor shall bear all expenses and responsibility for delays resulting from its failure to prepare, provide, or approve the Programme.

The Contractor shall provide monthly progress reports, including:

- An annotated copy of the current Programme, indicating progress achieved.
- A description of actions taken to address delays and maintain the construction schedule.

The Project float, defined as the time between early and late start/finish dates of any activity in the approved Programme, is jointly owned by the Employer and the Contractor.



If the actual progress of the Works does not conform to the approved Programme, the Contractor shall, within 14 days of the Engineer's request, submit a revised Programme showing modifications necessary to ensure completion within the Time for Completion.

If the Contractor falls behind schedule, it shall take steps to improve progress and submit revised Programmes demonstrating compliance with Milestone dates, without additional cost to the Employer.

Failure to comply with this Sub-clause, following written notice from the Engineer, shall entitle the Employer to enforce this requirement.

The Contractor shall submit a detailed Cash Flow Estimate together with the PoW of receiving the Letter of Acceptance. Any resubmission required shall be made within **28 days** of the Engineer's written notice.

The Cash Flow Estimate shall include:

- A Progress Curve/Projected Cash Flow developed using Primavera Project Planner.
- An S-Curve showing cumulative progress of work done (in % of work) against time (in weeks).

Failure to comply with this Sub-clause, following written notice from the Engineer, shall entitle the Employer to enforce this requirement through the “**Penalty for Delay**” provision.

The Contractor shall submit the following reports during the execution of the Works:

- The number of personnel by craft and major equipment utilized.
- Weather conditions (maximum/minimum temperatures, humidity, rainfall).
- Weekly report before the weekly site meeting, including: Project status, safety, and environmental control.
- Monthly report, including: Executive summary, detailed progress, budget, and cash flow & photographs of the Works.

For unjustifiable delay in submission, the Employer may deduct **Kshs. 50,000** per day as liquidated damages.

The Contractor shall allow in his programme all published Kenya public holidays including but not limited to the following per calendar year during which the Contractor shall not be permitted to work.

- New Year's Day (1<sup>st</sup> January)
- Good Friday
- Easter Monday
- Idd ul fitr
- Labour Day (1<sup>st</sup> May)
- Madaraka Day (1<sup>st</sup> June)
- Mazingira Day (10<sup>th</sup> October )
- Mashujaa Day (20<sup>th</sup> October)
- Jamhuri day (12<sup>th</sup> December)
- Christmas Day (25<sup>th</sup> December)
- Boxing Day (26<sup>th</sup> December)

The Contractor shall also allow per calendar year for a further 3 unspecified public holidays which may be announced by the Government of Kenya with no prior notification upon which he shall not be permitted to work.

#### **SUBCLAUSE 8.7: DELAY 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 **NOT** pay any bonus for early completion of the Works to the Contractor.

**SUBCLAUSE 11.1: COMPLETION OF OUTSTANDING WORK AND REMEDYING DEFECTS**

*Add:*

At the expiry of the Defects Notification Period, no defect arising from the permanent works existing shall be acceptable for taking over. The Employer shall verify and satisfy themselves that all the outstanding works and defects arising out of the works have been attended to sufficiently. Works shall also be inspected at the End of Defects Notification Period.

**SUBCLAUSE 13.1: RIGHT TO VARY**

*Add the following paragraph at the end of subclause 13.1:*

No such variations in any way shall contravene the requirements of Public Procurement and Disposal Act of 2015 and the amendments thereof.

**SUB-CLAUSE 14.8: DELAYED PAYMENT**

*Replace the second paragraph with:*

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 mean Base Lending Rate obtained from the Central Bank of Kenya. The provisions of this subclause are without prejudice to the Contractor's entitlements under subclause 16.2 or otherwise.

**SUB-CLAUSE 14.15: CURRENCIES OF PAYMENT**

*The paragraphs are substituted with;*

The Contract Price shall be designated in the Kenyan Shillings.

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 including variation of price payments in accordance with Clause 13.

**SUB-CLAUSE 18.1 GENERAL REQUIREMENTS FOR INSURANCES**

*Add the following at the end of the second paragraph:*

Insurances shall not contain exclusion clauses which limit cover for activities necessary for the execution of the Contract.

All insurances shall cover the entire contract period and an additional three (3) months.

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 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.

## **SECTION XI - CONTRACT FORMS**

### **TABLE OF FORMS**

FORM No. 1 - NOTIFICATION OF INTENTION TO AWARD

FORM No. 2 - NOTIFICATION OF AWARD - LETTER OF ACCEPTANCE

FORM No. 3 - CONTRACT AGREEMENT

FORM No. 4 - PERFORMANCE SECURITY [Option 1 - Unconditional Demand Bank Guarantee]

FORM No. 5 - ADVANCE PAYMENT SECURITY

FORM No. 6 - RETENTION MONEY SECURITY

## FORM NO. I - NOTIFICATION OF INTENTION TO AWARD

***[This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender.] [Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form]***

### **FORMAT**

For the attention of Tenderer's Authorized Representative

Name: ..... *[insert Authorized Representative's name]* Address: *[insert Authorized Representative's Address]* Telephones: *[insert Authorized Representative's telephone/fax numbers]* Email Address: *[insert Authorized Representative's email address]*

***[IMPORTANT: insert the date that this Notification is transmitted to Tenderers. The Notification must be sent to all Tenderers simultaneously. This means on the same date and as close to the same time as possible.]***

### **Date of Transmission:**

This Notification is sent by: *[email]* on *[date]* (local time)

Procuring Entity: *[insert the name of the Procuring entity]*

Contract title: *[insert the name of the contract]*

Country: Kenya, County \_\_\_\_\_ *(if the Procuring Entity is from a County)*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period, you may:

- a) Request a debriefing in relation the evaluation of your Tender, and/or
- b) Submit a Procurement-related Complaint in relation to the decision to award the contract.

### **1. The successful Tenderer**

Name: *[insert name of successful Tenderer]* Address: *[insert address of the successful Tenderer]*

Contract price: *[insert contract price of the successful Tender]*

- 2 Other Tenderers:** *insert names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out.]*

	Name of Tenderer	Tender price	Evaluated Tender price	Comments (if any)
1				
2				
3				
4				
5				
6				
7				
Etc.				

## 1. How to request a debriefing

**DEADLINE:** The deadline to request a debriefing expires at midnight on *[insert date]* (local time).

You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award. Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:

**Attention:** *[insert full name of person, if applicable]* **Title/position:** *[insert title/position]*

**Procuring Entity:** *[insert name of Procuring Entity]* **Email address:** *[insert email address]*

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end. The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

## 2. How to make a complaint

**Period:** Procurement-related Complaint challenging the decision to award shall be submitted by midnight, *[insert date]* (local time).

Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement- related Complaint as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]*

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

Email address: *[insert email address]*

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

In summary, there are four essential requirements:

- a) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process, and is the recipient of a Notification of Intention to Award.
- b) The complaint can only challenge the decision to award the contract.
- c) You must submit the complaint within the period stated above.
- d) You must include, in your complaint, all of the information necessary to support your case.
- e) The application must be accompanied by the fees set out in the Procurement Regulations,

which shall not be refundable (information available from the Public Procurement Authority at [www.ppoa.go.ke](http://www.ppoa.go.ke)).

**3. Standstill Period**

- a) **DEADLINE:** The Standstill Period is due to end at midnight on [*insert date*] (local time).
  - i) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.
  - ii) The Standstill Period may be extended as stated in Section 4 above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity: \_\_\_\_\_

Name \_\_\_\_\_

Title and Position \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

## **FORM NO. 2 - NOTIFICATION OF AWARD**

### **Letter of Acceptance**

*[letter head paper of the Procuring*

*Entity] [date]*

### **FORMAT**

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

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the SCC]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 30 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section X, Contract Forms, of the tender document.

We attach a copy of the Contract for your

Authorized

Signature: Name

and Title of

Signatory: Name of

Agency:

**Attachment: Contract Agreement**

### FORM NO. 3 – CONTRACT AGREEMENT

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, between

\_\_\_\_\_ of \_\_\_\_\_ (hereinafter “the Procuring Entity”), of the one part, and \_\_\_\_\_ of \_\_\_\_\_ (herein after “the Contractor”), of the other part:

WHEREAS the Procuring Entity desires that the Works known as \_\_\_\_\_ should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of these Works and the remedying of any defects therein, The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
  - a) The Letter of Acceptance
  - b) The Letter of Tender
  - c) The addenda Nos \_\_\_\_\_ (if any)
  - d) The Particular Conditions
  - e) The General Conditions;
  - f) The Specification
  - g) The Drawings; and
  - h) The completed Schedules and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Kenya on the day, month and year specified above.

Signed by \_\_\_\_\_

\_\_\_\_\_(for the Procuring Entity)

Signed by \_\_\_\_\_

\_\_\_\_\_(for the Contractor)



**FORM NO. 4 - PERFORMANCE SECURITY**  
**– (Unconditional Demand Bank Guarantee)**

*[Guarantor letterhead or SWIFT identifier code]*

**Beneficiary:** \_\_\_\_\_ *[insert name and Address of Procuring*

*Entity]* **Date:** \_\_\_\_\_ *[Insert date of issue]*

**PERFORMANCE GUARANTEE No.:** \_\_\_\_\_

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that \_\_\_\_\_ (herein after called "the Applicant") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with the Beneficiary, for the execution of \_\_\_\_\_ (herein after called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Applicant, we as Guarantor, here by irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_ ( ),<sup>1</sup> such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.
4. This guarantee shall expire, no later than the ..... Day of ..... 2...<sup>2</sup>, and any demand for payment under it must be received by us at this office indicated above on or before that date.
5. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

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*[Name of Authorized Official, signature(s) and seals/stamps]*

***Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.***

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<sup>1</sup>*The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

<sup>2</sup>*Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the pen ultimate paragraph: "The Guarantor agrees to a one-*

*time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

## FORM NO. 6 - ADVANCE PAYMENT SECURITY

**[Demand Bank Guarantee]** *[Guarantor letterhead or SWIFT*

*identifier code]* *[Guarantor letterhead or SWIFT identifier*

*code]*

**Beneficiary:** \_\_\_\_\_ *[Insert name and Address of Procuring Entity]* **Date:** \_\_\_\_\_ *[Insert date of issue]*

**ADVANCE PAYMENT GUARANTEE No.:** \_\_\_\_\_ *[Insert guarantee reference number]*

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that \_\_\_\_\_ (herein after called "the Applicant") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with the Beneficiary, for the execution of \_\_\_\_\_ (herein after called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum \_\_\_\_\_ ( ) is to be made against an advance payment guarantee.
3. At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ ( )<sup>1</sup> upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
  - a) Has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
  - b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number \_\_\_\_\_ at \_\_\_\_\_
5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, <sup>2</sup> \_\_\_\_\_, <sup>2</sup> \_\_\_\_\_ whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.
6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

*[Name of Authorized Official, signature(s) and seals/stamps]*

**Note:** *All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.*

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<sup>1</sup> *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a*

*freely convertible currency acceptable to the Procuring Entity.*

*<sup>2</sup>Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Entity might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

**FORM NO. 7 - RETENTION MONEY SECURITY**  
**[Demand Bank Guarantee]**

*[Guarantor letterhead]*

**Beneficiary:** \_\_\_\_\_ *[Insert name and Address of*  
*Procuring Entity]* **Date:** \_\_\_\_\_ *[Insert date of issue]*

**ADVANCE PAYMENT GUARANTEE No.:** \_\_\_\_\_  
*[Insert guarantee reference number]*

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that \_\_\_\_\_ *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (herein after called" the Contractor") has entered into Contract No. \_\_\_\_\_ *[insert reference number of the contract]* dated with the Beneficiary, for the execution of \_\_\_\_\_ *[insert name of contract and brief description of Works]* (herein after called" the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, and payment of *[insert the second half of the Retention Money]* is to be made against a Retention Money guarantee.
3. At the request of the Contractor, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words* \_\_\_\_\_ *])*<sup>1</sup> upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.
4. A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Contractor on its account number\_at \_\_\_\_\_ *[insert name and address of Applicant's bank]*.
5. This guarantee shall expire no later than the..... Day of....., 2...<sup>2</sup>, and any demand for payment under it must be received by us at the office indicated above on or before that date.
6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

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*[Name of Authorized Official, signature(s) and seals/stamps]*

***Note: All italicized text (including foot notes) is for use in preparing this form and shall be deleted from the final product.***

## FORM NO. 8 BENEFICIAL OWNERSHIP DISCLOSURE FORM

**INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM**

*This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful tenderer. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.*

*For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the Tenderer by meeting one or more of the following conditions:*

- *Directly or indirectly holding 25% or more of the shares.*
- *Directly or indirectly holding 25% or more of the voting rights.*
- *Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.*

Tender Reference No.: \_\_\_\_\_ [insert

identification no] Name of the Assignment: \_\_\_\_\_ [insert name

of the assignment] to: \_\_\_\_\_ [insert complete name of Procuring Entity]

In response to your notification of award dated \_\_\_\_\_ [insert date of notification of award]  
to furnish additional information on beneficial ownership: \_\_\_\_ [select one option as applicable and  
delete the options that are not applicable]

I) We here by provide the following beneficial ownership information.

### Details of beneficial ownership

<b>Identity of Beneficial Owner</b>	<b>Directly or indirectly holding 25% or more of the shares (Yes / No)</b>	<b>Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)</b>	<b>Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer (Yes / No)</b>
<i>[include full name (last, middle, first), nationality, country of residence]</i>			

OR

ii) We declare that there is no Beneficial Owner meeting one or more of the following

*conditions: directly or indirectly holding 25% or more of the shares. Directly or indirectly holding 25% or more of the voting rights. Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer.*

OR

*We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Tenderer shall provide explanation on why it is unable to identify any Beneficial Owner]*

*Directly or indirectly holding 25% or more of the shares. Directly or indirectly holding 25% or more of the voting rights.*

*Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer]”*

*Name of the Tenderer: .....\*[insert complete name of the Tenderer]\_\_\_\_\_*

*Name of the person duly authorized to sign the Tender on behalf of the Tenderer: \*\* [insert complete name of person duly authorized to sign the Tender]*

*Title of the person signing the Tender: ..... [insert complete title of the person signing the Tender]*

*Signature of the person named above: ..... [insert signature of person whose name and capacity are shown above]*

*Date signed ..... [insert date of signing] day of..... [Insert month], [insert year]*

## SUPERVISION CHECKLIST

**Supervision Check List**

Project Name:		<b>TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD</b>		Date	Signatures
1. This check list is for Resident Engineer to check Contractor's work execution process.  2. Fill in date of checking as (day/month), mark as indicated in Filling Example, and state remarks.  3. Put this k list in the Monthly Progress Report.				The Engineer's Representative (Project Engineer)	
				resident Engineer	

Item	Check Point		before	During execution								after	Remarks
			Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Reason for unsatisfactory performance (Site diary No.) Corrective order by authority (Date) Excellent point to be specified
			/	/	/	/	/	/	/	/	/	/	
1	Execution system in general	1-1	Works Execution Programme (including its revised version if any) is	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



**Supervision Check List**

Project Name:

**TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD**

Date	Signatures
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			submitted before the date specified in contract document										
		1-2	Works Execution Programme properly reflects the given specifications and site conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		1-3	Execution procedures are in accordance with Works Execution Programme		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2		2-1											

**Supervision Check List**

Project Name: **TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD**

Date	Signatures
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	Equipment holding		All equipment used are properly mobilized in accordance with Works Execution Programme		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		2-2	All equipment used is well maintained during the execution of works		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3	Contractor's in-house staff	3-1	Qualified technical staff of Contractor are properly assigned as specified in Works		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**Supervision Check List**

Project Name:

**TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD**

Date	Signatures
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			Execution Programme										
		3-2	Contractor's in-house key staff understand work process and schedule properly		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		3-3	Contractor's in-house staff give technical guidance and direction to workers and operators properly and timely		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		3-4	Communications with authority in writing is		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Supervision Check List**

Project Name: **TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD**

Date	Signatures
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			properly and timely										
4	Personnel employment	4-1	Workers and operators are deployed in accordance with Works Execution Programme		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		4-2	Wage payment is properly made on time		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Site base facilities	5-1	Office and stockyard are prepared in accordance with Works Execution Programme		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Supervision Check List**

TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD													Date	Signatures
		5-2	Site is well maintained during the work execution and cleared on completion		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		5-3	Material stored on site is properly managed during the work execution		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6	Quality and quantity management	6-1	Material testing, structural examination, and measurements are properly and PERIODIC		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**Supervision Check List**

Project Name: **TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD**

Date	Signatures
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			y conducted based on specifications and Works Execution Programme										
		6-2	Results of material testing, structural examination and measurements are within the specifications.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		6-3	Results of material testing, structural examination, and measurements		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Supervision Check List**

Project Name: **TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD**

Date	Signatures
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			ts are properly compiled as reports for confirmation										
7	Work scheduling	7-1	Understanding of critical path and its reflection on scheduling is proper		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		7-2	Actual proceedings are periodically compared to the planned schedule described in Works Execution Programme		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		7-3											

**Supervision Check List**

Project Name:

**TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD**

Date	Signatures
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			Changes caused by site conditions are properly handled to keep things on schedule		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		7-4	All works are completed within the contract term or within the extended term as allowed										<input type="checkbox"/>	
8	Work safety management	8-1	No accident occurs to workers, operators, or third-parties.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		8-2												



**Supervision Check List**

Project Name: **TENDER DOCUMENT FOR UPGRADING TO BITUMEN STANDARDS OF KAKAMEGA AIRSTRIP – SHINYALU – CHEPSONOI (B12) ROAD**

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			Safety of workers and operators is considered		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		8-3	Accident prevention efforts for third-parties are proper		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		8-4	Traffic and site safety devices are properly installed and managed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		8-5	Temporary facilities (e.g. scaffolding) are constantly checked		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**Supervision Check List**

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9	Environmental and social management	9-1	Environmental and social mitigation efforts (e.g. against noise, vibration, emission, and dust ) are conducted		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		9-2	Waste material from site is properly disposed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		9-3	Damage to existing roads, works and services is avoided or are repaired when it occurs		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**Supervision Check List**

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		9-4	No overloading for work-related vehicles is reported		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Filling Example: ✓ Check point is satisfactory    ■ Check point is unsatisfactory    N/A Not applicable

