



KENYA RURAL ROADS AUTHORITY

TENDER DOCUMENT

FOR

**SPOT IMPROVEMENT OF GACHARU-KIANGWACI(E612)
ROAD LOT 1**

TENDER NO. KeRRA/08/39/94/2023-24

OPEN TO CITIZEN CONTRACTORS

JULY, 2024

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

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

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INVITATION TO TENDER

**Kenya Rural Roads Authority,
P.O. Box 48151–00100,
NAIROBI.
Email : dg@kerra.go.ke**

TENDER NAME: SPOT IMPROVEMENT OF GACHARU - KIANGWACI(E612) ROAD LOT 1.

TENDER No: KeRRA/08/39/94/2023-24

1. The (*Kenya Rural Roads Authority*) invites sealed tenders from eligible candidates for (*Spot Improvement of GACHARU - KIANGWACI (E612) ROAD LOT 1.*)
2. Tendering will be conducted under open competitive method using a standardized tender document. Tendering is open to all qualified and interested Tenderers (Citizen Contractors).
3. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours [0900 to 1600 hours] at the address given below.

**The Director General,
Kenya Rural Roads Authority,
Block 'B', Barabara Plaza, off Mombasa Road,
Opposite KCAA along Airport South Road, JKIA, Nairobi.
P.O Box 48151-00100, Nairobi, Kenya.**

4. A complete set of tender documents may be purchased or obtained by interested tenders (who would want a hard copy of the tender document) upon payment of a non-refundable fees of (Kenya shillings 1,000) in Banker's Cheque and payable to the address given below.
5. Tender documents may be obtained electronically from the Authority's Website (www.kerra.go.ke) and PPIP Portal (www.tenders.go.ke). Tender documents obtained electronically will be free of charge.
6. Tender documents may be viewed and downloaded for free from the website (www.kerra.go.ke) and PPIP Portal (www.tenders.go.ke). Tenderers who download the tender document must forward their particulars immediately to (procurement@kerra.go.ke) to facilitate any further clarification or addendum.
7. All Tenders must be accompanied by a *Kenya Shillings Eight Hundred Thousand Shillings Only [Kshs. 800,000.00]* Tender Security.
8. The Tenderer shall chronologically serialize all pages of the tender documents submitted.
9. Completed tenders must be delivered to the address below on or before *20th August, 2024 at 11.00am*. Electronic Tenders [*will not*] be permitted.
10. Bulky tenders which do not fit in the Tender Box shall be delivered to the Regional Supply Chain Management Office.
11. Tenders will be opened immediately after the deadline date and time specified above or any deadline date and time specified later. Tenders will be publicly opened in the presence of the Tenderers'

designated representatives who choose to attend at the address below.

12. Late tenders will be rejected.
13. The estimated cost for the proposed spot improvement is **Kshs. 42,000,000**
14. The addresses referred to above are:

A. **Address for obtaining further information and for purchasing tender documents**

Physical address for hand Courier Delivery to an office or Tender Box

Kenya Rural Roads Authority,
Block 'B', Ground Floor, South Wing,
Barabara Plaza, Off Mombasa Road,
Opposite KCAA along Airport South Road, JKIA, Nairobi.
P.O Box 48151-00100, Nairobi, Kenya.

The officer to be contacted:
Deputy Director Supply Chain Management,
Email : procurementhq@kerra.go.ke
Tel : 020-7807600 (01-05) ; Mobile : +254 711 851103

B. **Address for Submission of Tenders. (Office or Tender Box)**

Physical address for hand Courier Delivery to office or Tender Box

The Regional Director,
Kenya Rural Roads Authority
Kirinyaga Regional Office
P.O. Box 390-10300
KERUGOYA

C. **Address for Opening of Tenders.**

The Regional Director,
Kenya Rural Roads Authority
Kirinyaga Regional Office
P.O. Box 390-10300
KERUGOYA

Deputy Director – Supply Chain Management
FOR. DIRECTOR GENERAL

PART 1 - TENDERING PROCEDURES

SECTION I: INSTRUCTIONS TO TENDERERS

A General Provisions

1. Scope of Tender

- 1.1 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 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.
- 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 being tendered for. The Procuring Entity shall indicate in the **TDS** firms (if any) that provided consulting services for the contract being tendered for. The Procuring Entity shall check whether the owners or controllers of the Tenderer are same as those that provided consulting services. The Procuring Entity shall, upon request, make available to any tenderer information that would give such firm 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 3.7 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. Public employees and their close relatives (*spouses, children, brothers, sisters and uncles and aunts*) are not eligible to participate in the tender. 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. 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 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 Engineer for the 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 family relationship with a professional staff of the Procuring Entity who:
 - 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) would 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, collusive or fraudulent practice. A tenderer that is proven to have been involved 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. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender. 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.

3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.8.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 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.

3.8 Tenderers that are state-owned enterprises or institutions may be eligible to compete and be awarded a Contract(s) only if they are accredited by PPRA to be (i) a legal public entity of the state 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 A Firms and individuals may be ineligible if their countries of origin (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, subcontracts and labor) from national 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 in for this purpose is be provided in “*SECTION III - EVALUATION AND QUALIFICATION CRITERIA, Item 9*”.
- 3.11 Pursuant to the eligibility requirements of ITT 4.10, 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.
- 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
- 3.14 A Kenyan tenderer shall provide evidence of having fulfilled his/her tax obligations by producing a valid tax clearance certificate or tax exemption 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 eligible under ITT 3.9. 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.
- 5.2 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine 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.
- 5.3 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter upon 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 inspection.

5.4 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 ITT 8.

PART 1 Tendering Procedures

- i) Section I - Instructions to Tenderers (ITT)
- ii) Section II - Tender Data Sheet (TDS)
- iii) Section III - Evaluation and Qualification Criteria
- iv) Section IV - Tendering Forms

PART 2 Works Requirements

- i) Section V - Drawings
- ii) Section VI - Specifications
- iii) Section VII - Bills of Quantities

PART 3 Conditions of Contract and Contract Forms

- i) Section VIII - General Conditions of Contract (GCC)
- ii) Section IX - Special Conditions of Contract (SC)
- iii) Section X - Contract Forms

6.2 The Invitation to Tender Document (ITT) issued by the Procuring Entity is not part of the Contract documents.

6.3 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 the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 8. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

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. Site Visit

7.1 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the Site of the Required Services and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for the Services. The costs of visiting the Site shall be at the Tenderer's own expense.

8. Pre-Tender Meeting

8.1 The Procuring Entity shall specify in the **TDS** if a pre-tender meeting will be held, when and where. The Procuring Entity shall also specify in the **TDS** if a pre-arranged pretender site visit will be held and when. The Tenderer's designated representative is invited to attend a pre-arranged pretender visit of the site of the works. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

8.2 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.

- 8.3 Minutes of the pre-Tender meeting and the pre-arranged pretender site visit of the site of the works, 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 in accordance with ITT 6.3. Minutes shall not identify the source of the questions asked.
- 8.4 The Procuring Entity shall also promptly publish anonym zed (*no names*) Minutes of the pre-Tender meeting and the pre-arranged pretender visit of the site of the works at the web page identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-tender meeting and the pre-arranged pretender site visit, 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. Nonattendance at the pre-Tender meeting will not be a cause for disqualification of a Tenderer.

9. Clarification and amendments of Tender Documents

- 9.1 A 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 and the pre-arranged pretender visit of the site of the works if provided for in accordance with ITT 8.4. 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 Documents in accordance with ITT 6.3, including a description of the inquiry but without identifying its source. If 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 appropriately following the procedure under ITT 8.4.

10. Amendment of Tendering Document

- 10.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tendering document by issuing addenda.
- 10.2 Any addendum issued shall be part of the tendering document and shall be communicated in writing to all who have obtained the tendering document from the Procuring Entity in accordance with ITT 6.3. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's web page in accordance with ITT 8.4.
- 10.3 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity shall extend, as necessary, the deadline for submission of Tenders, in accordance with ITT 25.2 below.

C. Preparation of Tenders

11. Cost of Tendering

- 11.1 The Tenderer shall bear 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.

12. Language of Tender

- 12.1 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.

13. Documents Comprising the Tender

13.1 The Tender shall comprise the following:

- a) Form of Tender prepared in accordance with ITT 14;
- b) Schedules including priced Bill of Quantities, completed in accordance with ITT 14 and ITT 16;
- c) Tender Security or Tender-Securing Declaration, in accordance with ITT 21.1;
- d) Alternative Tender, if permissible, in accordance with ITT 15;
- e) Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 22.3;
- f) Qualifications: documentary evidence in accordance with ITT 19 establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
- g) Conformity: a technical proposal in accordance with ITT 18;
- h) Any other document required in the **TDS**.

13.2 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 Agreement. The Tenderer shall chronologically serialize pages of all tender documents submitted.

13.3 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.

14. Form of Tender and Schedules

14.1 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.

15. Alternative Tenders

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

15.2 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.

15.3 Except as provided under ITT 13.4 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. 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.

16. Tender Prices and Discounts

16.1 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.

- 16.2 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.
- 16.3 The price to be quoted in the Form of Tender, in accordance with ITT 14.1, shall be the total price of the Tender, including any discounts offered.
- 16.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 14.1.
- 16.5 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, except in 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.
- 16.6 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 16.4, provided the Tenders for all lots (contracts) are opened at the same time.
- 16.7 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.

17. Currencies of Tender and Payment

- 17.1 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 Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya shall devise own ways of getting foreign currency to meet those expenditures.

18. Documents Comprising the Technical Proposal

- 18.1 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, in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

19. Documents Establishing the Eligibility and Qualifications of the Tenderer

- 19.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT 4.
- 19.2 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.
- 19.3 A margin of preference will not be allowed. Preference and reservations will be allowed, individually or in joint ventures. Applying for eligibility for Preference and reservations shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.

- 19.4 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 contractor 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 a possibility of collusion between tenderers, and thereby help to prevent any corrupt influence in relation to the procurement process or contract management.
- 19.5 The purpose of the information described in ITT 19.4 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.
- 19.6 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 6.3. 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.
- 19.7 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.
- 19.8 If a tenderer fails to submit the information required by these requirements, its tender 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.
- 19.9 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 ongoing, 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.
- 19.10 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 6.7 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 tenderer.

20. Period of Validity of Tenders

- 20.1 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 24). A Tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

20.2 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 21.1, 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 the request shall not be required or permitted to modify its Tender, except as provided in ITT 20.3.

20.3 If the award is delayed by a period exceeding the number of days to be specified in the **TDS** days beyond the expiry of the initial tender validity period, the Contract price shall be determined as follows:

- a) in the case of **fixed price** contracts, the Contract price shall be the tender price adjusted by the factor specified in the **TDS**;
- b) in the case of **adjustable price** contracts, no adjustment shall be made; or in any case, tender evaluation shall be based on the tender price without taking into consideration the applicable correction from those indicated above.

21. Tender Security

21.1 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.

21.2 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:

- a) an unconditional Bank Guarantee issued by reputable commercial bank); or
- b) an irrevocable letter of credit;
- c) a Banker's cheque issued by a reputable commercial bank; or
- d) another security specified **in the TDS**,

21.3 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 20.2.

21.4 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.

21.5 If a Tender Security is specified pursuant to ITT 21.1, 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 nonresponsive or a bidder declines to extend tender validity period.

21.6 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**.

21.7 The Tender Security may be forfeited or the Tender-Securing Declaration executed:

- e) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension thereto provided by the Tenderer; or
- f) if the successful Tenderer fails to:
 - i) sign the Contract in accordance with ITT 50; or
 - ii) furnish a Performance Security and if required in the **TDS**, and any other documents

required in the **TDS**.

21.8 Where tender securing declaration is executed, the Procuring Entity shall recommend to the PPRA that PPRA debar the Tenderer from participating in public procurement as provided in the law.

21.9 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.

21.10 A tenderer shall not issue a tender security to guarantee itself.

22. Format and Signing of Tender

22.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 13 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 15, 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.

22.2 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.

22.3 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.

22.4 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 to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

22.5 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

23. Sealing and Marking of Tenders

23.1 Depending on the sizes or quantities or weight of the tender documents, a tenderer may use an envelope, package or container. 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 15, 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.

23.2 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 are misplaced or opened prematurely will not be accepted.

24. Deadline for Submission of Tenders

24.1 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**.

24.2 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.

25. Late Tenders

25.1 The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 24. 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.

26. Withdrawal, Substitution, and Modification of Tenders

26.1 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 22.3, (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 22 and ITT 23 (except that withdrawal 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 24.

26.2 Tenders requested to be withdrawn in accordance with ITT 26.1 shall be returned unopened to the Tenderers.

26.3 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.

27. Tender Opening

27.1 Except in the cases specified in ITT 23 and ITT 26.2, 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 who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 24.1, shall be as specified in the **TDS**.

27.2 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.

27.3 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.

27.4 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.

27.5 Next, all remaining envelopes shall be opened one at a 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.

27.6 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 Bills of Quantities are to be initialed by the members of the tender opening committee attending the opening. The number of representatives of the Procuring Entity to sign shall be specified in the **TDS**.

27.7 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 25.1).

27.8 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.

27.9 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 the tender opening register shall be distributed to all Tenderers upon request.

E. Evaluation and Comparison of Tenders

28. Confidentiality

28.1 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 46.

28.2 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.

28.3 Notwithstanding ITT 28.2, 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.**

29. Clarification of Tenders

29.1 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 33.

29.2 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.

30. Deviations, Reservations, and Omissions

30.1 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.

31. Determination of Responsiveness

31.1 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 13.

31.2 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.

31.3 The Procuring Entity shall examine the technical aspects of the tender submitted in accordance with ITT 18, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.

31.4 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.

32. Non-material Non-conformities

32.1 Provided that a tender is substantially responsive, the Procuring Entity may waive any non-conformities in the tender.

32.2 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, 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.

32.3 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**.

33. Arithmetical Errors

33.1 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 any way by any person or entity.

33.2 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, and subtotal 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

33.3 Tenderers shall be notified of any error detected in their bid during the notification of a ward.

34. Currency provisions

34.1 Tenders will be priced in Kenya Shillings only. Tenderers quoting in currencies other than in Kenya shillings will be determined non-responsive and rejected.

35. Margin of Preference and Reservations

35.1 No margin of preference shall be allowed on contracts for small works.

35.2 Where it is intended to reserve the contract to specific groups under Small and Medium Enterprises, or enterprise of women, WOMEN and/or persons living with disability, 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/firms belonging to those specified groups are the only ones eligible to tender. Otherwise if no so stated, the invitation will be open to all tenderers.

36. Nominated Subcontractors

36.1 Unless otherwise stated in the **TDS**, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Procuring Entity.

36.2 Tenderers may propose subcontracting up to 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.

36.3 The 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 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.

37. Evaluation of Tenders

37.1 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 Best Evaluated Tender in accordance with ITT 40.

37.2 To evaluate a Tender, the Procuring Entity shall consider the following:

- a) price adjustment due to discounts offered in accordance with ITT 16;

- b) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT39;
- c) price adjustment due to quantifiable nonmaterial non-conformities in accordance with ITT 30.3; and
- d) any additional evaluation factors specified **in the TDS** and Section III, Evaluation and Qualification Criteria.

37.3 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 in Tender evaluation.

37.4 In the case of multiple contracts or lots, Tenderers shall be allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the **Form of Tender, is specified in Section III, Evaluation and Qualification Criteria.**

38. Comparison of Tenders

38.1 The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders established in accordance with ITT 38.2 to determine the Tender that has the lowest evaluated cost.

39. Abnormally Low Tenders

39.1 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.

39.2 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.

39.3 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.

40. Abnormally High Tenders

40.1 An abnormally high 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.

40.2 In case of an abnormally high tender 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.

40.3 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.

41. Unbalanced and/or Front-Loaded Tenders

41.1 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.

41.2 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 30% 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,

42. Qualifications of the Tenderer

42.1 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.

42.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 19. 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.

42.3 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.

42.4 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.

42.5 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.

42.6 After evaluation of the price analyses, if 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.

43. Best Evaluated Tender

43.1 Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Best Evaluated Tender. The Best 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.

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

44.1 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 thereby incurring any liability to Tenderers. In case of annulment, all Tenderers shall be notified with reasons and all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

F. Award of Contract

45. Award Criteria

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

46. Notice of Intention to enter into a Contract

46.1 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 standstill period;

47. Standstill Period

47.1 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.

47.2 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.**

48. Debriefing by the Procuring Entity

48.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 46, an unsuccessful tenderer may make a written request to the Procuring Entity for a debriefing on specific issues or concerns regarding their tender. The Procuring Entity shall provide the debriefing within five days of receipt of the request.

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

49. Letter of Award

49.1 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.

50. Signing of Contract

- 50.1 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.
- 50.2 Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.
- 50.3 The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period

51. Appointment of Adjudicator

- 51.1 The Procuring Entity proposes the person named in the **TDS** to be appointed as Adjudicator under the Contract, at the hourly fee specified in the **TDS**, plus reimbursable expenses. If the Tenderer disagrees with this proposal, the Tenderer should so state in his Tender. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the Special Conditions of Contract (SCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.

52. Performance Security

- 52.1 Within twenty-one (21) days of the receipt of the Letter of Acceptance 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 40.2 (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.
- 52.2 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.
- 52.3 Performance security shall not be required for contracts estimated to cost less than Kenya shillings five million shillings.

53. Publication of Procurement Contract

- 53.1 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.

54. Procurement Related Complaints and Administrative Review

- 54.1 The procedures for making Procurement-related Complaints are as specified in the **TDS**.
- 54.2 A request for administrative review shall be made in the form provided under contract forms.

Section II - Tender Data Sheet (TDS)

The following specific data 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.

| ITT Reference | PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS |
|---------------|--|
| | A. General |
| ITT 1.1 | The name of the contract is Spot Improvement of GACHARU - KIANGWACI (E612) ROAD LOT 1. The reference number of the Contract is KeRRA/08/39/94/2023-24 |
| ITT 2.3 | The Information made available on competing firms is as follows: as indicated in ITT and qualification criteria |
| ITT 2.4 | The firms that provided consulting services for the contract being tendered for are: _____ NA _____ _____ |
| ITT 3.1 | Maximum number of members in the Joint Venture (JV) shall be: Two [2]. |
| | B. Contents of Tender Document |
| 8.1 | There shall be no Pre-Tender site meeting. However, Pre-Tender site visit is Open but MANDATORY and Bidders are required to visit site and thereafter collect a duly signed Pre-Tender Site Visit Certificate from Authorized Regional Officer per indicated in the Instruction to Bidders. |
| ITT 8.2 | The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than 7 days before the date of tender opening. |
| ITT 8.4 | The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender site visit will be published is https://www.kerra.go.ke |
| ITT 9.1 | For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is: (1) Name of Procuring Entity Kenya Rural Roads Authority, Block 'B', Ground Floor, South Wing, Barabara Plaza, off Mombasa Road, Opposite KCAA along Airport South Road, JKIA, Nairobi. P.O Box 48151-00100, Nairobi, Kenya Email: procurement@kerra.go.ke (2) Physical address for hand Courier Delivery to an office or Tender Box The Regional Director, Kenya Rural Roads Authority Kiranyaga Regional Office P.O. Box 390-10300 KERUGOYA Email: procurement@kerra.go.ke |
| | C. Preparation of Tenders |
| ITP 13.1 (h) | The Tenderer shall submit the following additional documents in its Tender: <i>N/A</i> |
| ITT 15.1 | Alternative Tenders <i>shall not be</i> considered. |
| ITT 15.2 | Alternative times for completion <i>shall not be</i> permitted. |
| ITT 15.4 | Alternative technical solutions shall be permitted for the following parts of the Works: <i>N/A</i> |
| ITT 16.5 | The prices quoted by the Tenderer shall be <i>fixed</i> |

| ITT Reference | PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS |
|---|--|
| ITT 20.1 | The Tender validity period shall be 210 days. |
| ITT 20.3 (a) | <p>(a) The delayed to exceeding _____N/A___ number of days.</p> <p>(b) The Tender price shall be adjusted by the following percentages of the tender price:</p> <p>(i) By _____N/A___% of the local currency portion of the Contract price adjusted to reflect local inflation during the period of extension, and</p> <p>(ii) By_____ N/A _____% the foreign currency portion of the Contract price adjusted to reflect the international inflation during the period of extension.</p> |
| ITT 21.1 | <p>A Tender Security __ shall be _____ required.</p> <p>A Tender-Securing Declaration _____Shall not be_____ required.</p> <p>If a Tender Security shall be required, the amount and currency of the Tender Security shall be Kshs. 800,000.00</p> |
| ITT 21.2 (d) | The other Tender Security shall be in form of a Demand Bank Guarantee or Insurance Guarantee |
| ITT 21.5 | On the Performance Security, other documents required shall be Unconditional Demand Bank Guarantee as Performance Security and a filled and signed Beneficial Ownership Disclosure Form. |
| ITT 22.1 | In addition to the original of the Tender, the number of copies is: 1_____ |
| ITT 22.3 | The written confirmation of authorization to sign on behalf of the Tenderer shall consist of: Written Power of Attorney drawn by Commissioner of Oaths and signed by all the Directors providing the Power of Attorney. |
| D. Submission and Opening of Tenders | |
| ITT 24.1 | <p>(A) For <u>Tender submission purposes</u> only, the Procuring Entity’s address is:</p> <p style="text-align: center;">The Regional Director, Kenya Rural Roads Authority Kirinyaga Regional Office P.O. Box 390-10300 <u>KERUGOYA</u></p> <p>Email: <u>procurement@kerra.go.ke</u></p> <p>(4) Date and time for submission of Tenders shall be 20th August, 2024. (5) Tenders shall not submit tenders electronically.</p> |
| ITT 27.1 | <p>The Tender opening shall take place at the time and the address for Opening of Tenders provided below:</p> <p>(1) Name of Procuring Entity Kenya Rural Roads Authority, Kenya Rural Roads Authority</p> <p>(2) Physical address for the location (City, Street, Building, Floor Number and Room) The Regional Director, Kenya Rural Roads Authority Kirinyaga Regional Office P.O. Box 390-10300 <u>KERUGOYA</u></p> <p>(3) State date and time of tender opening. 20th August, 2024 at 11am</p> |

| ITT Reference | PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS |
|---|--|
| ITT 27.1 | If Tenderers are allowed to submit Tenders electronically, they shall follow the electronic tender submission procedures <i>N/A</i> _____ |
| ITT 27.6 | The number of representatives of the Procuring Entity to sign is All members of the opening committee. |
| E. Evaluation, and Comparison of Tenders | |
| ITT 32.3 | The adjustment shall be based on the _____ <i>Average</i> _____ [<i>insert “average” or “highest”</i>] 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 best estimate. |
| ITT 35.2 | The invitation to tender is extended to the following groups that qualify for Reservations <i>_N/A_</i> <i>(These groups are Small and Medium Enterprises, Women Enterprises, WOMEN Enterprises and Enterprises of persons living with disability, as the case may be; describe precisely which groups qualify).N/A</i> |
| ITT 36.1 | At this time, the Procuring Entity <i>does not intend</i> to execute certain specific parts of the Works by subcontractors selected in advance. |
| ITT 36.2 | Contractor’s may propose subcontracting: Maximum percentage of subcontracting permitted is: <i>_40%_ of the total contract amount</i> . 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. |
| ITT 36.3 | <i>[Indicate N/A if not applicable]</i> The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows: _____ <i>N/A</i> _____ 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. |
| ITT 37.2 (d) | Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria. |
| ITT 51.1 | The person named to be appointed as Adjudicator is as nominated by the Employer who is registered by the CIARB at an hourly fee of Shs.as provided by CIARB per day. |
| ITT 52.2 | Other documents required are Form No. 9 Beneficial Ownership Disclosure Form. |
| ITT 54.1 | The procedures for making a Procurement-related Complaints are detailed in the “Regulations” available from the PPRa Website www.ppra.go.ke or email complaints@ppra.go.ke . 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: For the attention: <i>[Director General]</i> Title/position: <i>[Director General]</i> Procuring Entity: <i>[KeRRA]</i> Email address: <i>[procurement@kerra.go.ke]</i> In summary, a Procurement-related Complaint may challenge any of the following: (i) the terms of the Tender Documents; and (ii) the Procuring Entity’s decision to award the contract. |

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1. 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 be 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. Tenders that do not pass the Preliminary Examination will be considered irresponsive and will not be considered further.

A. PRELIMINARY EXAMINATION

Tenderers shall provide evidence satisfactory to the Employer of their eligibility and of their capability and adequacy of resources to effectively carry out the subject Contract. To this end, the tenderer shall be required to provide latest information set out below:

Table 1:

| Item No. | Evaluation Criteria / Condition / Requirement Description | Clause Ref. | Requirement Priority |
|--|--|--|-----------------------------|
| (A) PRELIMINARY EVALUATION CRITERIA | | | |
| 1) | Provide a Tender Security of Kshs. 800,000.00 in the required format. The tender guarantee (security) will remain in force up to and including two hundred and Ten (210) days after the date of bid submission and including Thirty (30) days beyond the tender validity period of the Tender Sub-Clause 20.1 of Instructions to Bidder. <i>a) A bank guarantee;</i> <i>b) A guarantee by an insurance company registered and licensed by the insurance regulatory authority listed by the authority; or</i> <i>c) A guarantee issued by a financial institution approved and licensed by the central bank of Kenya, from a reputable source, and an eligible country.</i> | ITT 21.0 ITT 13.1(c) TDS ITT 13.1 (h) SECTION III A - (1) | Must be submitted |
| 2) | <i>A) Properly and dully filled, signed and stamped form of bid and appendix to form of bid by the authorized person through the power of attorney. with a bid validity of two hundred and Ten (210) days, from the specified date of bid opening.</i> <i>In addition:</i> <i>B) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.</i> <i>C) The Form of Tender shall include the following Forms duly completed and signed by the Tenderer.</i> <i>a) Properly and dully filled, signed and stamped Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.</i> <i>b) Properly and dully filled, signed and stamped Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.</i> <i>c) Properly and dully filled, signed and stamped Self-Declaration of the Tenderer– to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.</i> | ITT 14.1 ITT 19.1 ITT 13.1(a) TDS ITT 13.1 (h) SECTION III EQC A-(2) | Must be submitted |

| Item No. | Evaluation Criteria / Condition / Requirement Description | Clause Ref. | Requirement Priority |
|----------|--|---|----------------------|
| | d) Properly and dully filled, signed and stamped Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal 2015. D) Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender | | |
| 3) | Certified Certificate of Incorporation issued by Registrar of Companies. | ITT 3 ITT 13.1(a) TDS ITP 13.1 (h) SECTION III EQC A-(3) | Must be submitted |
| 4) | Current Certified CR12 Certificate (dated within 6 Months before date of opening) from the Registrar of Companies. This should be provided with Identification Documents of Directors and all individuals listed on the CR12. (ID or Passport). For Corporate Directors, CR12 or its equivalent for the corporate directors, Identification Documents for the corporate Director and its directors MUST be provided. | TDS ITT 13.1 (h) SECTION III EQC A-(4) | Must be submitted |
| 5) | Valid certified Current Single Business permit | TDS ITT 13.1 (h) SECTION III EQC A-(5) | Must be submitted |
| 6) | Valid Tax Compliance Certificate. | ITT 3.14 TDS ITT 13.1 (h) SECTION III EQC A-(6) | Must be submitted |
| 7) | Current Certificate of Registration with National Construction Authority in the Category “NCA 5 or 6 or 7” together with a valid NCA practicing license | ITT 3.12 TDS ITT 13.1 (h) SECTION III EQC A-(7) | Must be submitted |
| 8) | Pre-Tender Site Visit Certificate duly endorsed by the Authorized KeRRA Staff. | ITT 7 SECTION III EQC A-(8) | Must be submitted |
| 9) | Submit a written power of attorney authorizing the signatory of the bid to commit the Bidder Witnessed by a Commissioner of Oaths and signed by all the Firms Directors. | ITT 22.3 TDS ITT 13.1 (h) SECTION III EQC A-(9) | Must be submitted |
| 10) | Chronological Serialization of all the pages of the tender document (this should be sequential in the format of 1,2,3,4,5.....) from the first page to the last page. | ITT 12.1 TDS ITT 13.1 (h) SECTION III EQC A-(10) | Must be Serialized |
| 11) | The Tender submission SHALL be as follows: a) One Original clearly marked “ ORIGINAL ”, b) One hard copy CLEARLY marked “ COPY ” | ITT 22.1 SECTION III EQC A-(11) | Must be submitted |
| 12) | Provide Properly and dully filled, signed and stamped proof of Eligible Goods, Equipment, and Services (<i>Bidders to demonstrate that 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</i>). | ITT 4.1 SECTION III EQC A-(12) | Must be submitted |
| 13) | Provide a Properly and dully filled, signed and stamped proof of having not been declared ineligible by the PPRA as described in ITT 3.7 | ITT 2.1; ITT 3.7; ITT 18.0; ITT 19.0 SECTION III EQC A-(13); SECTION III A EQC – (16)(15) | Must be Filled |
| 14) | Submission of Audited Accounts or equivalent acceptable to the Employer, for the last three [3] years (2021, 2022 & 2023) to demonstrate: the current soundness of the applicant’s financial position and its prospective long-term profitability, and capacity to have a cash flow amount, turnover and working capital (attach valid license of the auditor from ICPAK), | TDS ITT 13.1 (h) SECTION III EQC A-(14) | Must be submitted |
| 15) | Provide a Properly and dully filled, signed and stamped Bill of Quantities (any alterations should be countersigned by the authorized person) | ITT 14.1 ITT 16 ITT 13.1 (b) TDS ITT 13.1 (h) SECTION III EQC A-(9) | Must be Filled |
| 16) | Provide a Properly and dully filled, signed and stamped, the following schedules of supplementary information. NOTE: That bidders should not alter the format of any of the forms under this section. Any alteration shall lead to disqualification of the bid | ITT 14.1 ITT 18; ITT 19 SECTION III EQC - (16) SECTION IV | |
| 1) | FORM 1 FT: Properly and dully filled, signed and stamped form of foreign tenderers 40% rule (<i>for foreign tenderers</i>) | ITT 3.10; ITT 18 SECTION IV; ITT 19 SECTION III A EQC – (16)(1) | N/A |
| 2) | FORM EQU: Properly and dully filled, signed and stamped form of | ITT 16; ITT 18; ITT 19 | Must be |

| Item No. | Evaluation Criteria / Condition / Requirement Description | Clause Ref. | Requirement Priority |
|----------|---|---|-------------------------------|
| | Equipment (<i>A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Tenderer</i>) | SECTION IV EQU - (1) SECTION IIIA EQC – (16)(2) | Filled |
| 3) | FORM PER 1 & 2: Properly and dully filled, signed and stamped Contractor's Representative and Key Personnel Schedule (<i>Tenderers should provide the names and details of the suitably qualified Contractor's Representative and Key Personnel to perform the Contract separately for each personnel/candidate; with declaration for both parties; data on their experience should be provided</i>). | ITT 6.9; ITT 18 ITT 19 SECTION IV PER SECTION III A EQC – (16)(3) | Must be Filled |
| 4) | FORM 4: Properly and dully filled, signed and stamped form of tenderers qualification without pre-qualification. FORM ELI-1.1 (Properly and dully filled, signed and stamped form of Tenderer Information) Attach copies of original documents of [check the box(es) of the attached original documents] 1) Articles of incorporation (or equivalent documents of constitution or association), and /or documents of registration of the legal entity named above, in accordance with ITT 4.4. 2) A current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority, if tender s a Kenyan tenderer, in accordance with ITT 4.15. 3) In case of state-owned enterprise or institution, in accordance with ITT 4.6 documents establishing: Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. | ITT 18 ITT 19 SECTION III A EQC – (16)(4) SECTION IV ELI | Must be Filled |
| 5) | FORM ELI-1.1 Properly and dully filled, signed and stamped form of Tenderer Information | ITT 18.0; ITT 19.0 SECTION IV ELI SECTION III A EQC – (16)(5) | Must be Filled |
| 6) | FORM ELI-1.2 Properly and dully filled, signed and stamped of Tenderer's JV Information Form (<i>to be completed for each member of Tenderer's JV</i>) | ITT 18.0; ITT 3.1; ITT 19 SECTION IV ELI – 1.2 SECTION IIIA EQC – (16)(6) | Must be Filled/ if Applicable |
| 7) | FORM CON- 2 Properly and dully filled, signed and stamped form of Historical Contract Non-Performance, Pending Litigation and Litigation History | ITT 18.0; ITT 19.0 SECTION IV CON - 2 SECTION IIIA EQC – (16)(7) | Must be Filled |
| 8) | FORM FIN – 3.1 Properly and dully filled, signed and stamped of Financial Situation and Performance Properly and dully filled, signed and stamped form of Sources of Finance Properly and dully filled, signed and stamped form of financial documents | ITT 18.0; ITT 19.0 SECTION IV FIN – 3.1 SECTION IIIA EQC – (16)(8) | Must be Filled |
| 9) | FORM FIN – 3.2 Properly and dully filled, signed and stamped form of Average Annual Construction Turnover | ITT 18.0; ITT 19.0 SECTION IV FIN – 3.2 SECTION IIIA EQC – (16)(9) | Must be Filled |
| 10) | FORM FIN – 3.3 Properly and dully filled, signed and stamped form of Financial Resources | ITT 18.0; ITT 19.0 SECTION IV FIN – 3.3 SECTION IIIA EQC – (16)(10) | Must be Filled |
| 11) | FORM FIN-3.4 Properly and dully filled, signed and stamped form of Current Contract Commitments / Works in Progress | ITT 18.0; ITT 19.0 SECTION IV FIN – 3.4 SECTION IIIA EQC – (16)(11) | Must be Filled |
| 12) | FORM EXP-4.1 Properly and dully filled, signed and stamped form of General Construction Experience | ITT 18.0; ITT 19.0 SECTION IV EXP – 4.1 SECTION III A EQC – (16)(12) | Must be Filled |
| 13) | FORM EXP - Properly and dully filled, signed and stamped of | ITT 19.0; ITT 18.0 | Must be |

| Item No. | Evaluation Criteria / Condition / Requirement Description | | Clause Ref. | Requirement Priority |
|---|---|--|---|------------------------------------|
| | 4.2(a) | Specific Construction and Contract Management Experience. | SECTION IV EXP-4.2(a) SECTION IIIA EQC – (16)(13) | Filled |
| 14) | FORM EXP - 4.2(b) | Properly and dully filled, signed and stamped form of Construction Experience in Key Activities (<i>All Sub-contractors for key activities must complete the information in this form as per ITT 36 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.</i>) | ITT 18.0; ITT 19.0 ITT 36 SECTION IV EXP-4.2b SECTION III A EQC – (16)(14) | Must be Filled |
| 15) | FORM SD1: | Properly and dully filled, signed and stamped form of Self-declaration that the person/tenderer is not debarred in the matter of the public procurement and asset disposal act 2015. | ITT 18.0; ITT 19.0 ITT 2.1; ITT 3.7; SECTION III A EQC – (16)(15) | Must be Filled |
| 16) | | Must submit APPENDIX 1 form of -fraud and corruption must be attached (<i>Appendix 1 shall not be modified.</i>) | ITT 18.0; ITT 19.0 ITT 2.1; SECTION III A EQC – (16)(16) | Must be Submitted |
| B) DETAILED EVALUATION CRITERIA | | | | |
| (i) TECHNICAL & FINANCIAL CAPACITY EVALUATION CRITERIA | | | | |
| Technical Evaluation Criteria will be as per Table 3 & 4 given below. Tenders that do not pass the Technical & Financial Capacity Examination will be considered non-responsive and will not be considered further. | | | | |
| C) MARGIN OF PREFERENCE AND RESERVATIONS | | | | |
| 17 | Procuring Entity will grant a margin of preference in accordance to Clause 147 and 148 respectively of the PPADR 2020 citizen contractor registered outside Kenya shall only be eligible to benefit from the preferences and reservations scheme when bidding in international tendering and competition. For international/Open Tenders, a margin of preference shall be applied as follows: - | | ITT 35 | Not Applicable |
| | Group A: | Ten percent (10%) margin of preference of the evaluated price of the tender, where the percentage of shareholding of Kenyan citizens is more than fifty percent (50%); | | |
| | Group B: | Eight percent (8%) margin of preference of the evaluated price of the tender, where the percentage of shareholding of Kenyan citizens is less than fifty percent (50%) but above twenty percent (20%); and | | |
| | Group C: | Six percent (6%) margin of preference of the evaluated price of the tender, where percentage of shareholding of Kenyan citizens is above five percent (5%) and less than twenty percent (20%). | | |
| D) ERROR CHECK | | | | |
| 17) | <ul style="list-style-type: none"> ✓ 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. ✓ Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis: | | ITT 30; ITT 31; ITT 32; ITT 33; ITT 38; ITT 39; ITT 40; ITT 41 | Must be Met |
| | 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, subtotal 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 | | | |
| D. Abnormally low tenders, abnormally high tenders or any other indications of potential bid rigging practices, and tenders that are front loaded. | | | | |
| E) POST QUALIFICATION AND CONTRACT AWARD | | | | |
| | A. 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 as per the provisions of the Qualification Criteria Matrix in Table 3 below | | ITT 37; SECTION III A EQC – TABLE 3 | Must Meet with Supporting Evidence |
| | B. Minimum average annual turnover as per the provisions of the Qualification Criteria Matrix in Table 3 below. | | | |

| Item No. | Evaluation Criteria / Condition / Requirement Description | Clause Ref. | Requirement Priority |
|----------|---|-------------|----------------------|
| | C. Specific experience requirement as per the provisions of the Qualification Criteria Matrix in Table 3 below. | | |

Table 3: Technical & Financial Capacity Evaluation

| Qualification Criteria | | | | Compliance Requirements | | | Documentation |
|---|-------------------------------------|---|---|---|---|--|--|
| No. | Subject | Requirement | Single Entity | Joint Venture | | | Submission Requirements |
| | | | | All Parties Combined | Each Party | One Party | |
| 1. Historical Contract Non-Performance | | | | | | | |
| 1.1 | History of Non-Performing Contracts | Non-performance of a contract did not occur within the last five (5) years prior to the deadline for application submission based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract, and where all appeal instances available to the applicant have been exhausted. | Must meet requirement by itself or as party to past or existing JV | N / A | Must meet requirement by itself or as party to past or existing JV | N / A | Form CON-2 |
| 1.2 | Pending Litigation | All pending litigation shall in total not represent more than thirty percent (30%) of the Applicant's net worth and shall be treated as resolved against the Applicant. | Must meet requirement by itself or as party to past or existing JV | N / A | Must meet requirement by itself or as party to past or existing JV | N / A | Form CON-2 |
| 2. Financial Situation | | | | | | | |
| 2.1 | Financial Performance | Submission of audited accounts or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last Three [3] years to demonstrate: (a) the current soundness of the applicants' financial position and its prospective long-term profitability, and (b) capacity to have a cash flow amount of min. KShs. 14,000,000.00 equivalent | Must meet requirement (a) Must meet requirement (b) Must meet requirement | N / A (a) N / A (b) Must meet requirement | Must meet requirement (a) Must meet requirement (b) N / A | N / A (a)N / A (b) N / A | Form FIN - 3.1, with Supporting Evidence |

| Qualification Criteria | | | | Compliance Requirements | | | Documentation |
|------------------------|--------------------------------------|---|-----------------------|-------------------------|--|-----------------------|---|
| No. | Subject | Requirement | Single Entity | Joint Venture | | | Submission Requirements |
| | | | | All Parties Combined | Each Party | One Party | |
| | | working capital | | | | | |
| 2.2 | Average Annual Construction Turnover | Minimum average annual construction turnover KShs 105,000,000.00 calculated as an annual average of the total payments received from construction works within the last Three (3) years. | Must meet requirement | Must meet requirement | Must meet ((100-50)/(n-1)) % of the requirement where n= number of joint venture members | N/A | Form FIN - 3.2 with Supporting Evidence |
| 3. Experience | | | | | | | |
| 3.1 | General Construction Experience | Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last three (3) years prior to the applications submission deadline | Must meet requirement | N / A | Must meet requirement | N / A | 4. Form EXP - 4.1 Experience |
| 3.2 (a) | Specific Construction Experience | Participation as contractor, management contractor or subcontractor, in at least Two (2) contracts with a cumulative value of at least KShs. 34,000,000.00 within the last Five (5) Years that have been successfully and substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods/technology or other characteristics as described in the Scope of Works) For subcontracted Works the Bidder should provide the following: <ul style="list-style-type: none"> ▪ Award letter of the Main Contractor ▪ Award letter of the subcontract ▪ Completion letter of the | Must meet requirement | Must meet requirement | N / A | Must meet requirement | FormEXP.4.2(a) Must Provide Supporting Evidence (Award Letter & Completion Certificate (Substantial of Final)) |

| Qualification Criteria | | | | Compliance Requirements | | | Documentation |
|--|---|--|---|--|------------|-----------------------|--|
| No. | Subject | Requirement | Single Entity | Joint Venture | | | Submission Requirements |
| | | | | All Parties Combined | Each Party | One Party | |
| | | Subcontract | | | | | |
| 3.2 (b) | | b) For the above or other contracts executed during the period stipulated in 3.2(a) above, a minimum construction experience in at least one (1) of: <ul style="list-style-type: none"> • Construction or Rehabilitation of roads with a scope that includes bituminous works. • Other similar road works such as construction of or Concrete paving blocks or concrete or bridges etc | Must meet requirements | Must meet requirement | N / A | Must meet requirement | Must Provide Supporting Evidence required in 3.2 (a) above. |
| 3.3 (c) | Value of Current Contract Commitments / Works in Progress with the Procuring Organization | c) The value of pending works with the procuring entity SHALL not exceed KShs. 210 Million. | Must meet requirements | All Parties Combined | N/A | N/A | As filled in FORM FIN-3.4 |
| 4. Work Methodology | | | | | | | |
| 4.1 | Work Methodology | Submission of a work methodology | Should demonstrate understanding of the scope of works and other general requirements | Should demonstrate understanding of the scope of works and other general requirement | N/A | N/A | Must Submit |
| 5. Site Staff | | | | | | | |
| The site staff shall possess minimum levels set below; | | | | | | | |
| 5.1 | Site Agent | Qualification Bachelors in Civil Eng. General General Experience= 4 yrs, Specific Experience = 2 Yrs | Must meet requirements | Must meet requirement | N/A | N/A | Must Provide Supporting Evidence (CV & Certificates/ Testimonials) |
| 5.2 | Senior Foreman | Qualification =Diploma in Civil Eng. General Experience = 3 yrs, Specific Experience = 2 Yrs | Must meet requirements | Must meet requirement | N/A | N/A | Must Provide Supporting Evidence (CV & Certificates/ Testimonials) |
| 5.4 | Site Surveyor | Qualification = Diploma in | Must meet | Must meet | N/A | N/A | Must Provide Supporting |

| Qualification Criteria | | | | Compliance Requirements | | | Documentation |
|-------------------------|---|--|---------------|-------------------------|------------|-----------|---|
| No. | Subject | Requirement | Single Entity | Joint Venture | | | Submission Requirements |
| | | | | All Parties Combined | Each Party | One Party | |
| | | Surveying General Experience = 5 yrs Specific Experience = 2 Yrs | requirements | requirement | | | Evidence (CV & Certificates/ Testimonials) |
| 6. Key Equipment | | | | | | | |
| 6.1 | Contractors must meet requirements on key equipment as listed in table 4 below; | | | | | | Must Provide Supporting Evidence |

Table 4: Equipment Holding

Contractors must meet requirements on key equipment as listed below;

| Item No. | Equipment Details | Minimum Number Required for the execution of the Contract |
|---|---|--|
| A) General plant | | |
| | 1.Primary/Secondary/Crusher Unit/Power Screen Min capacity 60/hr | Optional |
| | 2. Concrete batching plant Min Cap 20m3/hr | Optional |
| | Subtotal for A | 0 |
| B) Bituminous Plants | | |
| | 1. Bitumen pressure distributor | 1 |
| | 2. Bitumen heater tank (10,000 litres) | Optional |
| | 3. Asphalt plant | Optional |
| | 4. Paver | 1 |
| | 5. Chip's spreader | 0 |
| | Subtotal for B | 2 |
| C) Compactors | | |
| | 1.Vibrating compaction plate 300mm wide | - |
| | 2.Vibrating compaction plate 600mm wide | Optional |
| | Subtotal for C | 0 |
| D) Mobile Compressors | | |
| | 1. Medium rock drill (1.5 m3/min) | Optional |
| | 2. Heavy rock drill (1.5 m3/min) | 0 |
| | Subtotal for D | 0 |
| E) Concrete Equipment | | |
| | 1. Mobile concrete mixers | 1 |
| | 2. Truck mounted mixers | Optional |
| | Subtotal for E | 1 |
| F) Transport (Tippers, dumpers, water tankers) | | |
| | 1. 4x2 tippers payload 7-12 tonnes | 2 |
| | 2. 6x4 tippers payload 16-20 tonnes | 4 |
| | 3. Articulated trailers (low loaders) | Optional |
| | 4. Dump trucks | Optional |
| | 5. Flatbed lorries | Optional |
| | 6. Water tankers (18,000- 20,000 lts capacity) | 1 |
| | 7. Water tankers (8,000- 10,000 lts capacity) | Optional |
| | Subtotal for F | 7 |
| G) Earth moving equipment | | |
| | 1. Tractor dozers with dozer attachment (D6-D9) | Optional |
| | 2. Tracked loaders | 1 |
| | 3. Wheel loaders | Optional |
| | 4. Motor scrappers | Optional |
| | 5. Motor graders (93-205KW) | 1 |
| | 6. Trench excavators | 1 |
| | Subtotal for G | 3 |
| H) Diesel Generators | | |
| | 1. Diesel generators (15- 200KV a) | Optional |
| | Subtotal H | 0 |
| I) Excavators | | |
| | 1. Hydraulic crawler mounted (7-10 | 1 |

| Item No. | Equipment Details | Minimum Number Required for the execution of the Contract |
|-------------------------|--|--|
| | tonnes) – 0.25-0.4m3 SAE bucket | |
| | 2. Hydraulic wheel mounted (10-16 tonnes) – 0.4- 0.6m3 SAE bucket | Optional |
| | Subtotal for I | 1 |
| J) Rollers | | |
| | 1. Self-propelled single drum vibrating (various types, 12 tonnes and above) | 1 |
| | 2. Pneumatic rubber tyre (1- 2 tonnes/wheel) | 1 |
| | 3. Sheep foot roller | 1 |
| | 4. Double drum vibrating pedestrian roller | 1 |
| | Subtotal for J | 4 |
| K) Stabilization | | |
| | 1. Pulvimixer | 1 |
| | Subtotal for K | 1 |

QUALIFICATION FORMS

1. FORMEQU: EQUIPMENT

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, or for alternative equipment proposed by the Tenderer.

| | | |
|-----------------------|--|------------------------|
| Item of equipment | | |
| 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 the 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 | Telex |
| Agreements | Details of rental / lease / manufacture agreements specific to the project | |
| | | |
| | | |

2 FORM PER -1

Contractor's Representative and Key Personnel Schedule

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

Contractor' Representative and Key Personnel

| | | |
|----|---|---|
| 1. | Title of position: Contractor's Representative | |
| | Name of candidate: | |
| | Duration of appointment: | <i>[insert the whole period (start and end dates) for which this position will be engaged]</i> |
| | Time commitment: for this position: | <i>[insert the number of days/week/months/ that has been scheduled for this position]</i> |
| | Expected time schedule for this position: | <i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i> |
| 2. | Title of position: [_____] | |
| | Name of candidate: | |
| | Duration of appointment: | <i>[insert the whole period (start and end dates) for which this position will be engaged]</i> |
| | Time commitment: for this position: | <i>[insert the number of days/week/months/ that has been scheduled for this position]</i> |
| | Expected time schedule for this position: | <i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i> |
| 3. | Title of position: [_____] | |
| | Name of candidate: | |
| | Duration of appointment: | <i>[insert the whole period (start and end dates) for which this position will be engaged]</i> |
| | Time commitment: for this position: | <i>[insert the number of days/week/months/ that has been scheduled for this position]</i> |
| | Expected time schedule for this position: | <i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i> |
| 4. | Title of position: [_____] | |
| | Name of candidate: | |
| | Duration of appointment: | <i>[insert the whole period (start and end dates) for which this position will be engaged]</i> |
| | Time commitment: for this position: | <i>[insert the number of days/week/months/ that has been scheduled for this position]</i> |
| | Expected time schedule for this position: | <i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i> |
| 5. | Title of position: [insert title] | |
| | Name of candidate: | |
| | Duration of appointment: | <i>[insert the whole period (start and end dates) for which this position will be engaged]</i> |
| | Time commitment: for this position: | <i>[insert the number of days/week/months/ that has been scheduled for this position]</i> |
| | Expected time schedule for this position: | <i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i> |

3. FORM PER-2:

Resume and Declaration - Contractor's Representative and Key Personnel.

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

| |
|-------------------------|
| Name of Tenderer |
|-------------------------|

| |
|---|
| Position [#1]: <i>[title of position from Form PER-1]</i> |
|---|

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

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 [*insert either "Contractor's Representative" or "Key Personnel" as applicable*], 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 Contractor's Representative or Key Personnel is available to work on this contract]</i> |
| Time commitment: | <i>[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]</i> |

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

- a) be taken into consideration during Tender evaluation;
- b) result in my disqualification from participating in the Tender;
- c) result in my dismissal from the contract.

Name of Contractor's Representative or Key Personnel: [*insert name*]

Signature: _____

Date: (day month year): _____ Countersignature

of authorized representative of the Tenderer:

Signature: _____ Date: (day month

year): _____

4 TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

To establish its qualifications to perform the contract in accordance with Section III, Evaluation and Qualification Criteria the Tenderer shall provide the information requested in the corresponding Information Sheets included hereunder.

4.1 FORM ELI -1.1

Tenderer Information Form

Date: _____

ITT No. and 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 <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITT 3.6 <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 <input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: <ul style="list-style-type: none">• Legal and financial autonomy• Operation under commercial law• Establishing that the Tenderer is not under the supervision of the Procuring Entity |
| 2. Included are the organizational chart and a list of Board of Directors. |

4.2 FORM ELI -1.2

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

Date: _____

ITT No. and 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 <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 3.6. <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 and a list of Board of Directors. |

4.3 FORM CON – 2

Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

| Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria | | | |
|--|------------------------------------|--|--|
| <input type="checkbox"/> Contract non-performance did not occur since 1 st January [insert year] specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1. | | | |
| <input type="checkbox"/> Contract(s) not performed since 1 st January [insert year] specified in Section III, Evaluation and Qualification Criteria, requirement 2.1 | | | |
| Year | Non- performed portion of contract | Contract Identification | Total Contract Amount (current value, currency, exchange rate and 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, Evaluation and Qualification Criteria | | | |
| <input type="checkbox"/> No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3. | | | |
| <input type="checkbox"/> Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below. | | | |

| Year of dispute | Amount in dispute (currency) | Contract Identification | Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate) |
|---|------------------------------------|---|---|
| | | Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____ | |
| | | 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 (currency), Kenya Shilling Equivalent (exchange rate) |

| | | | |
|---------------|---------------------|--|-----------------|
| [insert year] | [insert 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] Matter in dispute: [indicate main issues in dispute] Party who initiated the dispute: [indicate "Procuring Entity" or "Contractor"] Reason(s) for Litigation and award decision [indicate main reason(s)] | [insert amount] |
|---------------|---------------------|--|-----------------|

4.4 FORM FIN – 3.1:

Financial Situation and Performance

Tenderer's Name: _____
 Date: _____
 JV Member's Name _____
 ITT No. and title: _____

4.4.1. Financial Data

| Type of Financial information in _____ (currency) | Historic information for previous _____ years, _____ (amount in currency, currency, exchange rate*, USD equivalent) | | | | |
|--|---|--------|--------|--------|--------|
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| 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 | | | | | |

| | | | | | |
|---|--|--------|--------|--------|--------|
| Type of Financial information in _____ (currency) | Historic information for previous _____ years, _____ | | | | |
| | (amount in currency, currency, exchange rate*, USD equivalent) | | | | |
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| Cash Flow from Operating Activities | | | | | |

*Refer to ITT 15 for the exchange rate

4.4.2 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 | | |
| 2 | | |
| 3 | | |

4.4.3 Financial documents

The Tenderer and its parties shall provide copies of financial statements for _____ years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

- (a) 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).
- (b) be independently audited or certified in accordance with local legislation.
- (c) be complete, including all notes to the financial statements.
- (d) correspond to accounting periods already completed and audited.

Attached are copies of financial statements¹ for the _____ years required above; and complying with the requirements

¹ If the most recent set of financial statements is for a period earlier than 12 months from the date of Tender, the reason for this should be justified.

4.5 FORM FIN – 3.2:

Average Annual Construction Turnover

Tenderer’s Name: _____

Date: _____

JV Member’s Name _____

ITT No. and title: _____

| Annual turnover data (construction only) | | | |
|---|--|----------------------|----------------------------------|
| Year | Amount Currency | Exchange rate | Kenya Shilling equivalent |
| <i>[indicate year]</i> | <i>[insert amount and indicate currency]</i> | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Average Annual Construction Turnover * | | | |

* See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

4.6 FORM FIN – 3.3:

Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III, Evaluation and Qualification Criteria

| Financial Resources | | |
|----------------------------|----------------------------|---|
| No. | Source of financing | Amount (Kenya Shilling equivalent) |
| 1 | | |
| 2 | | |
| 3 | | |
| | | |

4.7 FORM FIN – 3.4:

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 letter 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 | | | | | |
|-------------------------------------|-------------------------|---|---|----------------------------------|---|
| | Name of Contract | Procuring Entity's Contact Address, Tel, | Value of Outstanding Work [Current Kenya Shilling /month Equivalent] | Estimated Completion Date | Average Monthly Invoicing Over Last Six Months [Kenya Shilling /month] |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| | | | | | |

4.8 FORM EXP - 4.1

General Construction Experience

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

Page _____ of _____ pages

| Starting Year | Ending Year | Contract Identification | Role of Tenderer |
|---------------|-------------|---|------------------|
| | | Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____ | |
| | | Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____ | |
| | | Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____ | |

4.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management Experience

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and 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 Shilling | | | |
| If member in a JV or sub-contractor, specify participation in total Contract amount | | | | |
| Procuring Entity's Name: | | | | |
| Address: | | | | |
| Telephone/fax number | | | | |
| E-mail: | | | | |

4.10 FORM EXP - 4.2 (a) (cont.)

Specific Construction and Contract Management Experience (cont.)

| Similar Contract No. | Information |
|--|-------------|
| Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III: | |
| 1. Amount | |
| 2. Physical size of required works items | |
| 3. Complexity | |
| 4. Methods/Technology | |
| 5. Construction rate for key activities | |
| 6. Other Characteristics | |

4.11 FORM EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: _____

Sub-contractor's Name² (as per ITT 34): _____

ITT No. and title: _____

All Sub-contractors for key activities must complete the information in this form as per ITT 34 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.

1. Key Activity No One: _

| 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 Shilling | |
| 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) x (ii) |
| Year 1 | | | | |
| Year 2 | | | | |
| Year 3 | | | | |
| Year 4 | | | | |
| Procuring Entity's Name: | | | | |
| Address: Telephone/fax number E-mail: | | | | |

² If applicable

| | Information |
|--|--------------------|
| Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III: | |
| | |
| | |
| | |
| | |
| | |

2. Activity No. Two

3.

OTHER FORMS

5. FORM OF TENDER

(Amended and issued pursuant to PPRA CIRCULAR No. 02/2022)

INSTRUCTIONS TO TENDERERS

- i) All italicized text is to help the Tenderer in preparing this form.*
- ii) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address. Tenderers are reminded that this is a mandatory requirement.*
- iii) Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION FORMS OF THE TENDERER as listed under (s) below.*

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

Tender Name and Identification:.....[insert identification]

Alternative No.:.....[insert identification No if this is a Tender for an alternative]

To: [Insert complete name of Procuring Entity]

Dear Sirs,

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

The above amount includes foreign currency amount (s) of [state figure or a percentage and currency] [figures]_____ [words]_____.

The percentage or amount quoted above does not include provisional sums, and only allows not more than two foreign currencies.

- 2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.
- 3. We agree to adhere by this tender until _____ [Insert date], and it shall remain binding upon us and may be accepted at any time before that date.
- 4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive.
- 5. We, the undersigned, further declare that:
 - i) No reservations: We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;
 - ii) Eligibility: We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;
 - iii) Tender-Securing Declaration: We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;
 - iv) Conformity: We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: [insert a brief description of the Works];

- v) Tender Price: The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*
- vi) Option 1, in case of one lot: Total price is: *[insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies];* Or
- Option 2, in case of multiple lots:
- a) Total price of each lot *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies];* and
- b) Total price of all lots (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies];*
- vii) Discounts: The discounts offered and the methodology for their application are:
- viii) The discounts offered are: *[Specify in detail each discount offered.]*
- ix) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts];*
- x) Tender Validity Period: Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- xi) Performance Security: If our Tender is accepted, we commit to obtain a Performance Security in accordance with the Tendering document;
- xii) One Tender Per Tender: We are not submitting any other Tender(s) as an individual Tender, 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 3.4, other than alternative Tenders submitted in accordance with ITT 13.3;
- xiii) Suspension and Debarment: We, along with any of our subcontractors, suppliers, Project Manager, 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 Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.
- xiv) 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];*
- xv) Commissions, gratuities, fees: We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender 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.”)

- xvi) Binding Contract: We understand that this Tender, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- xvii) Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Most Advantageous Tender or any other Tender that you may receive;
- xviii) 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;

- xix) **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.
- xx) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from _____ (*specify website*) during the procurement process and the execution of any resulting contract.
- xxi) **Beneficial Ownership Information:** We commit to provide to the procuring entity the Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form upon receipt of notification of intention to enter into a contract in the event we are the successful tenderer in this subject procurement proceeding.
- xxii) We, the Tenderer, have duly completed, signed and stamped 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.
 - c) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
 - d) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal

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]*

Date signed _____ day of _____, _____

Notes

** In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer*

*** Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.*

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 | DESCRIPTION |
|----|--|--|
| 1 | Name of the Procuring Entity | |
| 2 | Reference Number of the Tender | |
| 3 | Date and Time of Tender Opening | |
| 4 | Name of the 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 | |
| 7 | Name, country and full address (<i>postal and physical addresses, email, and telephone number</i>) of Registering Body/Agency | |
| 8 | Description of Nature of Business | |
| 9 | Maximum value of business which the Tenderer handles. | |
| 10 | 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.

| | Names 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.

| | Names of Director | 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.

| | Names 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 by 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. | | |

| | Type of Conflict | Disclosure YES OR NO | If YES provide details of the relationship with Tenderer |
|---|--|-------------------------|---|
| 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. | | |

f) 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 _____ [Name of Procuring Entity] for: _____ [Name and number of tender] 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 [check 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 _____ Title__ Date _____

[Name, title and signature of authorized agent of Tenderer and Date].

C. SELF - DECLARATION FORMS

FORM SD1

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

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.....

D. APPENDIX 1- FRAUD AND CORRUPTION

(Appendix 1 shall not be modified)

1. Purpose

2. 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.

3. Requirements

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.

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 direct or 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.

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

- a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:
 - i) "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii) "fraudulent practice" is any act or omission, including 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 award¹ 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 inspect² 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.

¹ 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.

² 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.

FORM OF TENDER SECURITY-[Option 1–Demand Bank Guarantee]

Beneficiary: _____

Request for Tenders No:

Date: _____

TENDER GUARANTEE No.: _____

Guarantor: _____

1. We have been informed that _____ (here in after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (here in after called" the Tender") for the execution of _____ under Request for Tenders No. _____ ("the ITT").
2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender 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 _____ (_____) 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 Letter of Tender ("the Tender Validity Period"), or any extension thereto 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 provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.
4. 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, 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) thirty days after the end of the Tender Validity Period.
5. 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)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

FORMAT OF TENDER SECURITY [Option 2–Insurance Guarantee]

TENDER GUARANTEE No.: _____

1. Whereas [*Name of the tenderer*] (hereinafter called “the tenderer”) has submitted its tender dated [*Date of submission of tender*] for the [*Name and/or description of the tender*] (hereinafter called “the Tender”) for the execution of _____ under Request for Tenders No. _____ (“the ITT”).
2. KNOW ALL PEOPLE by these presents that WE of [**Name of Insurance Company**] having our registered office at (hereinafter called “the Guarantor”), are bound unto [*Name of Procuring Entity*] (hereinafter called “the Procuring Entity”) in the sum of (Currency and guarantee amount) for which payment well and truly to be made to the said Procuring Entity, the Guarantor binds itself, its successors and assigns, jointly and severally, firmly by these presents.

Sealed with the Common Seal of the said Guarantor this ___ day of _____ 20 __.

3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Applicant:
 - a) has withdrawn its Tender during the period of Tender validity set forth in the Principal's Letter of Tender (“the Tender Validity Period”), or any extension thereto provided by the Principal; or
 - b) having been notified of the acceptance of its Tender by the Procuring Entity during the Tender Validity Period or any extension thereto provided by the Principal; (i) 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 Procuring Entity's Tendering document.

then the guarantee undertakes to immediately pay to the Procuring Entity up to the above amount upon receipt of the Procuring Entity's first written demand, without the Procuring Entity having to substantiate its demand, provided that in its demand the Procuring Entity shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

4. 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, 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.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

[Date]

[Signature of the Guarantor]

[Witness]

[Seal]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

TENDER-SECURING DECLARATION FORM

[The Bidder shall complete this Form in accordance with the instructions indicated]

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

Tender No.:.....*[insert number of tendering process]*

To:..... *[insert complete name of Purchaser]* I/We, the undersigned, declare that:

- 1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.
- 2. I/We accept that I/we will automatically be suspended from being eligible for tendering in any contract with the Purchaser for the period of time of *[insert number of months or years]* starting on *[insert date]*, if we are in breach of our obligation(s) under the bid conditions, because we – (a) have withdrawn our tender during the period of tender validity specified by us in the Tendering Data Sheet; or (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the instructions to tenders.
- 3. I/We understand that this Tender Securing Declaration shall expire if we are not the successful Tenderer(s), upon the earlier of:
 - a) our receipt of a copy of your notification of the name of the successful Tenderer; or
 - b) thirty days after the expiration of our Tender.
- 4. I/We understand that if I am/we are/in a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid, and the Joint Venture has not been legally constituted at the time of bidding, the Tender Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed:..... Capacity / title (director

or partner or sole proprietor, etc.) Name:

..... Duly authorized to sign the bid

for and on behalf of: *[insert complete name of Tenderer]*

Dated on day of *[Insert date of signing]* Seal or stamp

Appendix to Tender

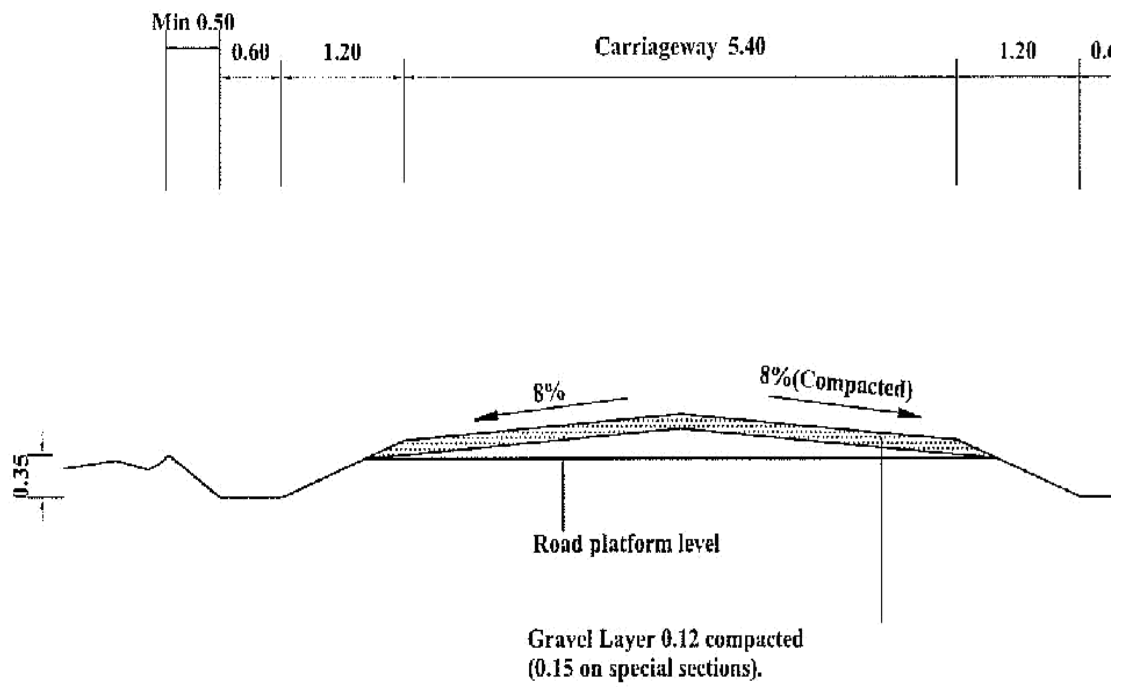
Schedule of Currency requirements

Summary of currencies of the Tender for _____ *[insert name of Section of the Works]*

| <i>Name of currency</i> | <i>Amounts payable</i> |
|---|---|
| Local currency: _____ | |
| Foreign currency #1: _____ | |
| Foreign currency #2: _____ | |
| Foreign currency #3: _____ | |
| Provisional sums expressed in local currency _____ | [To be entered by the Procuring Entity] |

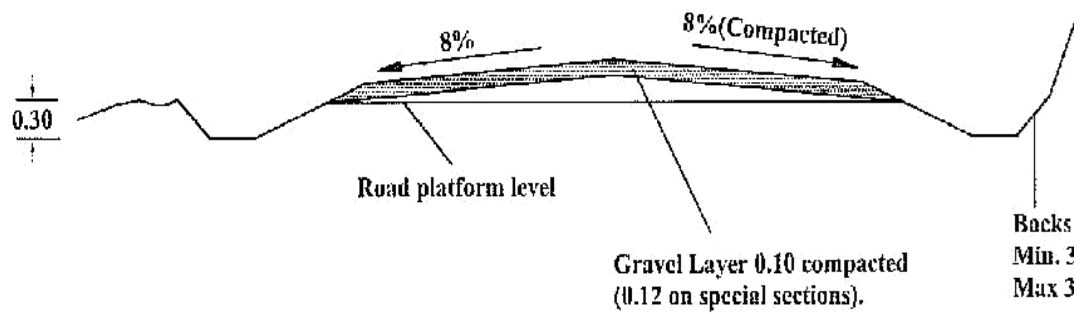
PART II - WORK REQUIREMENTS

SECTION V - DRAWINGS



Notes:

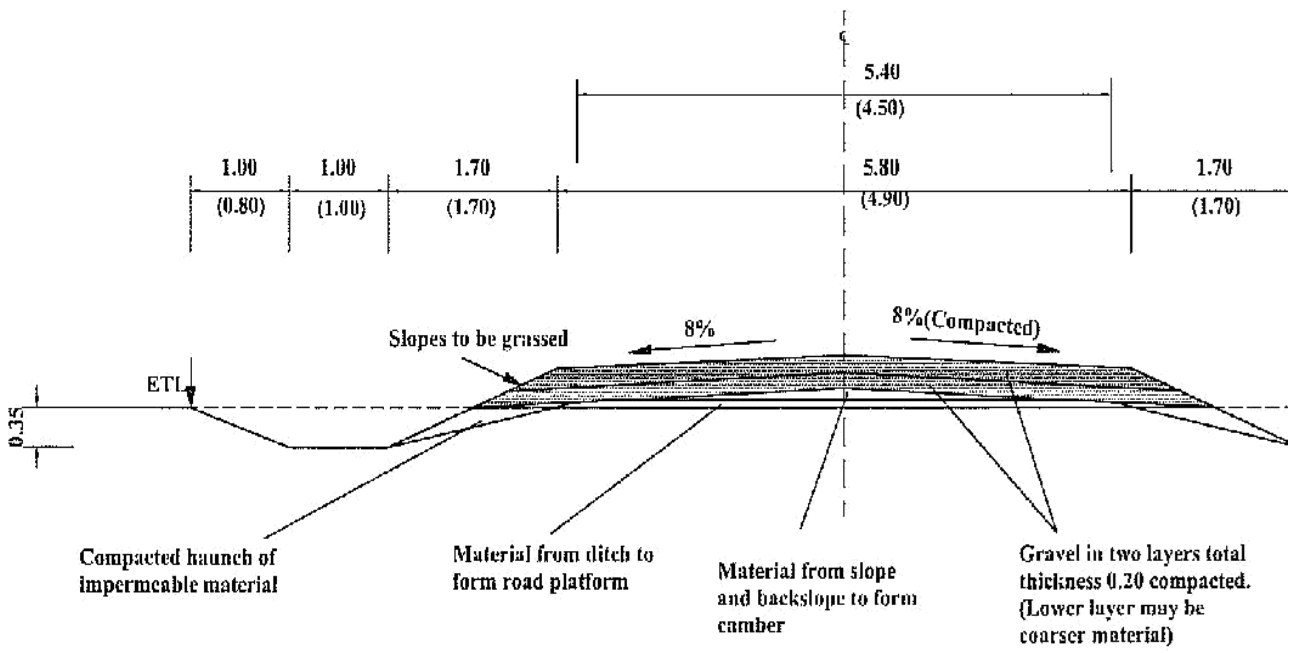
1. All dimensions in metres
2. Traffic levels of > 200vpd may justify a carriageway width of 6.0m
3. Gravel thickness may be increased as directed by the Engineer

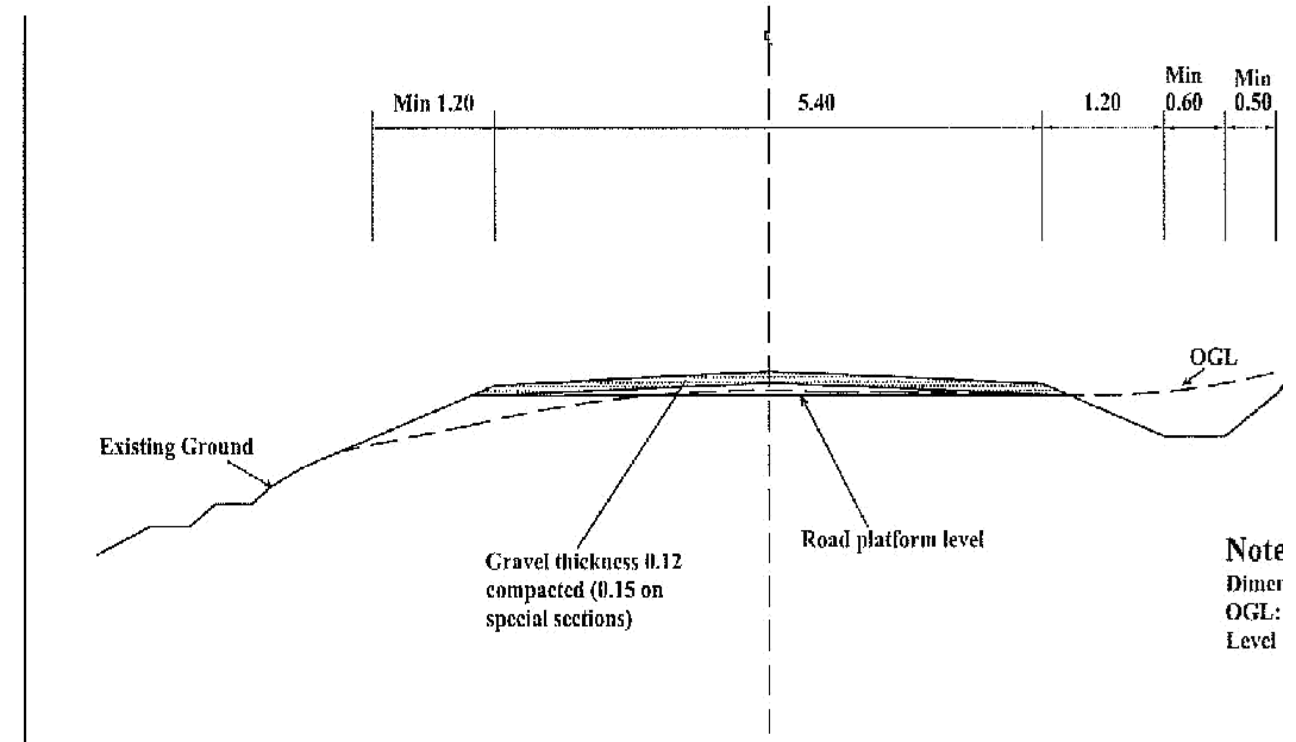


Notes:

1. All dimensions in metres
2. Gravel thickness may be increased as directed by the Engineer

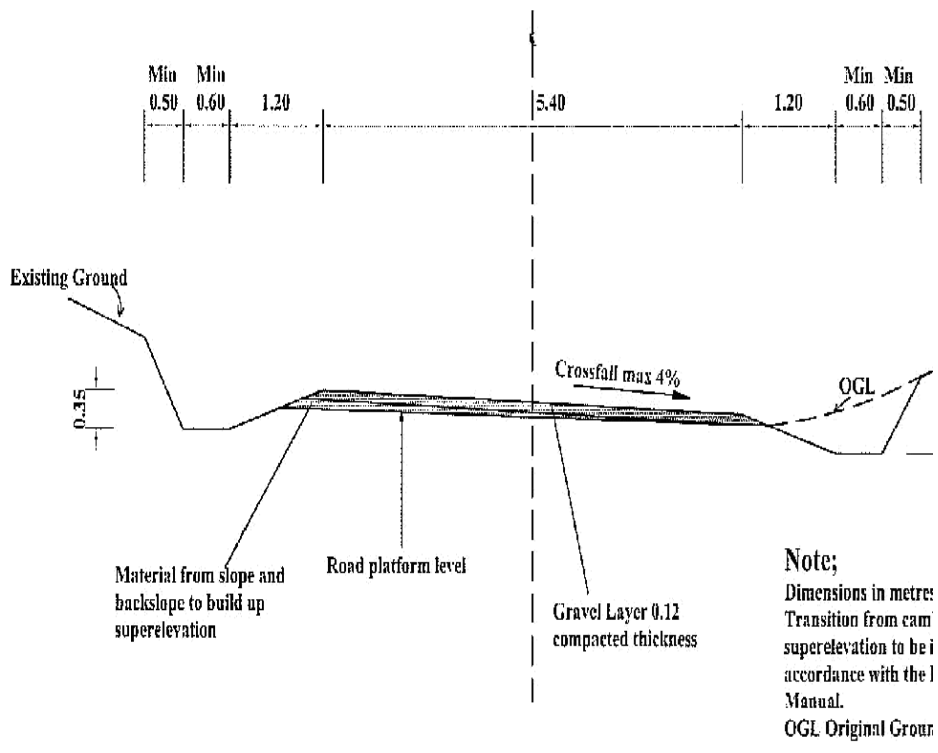
2-3

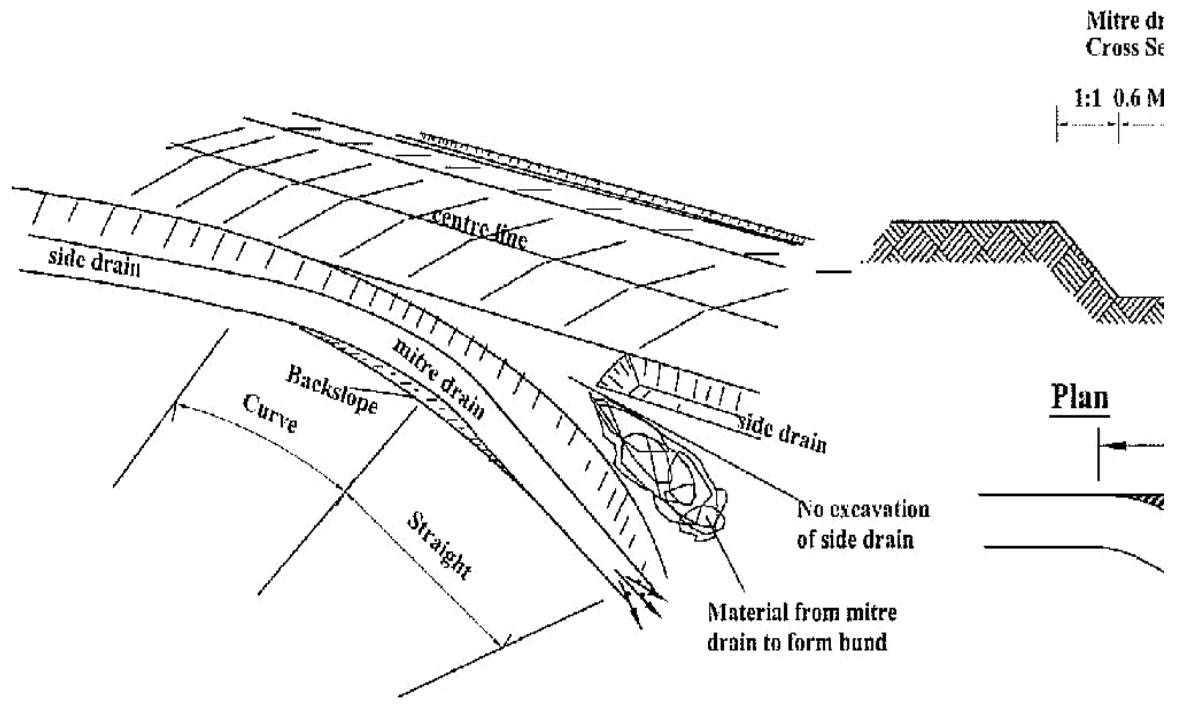




4-0

S-2

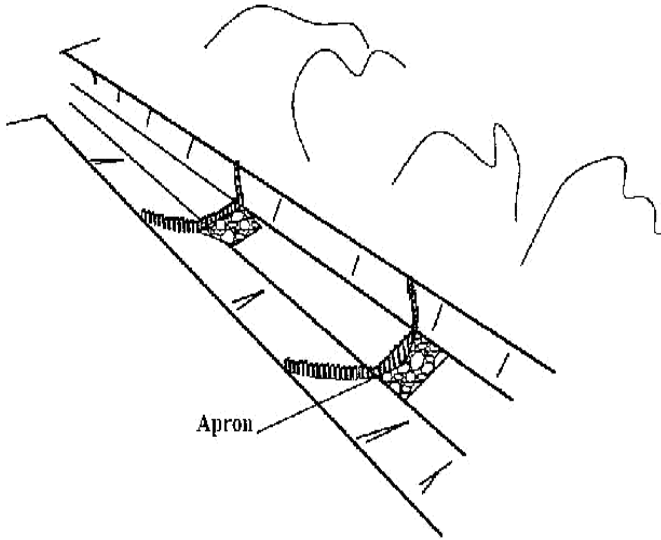




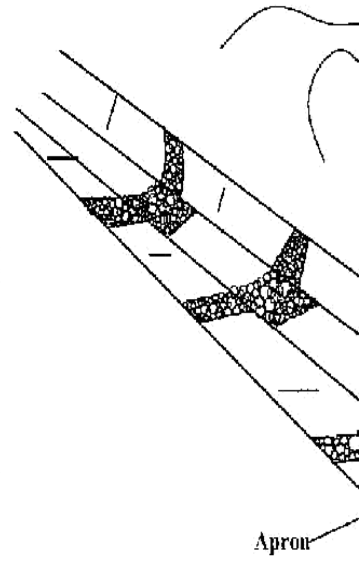
Notes

Location, direction and length of the mitre drain to be determined by the Engineer

Scour checks made of wooden stakes

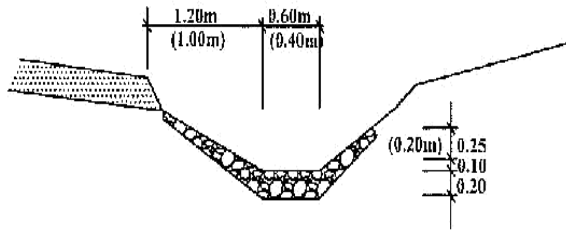


Scour checks made of stones

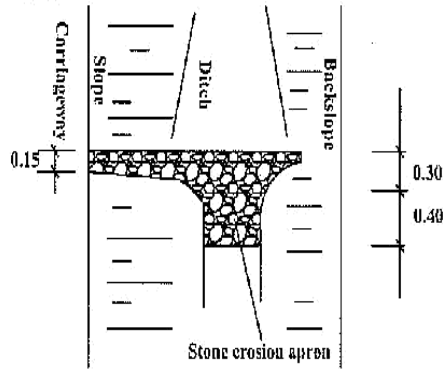


Scour checks made of stones

Cross section



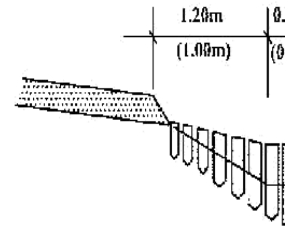
Ground plan



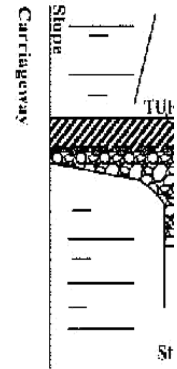
NOTE
1. Dimensions in metres

Scour checks made of stones

Cross section



Ground plan

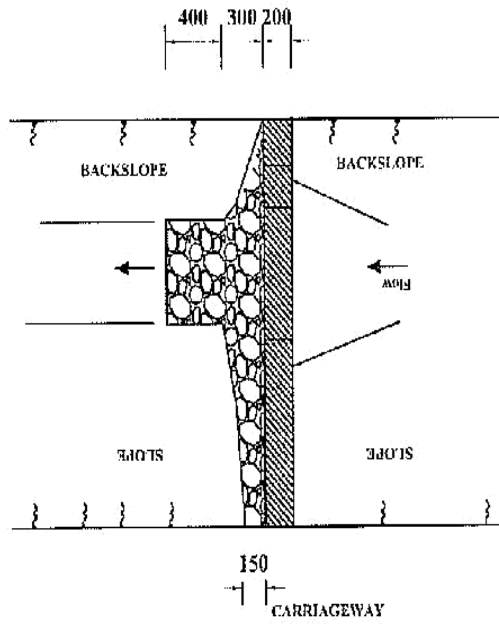


STONE WEIGHT: MIN 10KG
STONE DIAMETER: MIN. 0.10



SECTION OF MASONRY SCOUR CHECK

Note
 1. Dimensions in mm

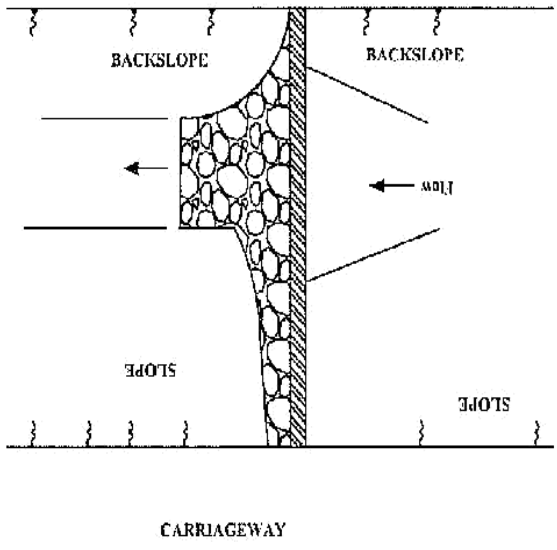


PLAN OF DRAIN WITH SCOUR CHECK

| Cross-Section | Spec in mm | | | Excess (m ³) | Lower of (m ³) | Average stone pitting (m ³) |
|---------------|------------|-------|-------|--------------------------|----------------------------|---|
| | Length | Width | Depth | | | |
| A | 2400 | 300 | 550 | 0.22 | 0.28 | 0.18 |
| R | 2000 | 200 | 500 | 0.18 | 0.2 | 0.14 |

1

SECTION OF CONCRETE SCOUR CHECK

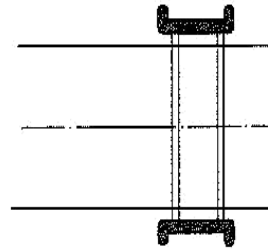
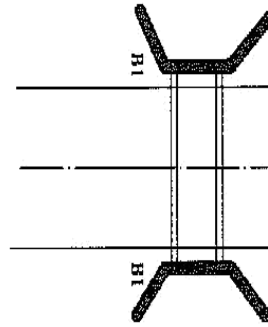


NOTE
1. Dimensions in mm

PLAN OF DRAIN WITH SCOUR CHECK

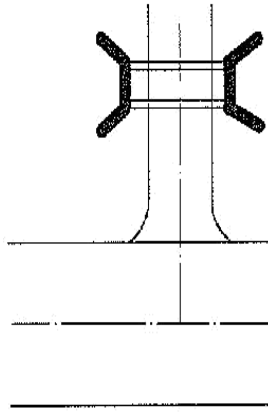
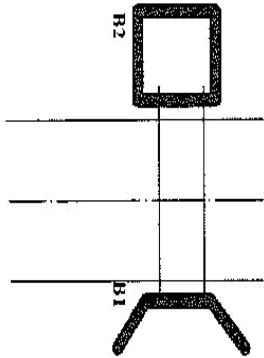
| Cross-Section | Sizes in mm | | Excav. (m ³) | Concrete (m ³) | Apron stone pitching (m ³) |
|---------------|-------------|-------|--------------------------|----------------------------|--|
| | Length | Width | | | |
| A | 2400 | 100 | 0.13 | 0.15 | 0.18 |
| B | 2000 | 100 | 0.10 | 0.09 | 0.14 |

C-9b



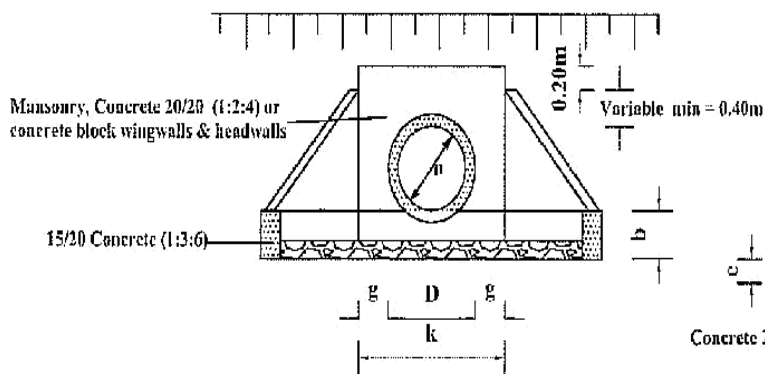
TYPE Z (ENTRY ONLY)

TYPE A (ENTRY AND EXIT ON ACCESS)

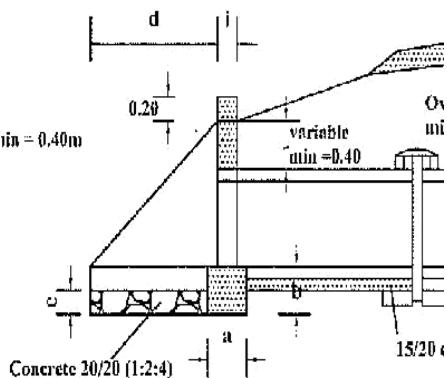


NOTE
 1. The code numbers specify the shape and function and the code letter denotes the material:
 A = Concrete block
 B = Stone masonry
 C = Concrete

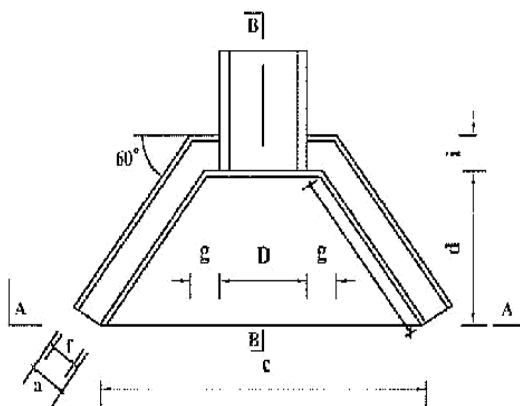
SECTION A-A



SECTION B-B



PLAN

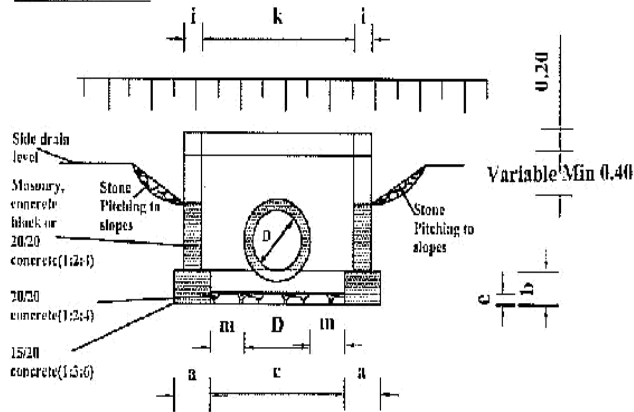


| CULVERT TYPES | |
|-------------------|--------------|
| X-SECTION WIDTH m | No. of pipes |
| 4.50 | 6 |
| 5.50 | 7 |
| 6.50 | 8 |

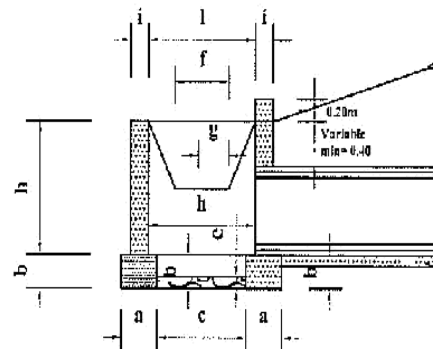
| PIPE DIAMETER IN M | TYPE A and C CONCRETE BL | CONCRETE BL | | |
|-----------------------------|--------------------------|-------------|------|------|
| | | 450 | 600 | |
| DIMENSION | UNIT | | | |
| a | FOUNDATION | m | 0.30 | 0.20 |
| b | FOUNDATION | m | 0.30 | 0.30 |
| c | FOUNDATION | m | 2.20 | 2.35 |
| d | APRON | m | 1.00 | 1.00 |
| e | APRON | m | 0.20 | 0.20 |
| f | WALL | m | 0.20 | 0.20 |
| g | WALL | m | 0.30 | 0.30 |
| h | WALL | m | 1.15 | 1.15 |
| i | WALL | m | 0.20 | 0.20 |
| k | APRON | m | 1.05 | 1.20 |
| MATERIAL REQUIREMENT | | | | |
| FOUNDATION | | | | |
| (concrete) | m ³ | 0.30 | 0.32 | |
| HEAD/WINGWALLS | | | | |
| (Concrete/Masonry) | m ³ | 0.42 | 0.49 | |
| APRON | | | | |
| (concrete) | m ³ | 0.33 | 0.36 | |

C-11

SECTION A-A



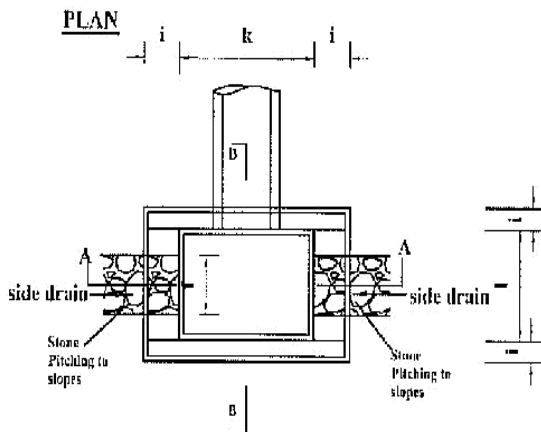
SECTION B-B



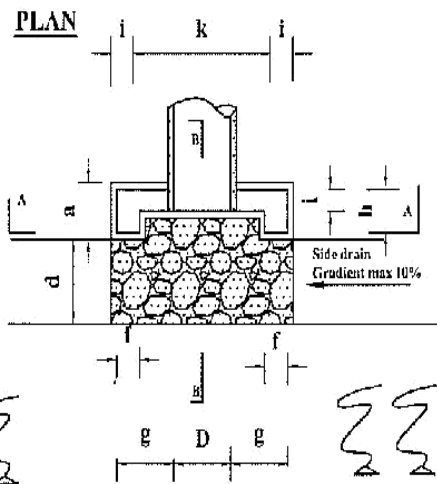
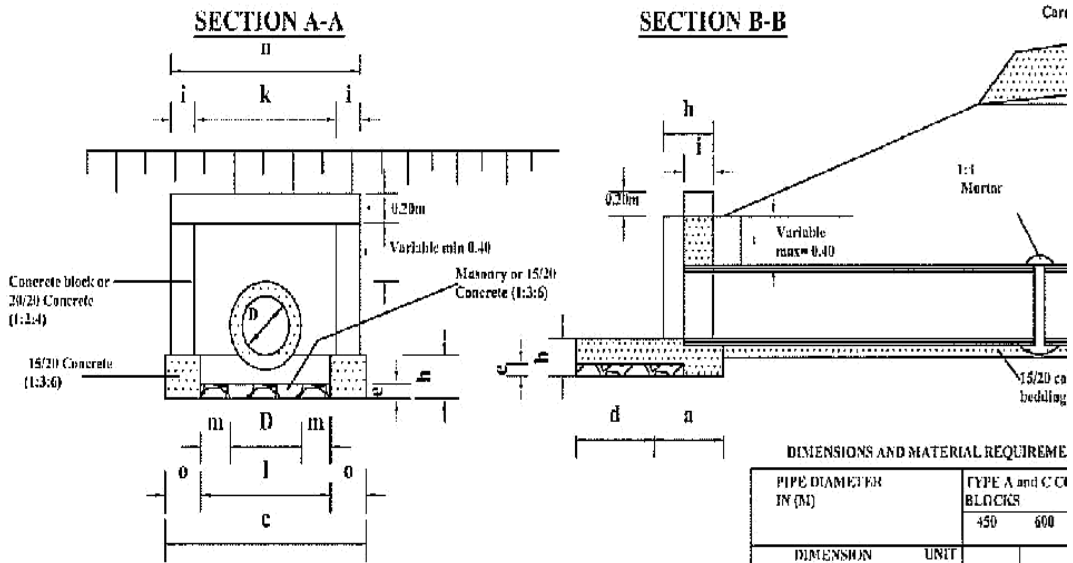
DIMENSIONS AND MATERIAL REQUIREMENTS

| PIPE DIAMETER IN (M) | TYPE A CONCRETE BLOCKS | | | TY M ³ | | |
|--------------------------------------|---------------------------|----------------|------|----------------------|------|-----|
| | 450 | 600 | 900 | | | |
| | UNIT | | | 45 | | |
| a | FOUNDATION | m | 0.30 | 0.30 | 0.30 | 0.4 |
| b | FOUNDATION | m | 0.30 | 0.30 | 0.30 | 0.3 |
| c | FOUNDATION | m | 1.10 | 1.10 | 1.40 | 1.2 |
| d | APRON | m | 0.90 | 0.90 | 0.90 | 1.0 |
| e | APRON | m | 0.20 | 0.20 | 0.20 | 0.2 |
| f | DROP INLET | m | 0.60 | 0.60 | 0.60 | 0.6 |
| g | DROP INLET | m | 0.30 | 0.40 | 0.60 | 0.3 |
| h | DROP INLET | m | 0.60 | 0.80 | 1.20 | 0.6 |
| i | DROP INLET | m | 0.20 | 0.20 | 0.20 | 0.4 |
| k | DROP INLET | m | 1.20 | 1.20 | 1.50 | 1.2 |
| l | DROP INLET | m | 1.00 | 1.00 | 1.00 | 1.0 |
| m | DROP INLET | m | 0.38 | 0.30 | 0.30 | 0.3 |
| MATERIAL REQUIREMENT | | | | | | |
| FOUNDATION (concrete) | | m ³ | 0.47 | 0.47 | 0.52 | 0.7 |
| HEAD/WINGWALLS (Concrete/Masonry) | | m ³ | 0.56 | 0.72 | 1.15 | 1.2 |
| APRON (concrete) | | m ³ | 0.24 | 0.24 | 0.30 | 0.2 |

PLAN



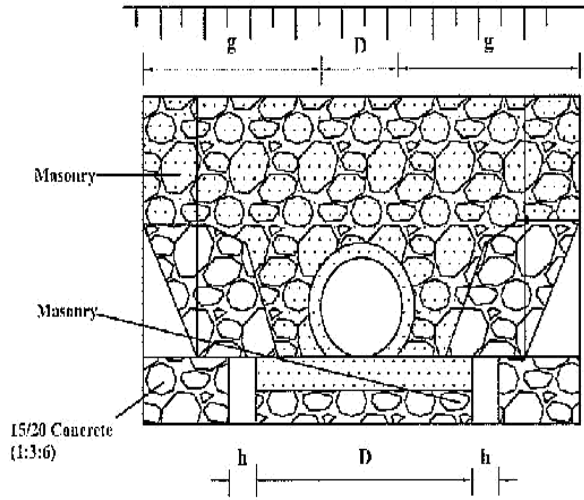
G-12



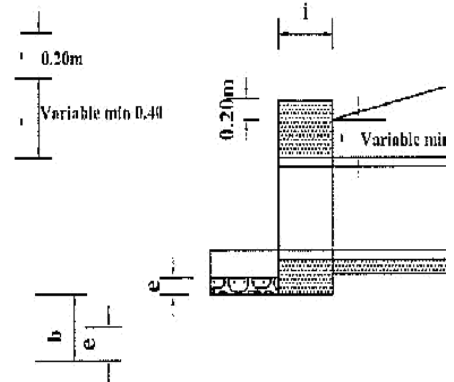
DIMENSIONS AND MATERIAL REQUIREME

| PIPE DIAMETER IN (M) | UNIT | TYPE A and C/C BLOCKS | | |
|------------------------------------|------------|-----------------------|------|------|
| | | 450 | 600 | |
| a | FOUNDATION | m | 0.50 | 0.50 |
| b | FOUNDATION | m | 0.30 | 0.30 |
| c | FOUNDATION | m | 1.55 | 1.70 |
| d | APRON | m | 0.60 | 0.60 |
| e | APRON | m | 0.20 | 0.20 |
| f | HEADWALL | m | 0.20 | 0.20 |
| g | HEADWALL | m | 0.50 | 0.50 |
| h | HEADWALL | m | 0.50 | 0.50 |
| i | HEADWALL | m | 0.50 | 0.50 |
| k | HEADWALL | m | 0.50 | 0.50 |
| l | FOUNDATION | m | 0.50 | 0.50 |
| m | FOUNDATION | m | 0.50 | 0.50 |
| n | HEADWALL | m | 0.50 | 0.50 |
| o | FOUNDATION | m | 0.50 | 0.50 |
| MATERIAL REQUIREMENT | | | | |
| FOUNDATION (concrete) | | | 0.23 | 0.19 |
| HEAD/WING WALLS (Concrete/Masonry) | | | 0.34 | 0.37 |
| APRON (concrete) | | | 0.25 | 0.29 |

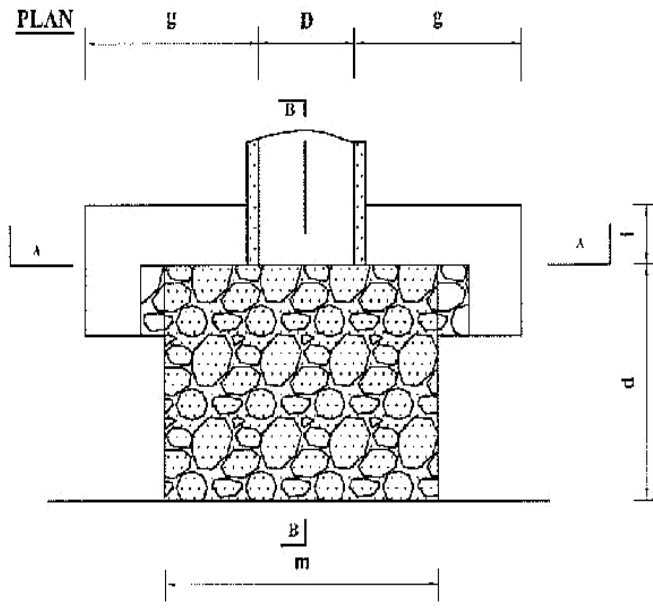
SECTION A-A



SECTION B-B



PLAN

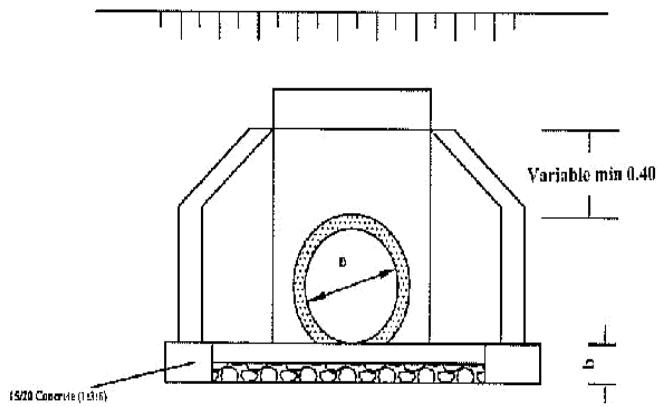


DIMENSIONS AND

| PIPE DIAMETER (M) | |
|------------------------------|------------|
| DIMENSION | |
| a | FOUNDATION |
| b | FOUNDATION |
| c | FOUNDATION |
| d | APRON |
| e | APRON |
| f | HEADWALL |
| g | HEADWALL |
| h | HEADWALL |
| i | HEADWALL |
| m | FOUNDATION |
| MATERIAL REQ | |
| FOUNDATION (concrete) | |
| HEAD/WING (Concrete/Masonry) | |
| APRON (concrete) | |

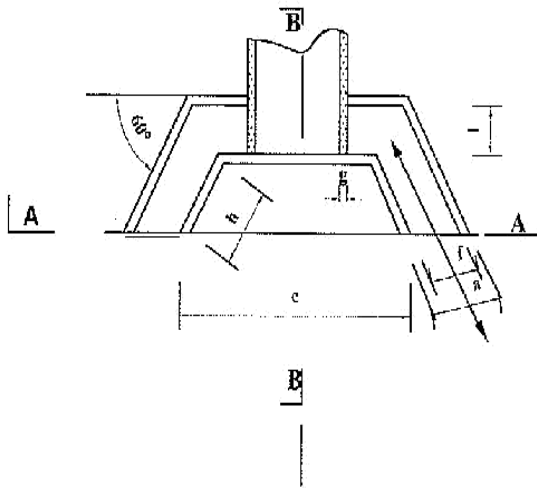
FIG 2

SECTION A-A

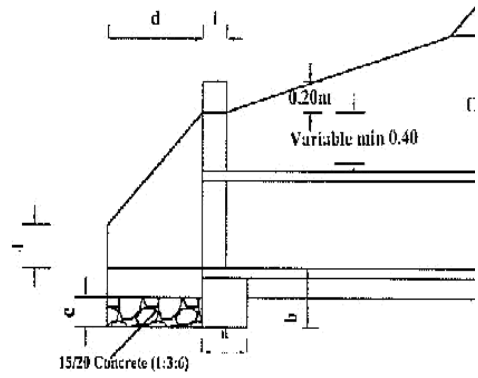


G D R

PLAN

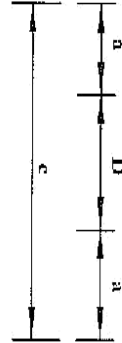
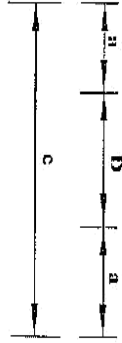
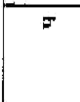
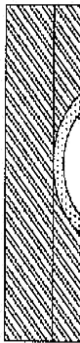
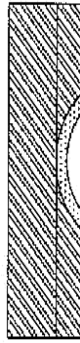


SECTION B-B



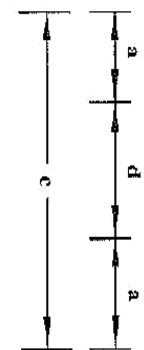
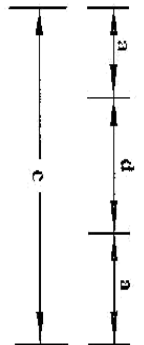
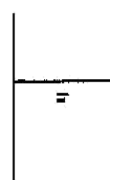
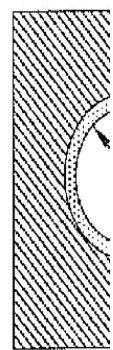
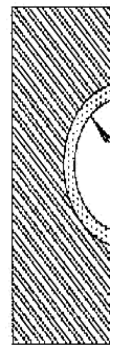
DIMENSIONS AND MATERIAL REQUIREMENTS

| PIPE DIAMETER IN (M) | TYPE A (CONCRETE BLOCKS) | | | |
|-----------------------------------|--------------------------|-----|------|------|
| | 450 | 600 | 900 | |
| DIMENSION | UNIT | | | |
| a | FOUNDATION | m | 0.30 | 0.30 |
| b | FOUNDATION | m | 0.30 | 0.30 |
| c | APRON | m | 1.34 | 1.49 |
| d | APRON | m | 0.60 | 0.60 |
| e | APRON | m | 0.20 | 0.20 |
| f | WINGWALLS | m | 0.20 | 0.20 |
| g | WINGWALLS | m | 0.10 | 0.10 |
| h | HEADWALLS | m | 0.69 | 0.69 |
| i | HEADWALLS | m | 0.20 | 0.20 |
| k | HEADWALLS | m | 0.65 | 0.80 |
| l | HEADWALLS | m | 0.36 | 0.40 |
| MATERIAL REQUIREMENT | | | | |
| FOUNDATION (concrete blocks) | | | 0.18 | 0.20 |
| HEAD/WINGWALLS (Concrete/Masonry) | | | 0.28 | 0.32 |
| APRON (concrete) | | | 0.12 | 0.14 |



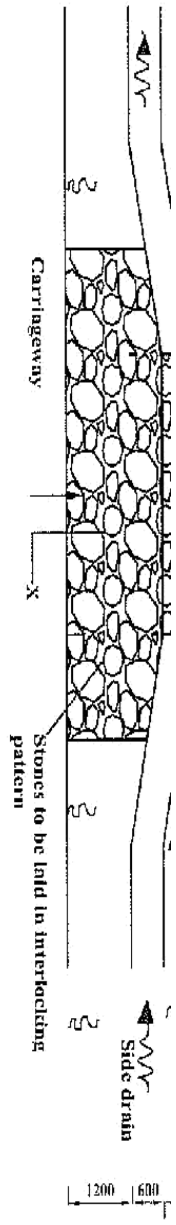
| Diameter (D) | 450 (mm) | 600 (mm) | 900 (mm) |
|----------------------|---|----------|----------|
| a | 0.15 | 0.20 | 0.20 |
| b | 0.10 | 0.15 | 0.15 |
| c | 0.86 | 1.12 | 1.48 |
| d | 0.56 | 0.72 | 1.08 |
| e | 0.14 | 0.18 | 0.17 |
| f (mm) | 0.34 | 0.45 | 0.68 |
| g | - | - | - |
| h | 0.24 | 0.33 | 0.42 |
| i | - | - | - |
| Concrete Class 15/20 | Volume in (m ³ /m) | 0.24 | 0.24 |
| Application | -Fair subgrade condition -Overfill > 75% of the pipe diameter -Seasonal water flow only | | |
| Remarks | Material for back/overfill shall be approved by the Engineer | | |

| Diameter (D) | 450 (mm) | 600 (mm) | 900 (mm) |
|----------------------|---|----------|----------|
| a | 0.15 | 0.20 | 0.20 |
| b | 0.10 | 0.15 | 0.15 |
| c | 0.86 | 1.12 | 1.48 |
| d | 0.56 | 0.72 | 1.08 |
| e | 0.28 | 0.36 | 0.54 |
| f (mm) | 0.34 | 0.45 | 0.68 |
| g | - | - | - |
| h | 0.38 | 0.51 | 0.69 |
| i | - | - | - |
| Concrete Class 15/20 | Volume in (m ³ /m) | 0.37 | 0.56 |
| Application | -Fair to poor subgrade condition -Overfill > 75% of the pipe diameter -Seasonal water flow only | | |
| Remarks | Material for back/overfill shall be approved by the Engineer | | |

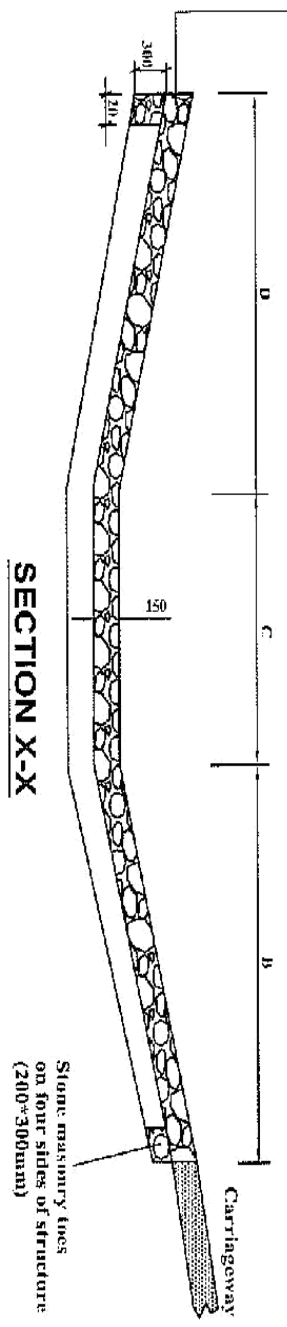


| Diameter (D) | 450 (mm) | 600 (mm) | 900 (mm) |
|--------------|---|----------|----------|
| a | 0.15 | 0.20 | 0.20 |
| b | 0.10 | 0.15 | 0.15 |
| c | 0.86 | 1.12 | 1.48 |
| d | 0.56 | 0.72 | 1.08 |
| e | 0.42 | 0.54 | 0.81 |
| f (min) | 0.23 | 0.3 | 0.45 |
| g | - | - | - |
| h | 0.52 | 0.69 | 0.96 |
| i | - | - | - |
| Concrete | Volume in (m ³ /m) | | |
| Class 15/20 | 0.26 | 0.47 | 0.71 |
| Application | -Fair subgrade condition -Overfill > 75% of the pipe diameter -Seasonal water flow only | | |
| Remarks | Material for back/overfill shall be approved by the Engineer | | |

| Diameter (D) | 450 (mm) | 600 (mm) | 900 (mm) |
|--------------|---|----------|----------|
| a | 0.15 | 0.20 | 0.20 |
| b | 0.10 | 0.15 | 0.15 |
| c | 0.86 | 1.12 | 1.48 |
| d | 0.56 | 0.72 | 1.08 |
| e | 0.46 | 0.52 | 0.78 |
| f | 0.15 | 0.15 | 0.15 |
| g | 0.15 | 0.15 | 0.15 |
| h | 0.81 | 1.02 | 1.38 |
| i | 0.28 | 0.35 | 0.45 |
| Concrete | Volume in (m ³ /m) | | |
| Class 15/20 | 0.37 | 0.61 | 0.92 |
| Application | -Fair to poor subgrade condition -Overfill > 75% of the pipe diameter -Seasonal water flow only | | |
| Remarks | Material for back/overfill shall be approved by the Engineer | | |

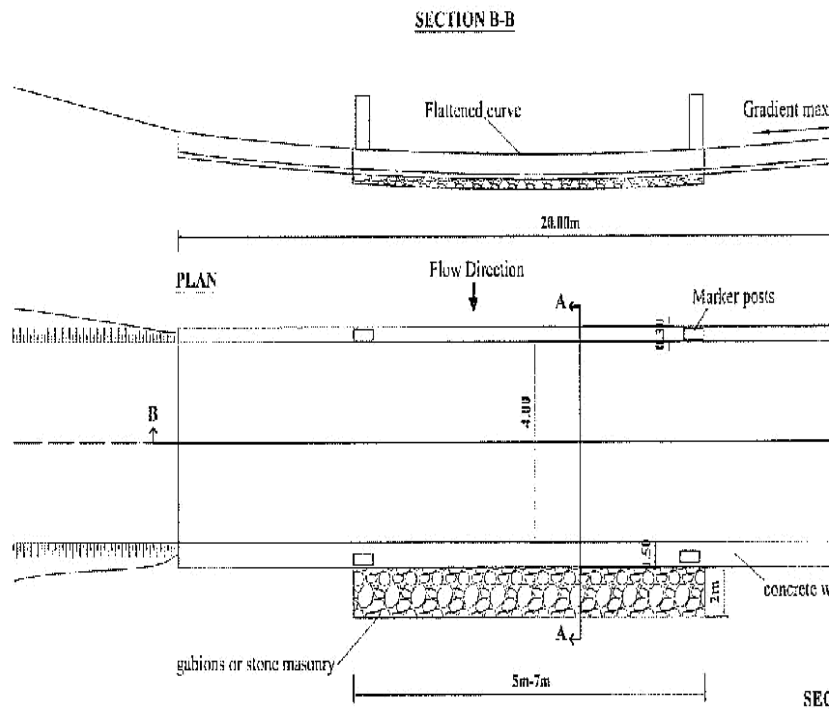


150mm Grouded Stone Pitching
(Cement mortar 1:4)



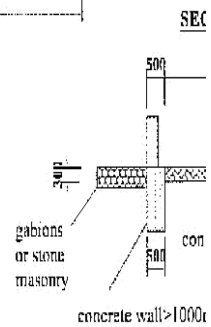
QUANTITIES TABLE

| Cross section | DIMENSIONS | | | | | Excavation(m ³) | Stone masonry (m ³) | 150mm Grouded stone pitching(m ³) |
|---------------|------------|------|-----|------|------|-----------------------------|---------------------------------|---|
| | A | B | C | D | E | | | |
| A | 4000 | 1800 | 600 | 1800 | 4200 | 7.5 | 1.30 | 21.75 |
| | 6000 | 1800 | 600 | 1800 | 4200 | 10.00 | 1.60 | 30.15 |
| B | 4000 | 1400 | 400 | 1800 | 3600 | 7.00 | 1.20 | 18.30 |
| | 6000 | 1400 | 400 | 1800 | 3600 | 9.00 | 1.50 | 25.50 |

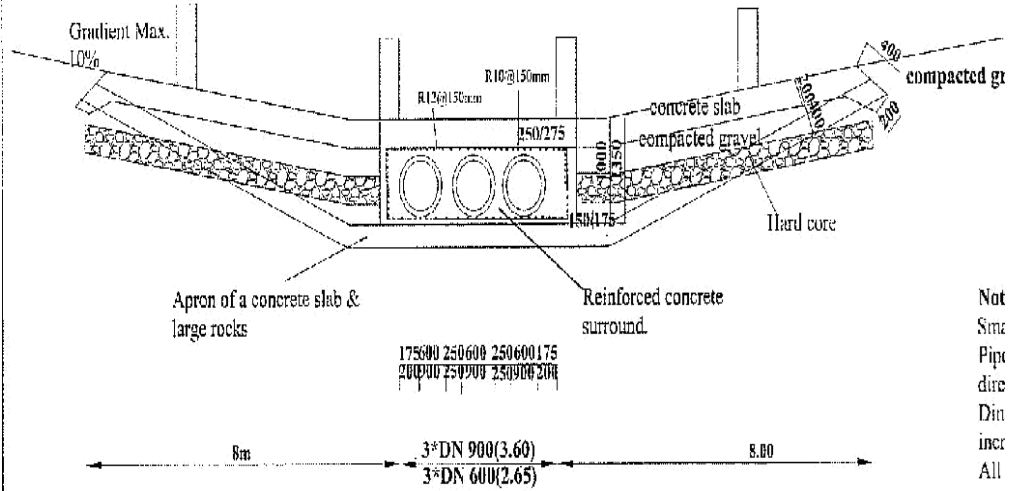


Material : All concrete Class 20/20 (1:2:4)

- 1 Concrete wall : 10m³
- 2 Concrete slab: 24m³ or stone masonry
- 3 Concrete toe : 8m³ or stone masonry
- 4 Gabions / mattress rock fill: 4.3m³ or stone masonry
- 5 Gabions /mattress: 36m²
- 6 Marker posts - precast concrete: 4 no.
- 7 Excavation (slab + toes + gabions) 54.2m³

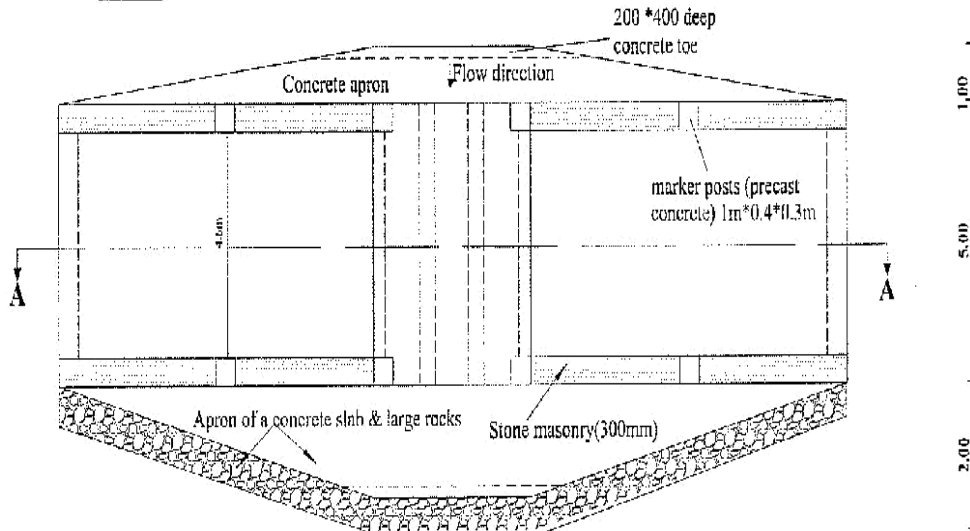


SECTION A-A



Not
Sim
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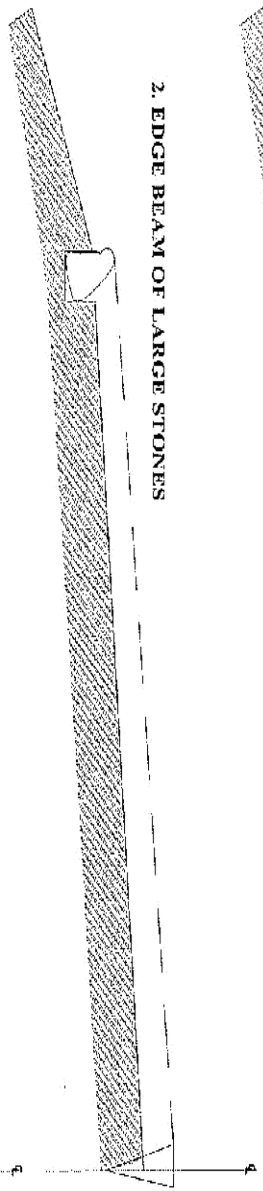
PLAN



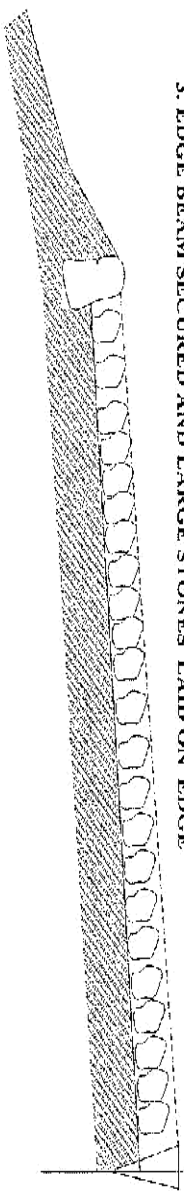
C-20



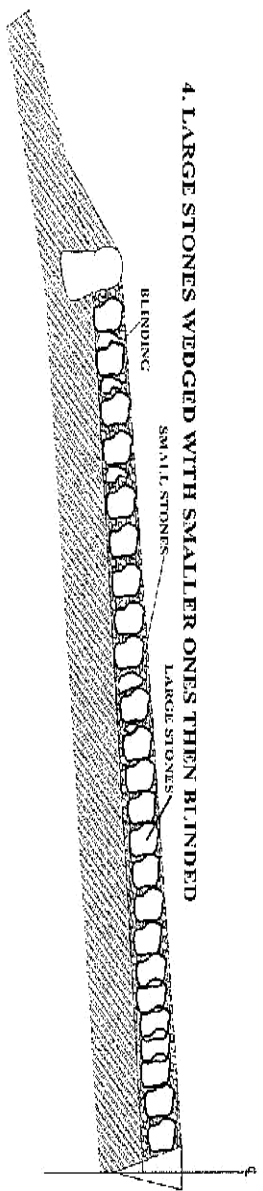
2. EDGE BEAM OF LARGE STONES

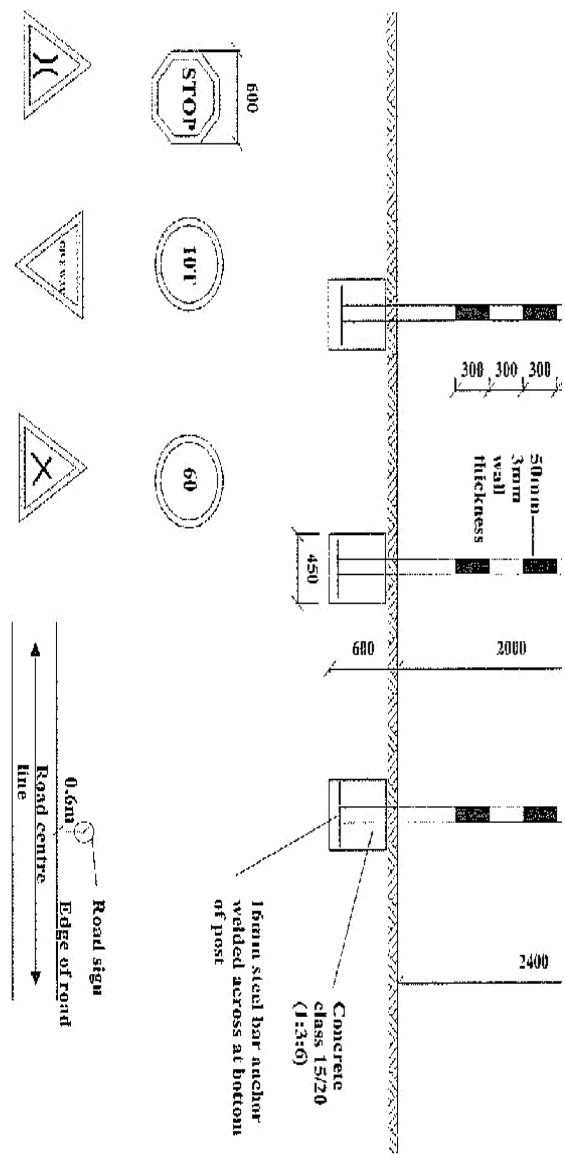


3. EDGE BEAM SECURED AND LARGE STONES LAID ON EDGE



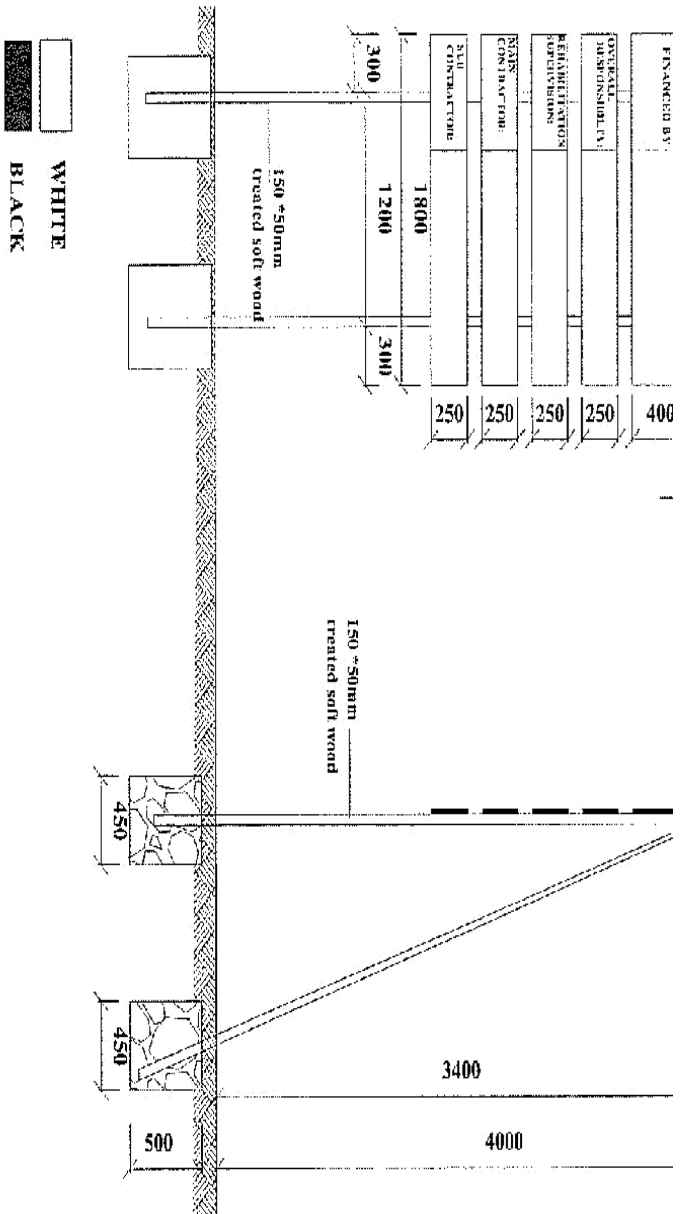
4. LARGE STONES WEDGED WITH SMALLER ONES THEN BLINDED





KEY
 ■ BLACK □ WHITE ■ RED

1. The type of sign required and their location shall be as shown on the Road Plan or as directed by the Engineer.
2. Sign plate to be 2mm thick mild steel plate
3. Sign post to be 50mm fixing clamps/brackets.
4. Sign plate to be fixed to steel tube by 5 Nos M10 bolts and 50mm fixing clamps/brackets.
5. Sign paints shall be reflective.
6. The sign plate and post shall be treated by applying two coats of lead red oxide paint before applying a priming and two finish coats of approved paints. Patterns used shall have a hard, durable and glossy finish.



NOTES

1. The wording of the project sign board and the location to be as directed by the Engineer.
2. Materials to be used for fabrication of signboard shall be pressure impregnated treated softwood timber
3. Wording board posts to be attached to the posts with galvanised nails
4. Project board posts and struts to be embedded in concrete class 20/20(1.2:4)

SECTION VI - SPECIFICATIONS

STANDARD SPECIFICATIONS

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

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

A. SPECIAL SPECIFICATIONS

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 will take precedence.

101 Location of Project

The project is located in Kirinyaga County and is approximately **1 km**.

The road traverses through hilly and rolling terrain from Gacharu to Kiangwaci. The road alignment soils are mainly red coffee soils which have good draining qualities. The project area of influence is moderately populated with intensive small-scale farming as the main stay of rural economy. The land uses adjacent to the project are daily farming, cultivation of crops including coffee, maize, beans and bananas.

102 Extent of Contract.

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

1. Provision of facilities to the supervising Engineers.
2. Site clearance and top soil removal.
3. Earthworks.
4. Construction of subgrade as shown on the drawings or as instructed by the Engineer.
5. 150mm of cement/Lime improved sub base of minimum CBR 60%(HIG60)
6. 125mm of cement /Lime improved base of minimum CBR160%(HIG160)
7. 35mm Asphalt concrete type II wearing course on carriageway and shoulders
8. The carriage way shall be 4.5m wide with shoulders constructed with the material and thickness of sub base and base as above.
9. Construction of standard pipe culverts, box culvert, bridges and improvement of other drainage and soil erosion protection works
10. Relocation of services as necessary
11. Installation or road furniture
12. Maintenance of passage of traffic through and around the works
13. Maintenance of work during construction.
14. The defects liability period shall be 3 months

104 PROGRAMME OF EXECUTION OF THE WORKS

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

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

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

105 ORDER OF EXECUTION OF WORKS

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

107 TAKING OVER CERTIFICATE

Taking over certificate shall be issued upon completion of **KIBURU-NGUGUINI- KIANWE-KIANGAI(D1377) ROAD LOT 2**

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

a) At the commencement of the contract the Contractor will submit in writing to the Engineer, the hours which shall be considered normal working hours, togetherwith the day of the week to be set aside for rest. When approved these shall be maintained throughout the continuance of the Contract.

b) Notwithstanding the provision of the last paragraph of clause 108 of the Standard Specification, the Engineer's Representative normal working hours shall be 8 hours from Monday to Friday and 5 hours on Saturday with Sunday set aside forrest.

If the Contractor wishes to execute permanent works outside these hours, he shall meet any extra costs arising thereof in addition to giving a day's notice in writing.

109 NOTICE OF OPERATIONS

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 givesufficient 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, and storage and transporting of all explosives, ancillary materials and all other items of related kind whatsoever required for blasting.

117 HEALTH, SAFETY AND ACCIDENTS

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 COVID-19, HIV/AIDS 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.

The contractor shall take an active role in civic and public health education for his employees and the community in general. To this end, he shall liaise with the regional office of the Ministry of Health with respect to drawing up and carrying out COVID-19 and HIV/AIDS awareness programmes and testing campaigns for his staff, and initiate and coordinate these as detailed in Clause 143 of the Specifications.

Bill No. 25 is included in the Bills of Quantities for COVID-19 & HIV/AIDS awareness/counselling/testing activities. The Contractor shall in consultation with regional service providers from the Ministry of Health, develop and include in his tender a COVID-19 mitigation measures, HIV/AIDS awareness, testing programmes and cost estimates for approval by the Supervisor, to be funded under this item.

The Contractor shall allow the dissemination and appropriate intervention and remedial measures to curb the spread of COVID-19 pandemic & HIV/AIDS scourge within his camps. These measures will include making condoms readily available to all his staff.

The Contractor shall maintain records of health and safety and make reports concerning the health and safety of his employees as the Supervisor may from time to time prescribe. The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the site from insect nuisance, rats and other pests and reduce the dangers to health and the general nuisance occasioned by the same. The Contractor shall, so far as is reasonably practicable, having regard to local conditions, provide on the site an adequate supply of drinking and other water for the use of his staff and labour.

The Contractor shall allow in his prices and be responsible for the cost of all site welfare arrangements.

119 USE OF EXPLOSIVES

The Contractor shall ensure that he complies with the current Government regulations with regard to explosives. No explosives of any kind shall be used without prior consent of the Supervisor. The Contractor shall be solely responsible for the provision, handling, storage and transporting of all explosives ancillary materials and all other items of related kind whatsoever required for blasting.

120 PROTECTION OF EXISTING WORKS

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

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

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

121 DIVERSION OF SERVICES

Refer to **Section 2603**.

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.

On or before completion of the Contract, the Contractor shall remove all temporary works and shall restore all such land to the condition in which it was immediately prior to the occupation thereof as far as is reasonable and practicable. No separate payment will be made to the Contractor on account of these items and the Contractor must make due allowance for them in his rates.

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

126 MATERIAL AND MANUFACTURED ARTICLES

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

127 INFORMATION FROM EXPLORATORY BORING AND TEST PITS

Notwithstanding the provisions of clause 127 of the Standard Specification, the materials

report if made available to bidders will not form part of the contract documents and will only be for information. The Engineer will not be responsible for the suitability of the borrow pits provided by him or shown on the drawings.

128 STORAGE OF MATERIALS

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

129 TEST CERTIFICATES

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

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

131 SIGNBOARDS

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

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

132.1 HOUSING AND ACCOMMODATION FOR THE ENGINEER'S SENIOR STAFF The contractor shall provide rent for the Engineer's site staff. This staff will generally comprise the following;

| Designation | Number |
|-----------------------------|---------------|
| Resident Engineer | 1 |
| Assistant Resident Engineer | 1 |
| Materials Engineer | 1 |
| Site Surveyor | 1 |
| Senior Inspector | 1 |
| Senior Lab. Technologist | 1 |
| Inspectors | 1 |
| Lab Technician | 3 |
| CAD Technician | 1 |
| Senior Lab. Technologist | 1 |

Payment shall be as per the bills of quantities.

132.4 HOUSING ACCOMMODATION FOR ENGINEER'S JUNIOR STAFF

The Contractor shall provide rent for the Engineer's junior staff as appropriate.

132.7 ENGINEER'S OFFICE, FURNITURE AND EQUIPMENT

The Contractor shall provide a furnished and equipped main office of plan area not smaller than 155 metre squares that is equivalent of the MOR Standard Resident Engineer's Office. This office shall be of weather-proof construction, provided with mosquito proof and burglar-proof windows and lockable doors and suitably insulated against heat and cold, 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.

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.

The main office 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.

Further, the Contractor shall, as provided for in the Bills of Quantities provide and maintain the listed office furniture and equipment as specified in the Appendix to Bill item 1.03 of Bill of Quantities with a dealer's certificate and warranty accompanying the furniture and equipment.

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

132.8 ENGINEER'S LABORATORY AND SURVEY EQUIPMENT

The Contractor shall provide 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 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 Contractor shall provide, install and maintain in a good state of repair, such laboratory, survey and other equipment as listed for the duration of the contract.

Such 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 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. The laboratory shall revert to the Contractor at the end 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 Contractor's 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. List of Laboratory and Survey Equipment shall revert to the Employer at the end of the Contract.

The laboratory equipment shall be purpose-made for use in highways materials testing laboratories and shall comply with the relevant British (BS) or American (AASHTO) Standards.

Resident Engineer's Laboratory Furniture and Equipment

As listed in the Appendix to the bills of quantities.

Resident Engineer's Survey Equipment

As listed in the Appendix to the Bills of quantities.

Survey/Road Design/Bridge Design Software

Where provided for in the Appendix to the Bills of Quantities, the Contractor shall supply the software complete with 5 No. stand-alone user licenses for the duration of the project. The cost shall include supply, installation, maintenance and training of not more than 5 No. Engineer's staff.

137 ATTENDANCE UPON THE ENGINEER AND HIS STAFF

The Contractor shall pay wages (including all overtime) and house all attendant staff to fulfil the requirements of Clause 137 of the Standard Specification. The number of staff required shall be 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.

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 the vehicles provided for in the Bills of Quantities for the exclusive use by the Engineer and his staff throughout the contract.

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.

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 5,000Km.), shall be by vehicle months. Payment for mileage above 5,000Km 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. Where there is a provision in the BoQ for reversion to the Employer, such action shall be effected upon instruction by the Engineer and paid for under the corresponding bill item.

139 RECEIPTED ACCOUNTS

The Contractor maybe 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

Delete this clause entirely and substitute with:

“If the Contractor wishes to execute permanent work outside the Supervisor’s normal working hours, as stated in Clause 108 of the Special Specification, then the payment for the overtime for the Supervisor’s Junior Staff shall be reimbursed in full by the Contractor to the Supervisor’s Representative including 20% for Administrative overheads

If the Contractor wishes to execute works on the regular basis outside the Supervisor’s normal working hours (Clause 108) over a prolonged period, the Supervisor may, if he deems necessary, employ additional supervisory staff for which the required salaries including the percentage for administrative overheads shall be in full by the Contractor to the Supervisor’s Representative and the Contractor shall provide the required adequate accommodation facilities for such staff at his own costs.

The Contractor shall not be reimbursed any of these costs.”

141 MEASUREMENT AND PAYMENT

All measurements and payments shall be as per the Standard Specifications.

142 LIQUIDATED DAMAGES

The rate of Liquidated Damages shall be as indicated in the Appendix to Form of Bid .

144 COMPLIANCE WITH SPECIFICATIONS AND REMEDIAL WORK

All materials, plant, labour and workmanship in and connected with the execution of the works shall be the best of their respective kinds without regard to any trade terms and the Contractors shall comply to these and in other respects with the relevant clauses and shall carry out the contract in a proper and workmanlike manner and in strict accordance with the working drawings and instructions of the Supervisor.

When any part of the Works or any plant or material is found upon examination by the Supervisor not to conform to the requirements or is at any stage before final acceptance damaged so that it no longer conforms to the requirements of the Specifications, the Supervisor may order its complete removal and replacement, at the Contractor's expense, with satisfactory work, plant or material or he may permit the Contractor to apply remedial measures in order to make good any such defects or damage. The actual remedial measures taken shall at all times be

entirely at the Contractor's own initiative, risk and cost, but subject to the Supervisor's approval regarding the details thereof.

In particular, remedial measures must ensure full compliance with the Specifications for the final product, shall not endanger or damage any other part of the Works and shall be carefully controlled and submitted to the Supervisor for examination when completed or at any intermediate stage as may be required.

For the guidance, an indication is given below of what would normally be required in the more common cases of defects or damage, but the Supervisor will in no way be bound to approve of or adhere to the measures given below as the actual remedial measures will be dictated by the circumstances of each particular case.

(a) Earthworks

- i) Where a cut slope has been over excavated or under cut, backfilling will not normally be allowed and the entire slope may have to be re-trimmed to obtain a uniform slope.
- ii) Where the floor of a cutting has been taken too deep, it will normally require backfilling and re-compacting with selected gravel in the case of soil or gravel excavations and with crushed stone material or suitably sized rock in the case of hard excavations. All necessary measures shall be taken to drain away ground water that may accumulate in backfilled sections.
- iii) Excess widths of fills will have to be trimmed back.
- iv) Where erosion has damaged the surface of cuts or fills, the damage shall be made good by backfilling with suitable material and re-trimming. In more serious cases, the slopes may have to be cut back and back-filled by benching and compacting to the required standard

of compaction with suitable small equipment and then re-trimmed.

(b) Stabilising

Any sections failing to meet the requirements specified or damaged to the extent that they require breaking up and re-compaction will have to be re-stabilised with the type and quantity of stabilising agent ordered by the Supervisor. The Supervisor may also order that the layer be removed entirely and replaced with fresh material to be stabilised.

(c) Local Defects in Pavement Layers

Where remedial measures are taken to make good local defects, the length and width of the area to be repaired by machines shall be such as will be necessary to accommodate the full width of the machines used and a reasonable length to ensure effective operation.

The depth to which material will have to be removed will depend on the type of material. Gravel will require breaking up to a depth of at least 75mm and crushed stone will usually require breaking up over its full depth. Asphalt material will normally require removal for its full depth.

(d) Concrete

Concrete work will normally require the cutting back and complete removal of any weak or honeycombed sections and making good using special epoxy adhesives to bind fresh concrete to old concrete. Cracks when permitted to remain, shall be injected with suitable epoxy compounds and test cores drilled to test the efficiency of the injection process.

145 AVAILABILITY OF MATERIALS

The Contractor shall be responsible for obtaining all materials from any local or foreign source. The Contracting Authority shall not be liable for any additional costs due to shortage of materials.

The material located by the Contractor shall be subject to the approval of the Supervisor before use of the Works.

146 ENVIRONMENTAL QUALITY PROTECTION

This section shall cover the implementation of all the provisions covered in the NEMA Licenses and shall not whatsoever be limited to the items detailed below.

146.1 Landscape Preservation

a) The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the Contractor's construction operations and equipment. The edges of clearings and cuts through trees, shrubbery and vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Movement of crews and equipment within

the right-of-way and over routes provided for access to the work shall be performed in a manner to prevent damage to grazing land, crops and other property.

(b) Reseeding and Replanting

Special reseeded or replanting will not be required under these specifications; however, on completion of the work, all non-permanent works shall be scarified and left in a condition that will facilitate natural re-vegetation, provide for proper drainage, and prevent erosion. All non-permanent works destruction, scarring, damage or defacing of the landscape resulting from the Contractor's operations shall be repaired, replanted, reseeded, or otherwise corrected as directed by the Supervisor and at the Contractor's expense.

The Contractor shall tend to grass and tree seedlings planted under this section for a period not less than half the project construction period to allow for them to take root.

(c) Construction Roads

The location, alignment and grade of construction roads shall be subject to approval of the Supervisor. When no longer required by the Contractor, construction roads shall be restored to the original contour and made impassable to vehicular traffic. The surfaces of such construction roads shall scarified as needed to provide a condition which will facilitate natural re-vegetation, provide for proper drainage and prevent erosion.

(d) Construction Facilities

The Contractor's camp, workshop, office, and any other construction facilities shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On completion of the Works, all storage and construction buildings, including concrete footings and slabs, and all construction materials and debris shall be removed from the site. The area shall be re-graded, as required, so that all surfaces drain naturally, blend with the natural terrain and are left in a condition that will facilitate natural re-vegetation, provide for proper drainage and prevent erosion.

(e) Blasting Precautions

The Contractor shall adopt precautions when using explosives which will prevent scattering of rocks, stumps, or other debris outside the work area and prevent damage to surrounding trees, shrubbery and vegetation.

146.2 Preservation of Trees and Shrubbery

a) Preservation

All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be preserved and shall be protected from any damage that may be caused by the Contractor's construction operations and equipment.

Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, blasting, excavating, dumping, chemical damage, or other operations; and the Contractor shall adequately protect such trees by use of protective barriers or other methods approved by the Supervisor. The removal of trees or shrubs will be permitted only after

prior approval by the Supervisor.

The layout of the Contractor's construction facilities such as workshops, warehouses, storage areas and parking areas; location of access and haul routes; and operations in borrow and spoil areas shall be planned and conducted in such manner that all trees and shrubbery not approved for removal by the Supervisor shall be preserved and adequately protected from either direct and indirect damage by the Contractor's operations. Except in emergency cases or when otherwise approved by the Supervisor, trees shall not be used for anchorage. Where such use is approved, the trunk shall be wrapped with a sufficient thickness of approved protective material before any rope, cable or wire is placed.

b) Repair of Treatment of Damage

The Contractor shall be responsible for injuries to trees and shrubs caused by his operations. The term "injury" shall include, without limitation, bruising, scarring, tearing and breaking of roots, trunk or branches. All injured trees and shrubs shall be repaired or treated without delay, at the Contractor's expense. If damage occurs, the Supervisor will determine the method of repair or treatment to be used for the injured trees and shrubs as recommended by an experienced horticulturist or a licensed tree surgeon provided by and at the expense of the Contractor. All repairs or treatment of injured trees shall be performed under the direction of an experienced horticulturist or a licensed tree surgeon provided by and at the expense of the Contractor.

Where tree climbing is necessary, the use of climbing spurs will not be permitted. If climbing is necessary, safety ropes will be required.

c) Replacement

Trees or shrubs [hat, in the opinion of the Supervisor, are beyond saving shall be removed and replaced early in the next planting season. The replacements shall be the same species, or other approved species, and of the maximum size that is practicable to plant and sustain growth in the particular environment. Replacement trees and shrubs shall be guyed, watered and maintained for a period of 1 year. Any replacement tree or shrub that dies shall be removed and replaced as directed by the supervisor, with such replacements being maintained for a period of 1 year from the date of replacement.

146.3 Prevention of Water Pollution

a) General

The Contractor's construction activities shall be performed by methods that will prevent entrance, or accidental spillage of solid matter, contaminants, debris and other pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and wastes include, but are not restricted to, refuse garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oils, bitumen and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution.

b) Dewatering

Dewatering work for structure foundations or earthwork operations adjacent to, or

encroaching on, streams or watercourses shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers,

setting ponds or by other approved means. Excavated materials or other construction materials shall not be stockpiled or deposited near or on stream banks, lake shorelines, or other watercourse perimeters where they can be washed away by high water of storm runoff or can in any way encroach upon the watercourse itself.

c) Turbidity

Turbidity increases in a stream or other bodies of water that are caused by construction activities shall be limited to the increases above the natural turbidities permitted under the water quality standards prescribed for that stream or body of water. When necessary to perform required construction work in a stream channel, the prescribed turbidity limits may be exceeded, as approved by the Supervisor, for the shortest practicable period required to complete such work.

This required construction work may include such work as diversion of a stream, construction or removal of cofferdams, specified earthwork in or adjacent to a stream channel, pile driving and construction of turbidity control structures. Mechanized equipment shall not be operated in flowing water except as necessary to construct crossings or to perform the required construction.

d) Wastewater

Wastewater from aggregate processing, concrete batching or other construction operations shall not be allowed to enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel- filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates or other approved methods. Any such wastewater discharged into surface waters shall contain the least concentration of settleable material possible. For the purpose of these specifications, settleable material is defined as that material which will settle from the water by gravity during a 1-hour quiescent detention period.

e) Compliance with Laws and Regulations

The Contractor shall comply with applicable local laws, orders, regulations and water quality standards concerning the control and abatement of water pollution.

146.4 Abatement of Air Pollution

- a) The Contractor shall comply with applicable local laws and regulations concerning the prevention and control of air pollution.
- b) In the conduct of construction activities and operation of equipment, the Contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent, and otherwise minimize atmospheric emissions or discharges of air contaminants. The emission of dust into the atmosphere will not be permitted during the manufacture, handling and storage of concrete aggregates, and the Contractor shall use such methods and equipment as are necessary for the collection and disposal, or prevention, of dust during

these operations. The Contractor's methods of storing and handling cement and pozzolans shall also include means of eliminating atmospheric discharges of dust.

- c) Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or other inefficient operating conditions, shall not be operated until corrective repairs or adjustments are made.
- d) Burning of materials resulting from clearing of trees and bush, combustible construction materials, and rubbish will be permitted only when atmospheric conditions for burning are considered favourable and when authorized by appropriate local air pollution or fire authorities. In lieu of burning, such combustible materials may be disposed of by other methods as provided in Clause 145.9. Where open burning is permitted, the burn piles shall be properly constructed to minimize smoke. In no case shall unapproved materials, such as tyres, plastics, rubber products, asphalt products, or other materials that create heavy black smoke or nuisance odours, be burned.
- e) Storage and handling of flammable or combustible materials, provisions for fire prevention, and control of dust resulting from drilling operations shall be in accordance with the applicable provisions of construction industry safety standards.
- f) Dust nuisance resulting from construction activities shall be prevented in accordance with Clause 145.5.

146.5 Dust Abatement

a) During the performance of the work required by these specifications or any operations appurtenant thereto, whether on right-of-way provided by the Contracting Authority or elsewhere, the Contractor shall furnish all the labour, equipment, materials, and means required, and shall carry out proper and efficient measures, wherever and as often as necessary to reduce the dust nuisance, and to prevent dust which has originated from his operations from damaging crops, orchards, cultivated fields, and dwellings, or causing a nuisance to persons. The Contractor will be held liable for any damage resulting from dust originating from his operations under these specifications on Contracting Authority right-of-way or elsewhere. The Supervisor may direct additional sprinkling or other measures for dust abatement if necessary to obtain adequate control.

146.6 Noise Abatement

The Contractor shall comply with applicable local laws, orders, and regulations concerning the prevention, control and abatement of excessive noise. Night time blasting, the use of jackhammers, pile driving, or other operations producing high intensity impact noise may be performed only upon approval of the Supervisor.

146.7 Light Abatement

- a) The Contractor shall exercise special care to direct all stationary floodlights to shine downward at an angle less than horizontal. These floodlights shall also be shielded so as not to be a nuisance to surrounding areas. No lighting shall include a residence in its direct beam.
- b) The Contractor shall be responsible for correcting lighting problems when they occur as approved by the Supervisor.

146.8 Preservation of Historical and Archaeological Data

a) Local legislation provides for the protection, preservation and collection of scientific, pre-historical, historical and archaeological data (including relics and specimens) which might otherwise be lost due to alteration of the terrain as a result of any construction project.

If necessary, an archaeological survey will be made along the proposed haul roads to establish the presence of any archaeological or historic remains.

b) Should the Contractor through his agent or any of his employees in the performance of this contract discover evidence of possible scientific, pre-historical, historical, or archaeological data, he will notify the Supervisor immediately giving the location and nature of the findings. Written confirmation shall be forwarded within 2 days.

The Contractor shall exercise care so as not to damage artefacts of fossils uncovered during excavation operations and shall provide such cooperation and assistance as may be necessary to preserve the findings for removal or other disposition by the Government.

c) Where appropriate, by reason of discovery or archaeological finds, the Supervisor may order delays in the time of performance, or changes in the work, or both. If necessary, an archaeological survey should be made along the proposed haul roads to establish the extent of the cultural resources. If such delays, or changes, or both, are ordered, the time of performance and contract price shall be adjusted in accordance with the applicable clauses in the general provisions of this contract.

The Contractor shall insert this paragraph in all sub-contracts, which involve the performance of work on the terrain of the site.

146.9 Pesticides

a) Pesticides include herbicides, insecticides, fungicides, rodenticides, priscicides, surface disinfectants, animal repellants and insect repellants. Should the Contractor find it necessary to use pesticides in work areas of this contract, he shall submit this plan for such use to the Supervisor for written approval. Such plan shall be subject to submittal to and review by a Pest Control Specialist, if necessary, before the plan is approved. Pesticides shall only be those registered with the respective agency when using pesticides.

b. The Contractor shall read and comply with all labelling requirements when using pesticides.

146.10 Clean up and Disposal of Waste Material

a) The Contractor shall, at all times, keep the construction area, including storage areas used by him, free from accumulations of waste materials or rubbish.

b) Prior to completion of the work, the Contractor shall remove from the vicinity of the work all plant facilities, buildings, rubbish, unused materials, concrete forms and such like material, belonging to him or used under his direction during construction. All work areas shall be graded and left in a neat

manner conforming to the natural appearance of the landscape as provided in Clause 145.1.

c) Any residue deposited on the ground from washing out transit mix trucks or any similar concrete operations shall be buried or cleaned up in a manner acceptable to the Supervisor.

d) In the event of the Contractor's failure to perform the above work, the work may be performed by the Contracting Authority, at the expense of the Contractor, and his surety or sureties shall be liable therefore.

e) Disposal of Waste Material

(i) General

Waste materials including, but not restricted to, refuse, garbage, sanitary wastes, industrial wastes, and oil and other petroleum products, shall be disposed off by the Contractor. Disposal of combustible materials shall be by burying, where burial of such materials is approved by the Supervisor; by burning of approved materials is permitted in accordance with local laws; or by removal from the construction area. Disposal of non-combustible materials shall be by burying, where burial of such materials is approved by the Supervisor, or by removal from the construction area. Waste materials removed from the construction area shall be dumped at an approved dump area.

ii) Disposal of Material by Burying

Only materials approved by the Supervisor may be buried. Burial shall be in pits at locations shown on drawings or as otherwise approved by the Supervisor.

The pits shall be covered by at least 06 metres of earth material prior to abandonment.

iii) Disposal of Material by Burning

All burning shall be in accordance with local laws. All materials to be burned shall be piled in designated burning areas in such a manner as will cause the least fire hazards.

Burning shall be thorough and complete and all charred pieces remaining after burning, except for scattered pieces shall be removed from the construction area and disposed of as otherwise provided in this paragraph. The Contractor shall, at all times, take special precautions to prevent fire from spreading beyond the piles being burned and shall be liable for any damage caused by his burning operations. The Contractor shall have available, at all times, suitable equipment and supplies for use in preventing and suppressing fires and shall be subject to all laws and regulations locally applicable for pre-suppression, suppression and prevention of fires.

(iv) Disposal of Material by Removal

Material to be disposed of by removal from the construction area shall be removed from the area prior to the completion of the work under these specifications. Material to be disposed of by dumping shall be hauled to an approved dump. It shall be the responsibility of the Contractor to make any necessary arrangements with private parties and with local officials pertinent to locations and regulations of such dumping. Any fees or charges required to be paid for dumping of materials shall be paid by the contractor.

146.11 Fire and Prevention

a) The Contractor shall prepare and carry out an effective fire-protection and prevention

Programme covering all phases of construction under this contract. The plan shall be submitted to the Supervisor, prior to the start of construction operations. At the option of the Contractor, the fire-protection and prevention Programme may be incorporated into a safety Programme.

b) The Contractor shall provide and maintain in a ready condition near each active work location a fire-tool cache consisting of at least one 19 litre back pump filled with water, two axes, two McLeod tools, and enough shovels to equip five workers for fire fighting purposes. A sufficient number of employees familiar with use of the equipment shall be available at all times when work is in progress. In the event of a fire resulting from project operations, the local fire-protection agency having jurisdiction shall be notified, and the Contractor shall take immediate control action with any and all available equipment and manpower.

c) In areas where significant fire hazard exists as determined by the Supervisor, the Contractor shall provide a fire patrol for 1 hour after shutdown of construction operations each day during the dry season

d) In areas where grass, bush, or other natural fuels are present and where roads or creek beds will not serve the purpose. The Contractor shall establish a firebreak on the uphill side of the project. The firebreak shall be within the right-of-way acquired by the Contracting Authority

146.12 Environmental Management Plan (EMP)

The Environmental Management Plan (EMP) prepared for this project is presented at the end of this section. The Contractor will take this plan, upgrade, amend and reconcile it, where appropriate, to his construction proposals. The Supervisor's Representative will then review this plan and make necessary amendments. This will then be referred to as the Project Environmental Management Plan (PEMP). The PEMP will form the principle document upon which all Environmental Monitoring will be based throughout the project.

146.13 Measurement and Payment

No separate measurement and payment shall be made for complying with Clause 146.1 to 146.12. The cost of all work required by these clauses shall be included in the Contractor's rates for other items of work under this Contract.

148 CONTRACTOR'S MOBILIZATION AND DEMOBILIZATION

No separate payment shall be made to the Contractor in respect of mobilization and demobilization of plant and equipment, and such costs shall be deemed to have been included in the rates entered by the Contractor in the Bills of Quantities.

SECTION 2 - MATERIALS AND TESTING OF MATERIALS

202 TESTING BY THE CONTRACTOR

Add the following paragraph to Clause 202 of the Standard Specifications

The onus rests with the Contractor to produce work which conforms in quality and accuracy of detail to the requirements of the Specifications and drawings, and the Contractor must, at his own expense institute a quality control system to ensure adequate supervision and positive control of the Works at all times, and the Contractor must provide chainmen and labourers for the Supervisor to carry out checks on the Works.

The Contractor shall submit to the Supervisor the results of the relevant tests, measurements and levels indicating compliance with the specifications on completion of every part of the work.

The Contractor shall make his laboratory accessible to the Supervisor's Representative for cross checking the test results and inspection during material testing in the laboratory.

SIEVES

Amend the following: -

204.1 Sieve sizes

A standard set of sieves for general use shall consist of the following sieve sizes mm: 100-63-50-37.5-25-20-14-10-6.3-5-4-2-1-0.6-0.5-0.425-0.300-0.150-0.075 mm. The sieves from 0.425 to 0.075 mm shall be suited for wet sieving.

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.

- i) After four days soaking in the case of neat materials and
- ii) After seven days curing plus seven days soaking in the case of cement improved materials.

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|------------|--|
| 207 | CEMENT |
| | Delete "KS 02-21" and replace with "KS 1725 2001 CEM 1 42.5" |
| 211 | BITUMINOUS BINDERS |
| | (a) Requirements: - |

(i) Straight-run Bitumen

In addition to the requirements of the Standard Specification, the ash content of penetration grade bitumen shall not exceed 0.5% by weight.

b) Types of Bitumen

Prime coat shall be type MC 30Tack coat shall be type K 1-60

For surface dressing, binder 80/100 cut back bitumen shall be used For asphalt concrete, 80/100 penetration grade bitumen shall be used.

218 PAINT FOR ROAD MARKING

a) **Colour**

(i) White

Delete line 1 and 2 and insert:

“The colour of white marking material shall be to BS colour No. 102 of BSS331C.”

(ii) Yellow

Delete line 1 and 2 and insert:

"The colour of yellow marking material shall be to BS colour No.305 (lemon) ofBSS 331 C, 1964 (Colour 0-002BCC; 1955).

b) **Drying Time**

Delete line 1, 2, and 3 and insert instead:

"The material shall have a drying time such that it can be spread uniformly on the road over the line width by the traffic line marker and shall dry sufficiently to withstand traffic within a maximum of 15 minutes after application. This condition shall be satisfied within the climate conditions obtained in any part of Kenya, provided that the bitumen surface shall be completely dry before application of the thermoplastic material and that the painted line shall remain free from water for 15 minutes from the application of the thermoplastic material by the machine or by brush."

c) **Reflectorization**

In line 3, delete "80%;" and insert instead "85%. ”

In line 4, delete "65%" and insert instead "60%".

d) **Materials**

(i) White Pigment

The pigment used for white shall contain sufficient titanium dioxide and be atleast a minimum of 29% of the total pigment composition. The titaniumdioxide shall comply with Type A (Anatase) or Type R (Rutile) of BSS 1851,1967 except that the purity of titanium dioxide shall be 98%.

(ii) Yellow Pigment

Lead chromate yellow pigment shall be a minimum of 33% of the total pigment composition.

(iii) Solid Content

The thermoplastic material shall have a minimum solid content of 60%.

e) Fineness of Grind

The thermoplastic material shall have a fineness of grind reading not exceeding 75 µm.

f) Specular Gloss at 60°

The thermoplastic material shall have a specular gloss of the dry film not exceeding 20.

g) Resistance to Cold Water

The dry material film shall show no wrinkling or blistering immediately after having been removed from the water. After a recovery period of two hours, the immersed portion of the film shall have a scratch resistance of at least 1500 g and shall have no whitening.

h) Flexibility

The material film shall not detach or show any signs of flaking or cracking along the bed after it has been tested with the appropriate mandrel.

i) Hiding Power

The thermoplastic material shall show a contact ratio of not less than 90% for white and 80% for yellow thermoplastic material.

j) Resistance to Grit Abrasion

The substrata shall not be visible after the abrasion test described in the standard being used.

k) Resistance to Bleeding

There shall be no colour change after the bleeding test is carried out in a manner prescribed in the standard being used.

l) Resistance to Diesel

The thermoplastic material shall show no signs of blistering after the diesel resistant test of the thermoplastic material applied on a panel.

m) Density

The specific gravity of road marking thermoplastic materials shall be between 1.0 and 1.8.

n) Consistency (Viscosity)

Before any dilution, the thermoplastic material should give a minimum viscosity of 70 k u (0.7 pas).

o) Durability (Degree of Erosion)

When tested as prescribed in the standard being used, the total wear index for the test area on each marked trial line shall not exceed 35 at each regular inspection interval over a 12 month period.

226 FREQUENCY OF TESTING

In (i) (ii) (iii) and (iv) delete "T99" and substitute "T180" instead.

xi) Reclaimed Bituminous Materials

The properties of reclaimed bituminous materials shall be determined at the same frequency as the constituent materials.

228 OUTLINE TESTING AND INSPECTION BY THE SUPERVISOR

The Supervisor will at regular intervals inspect and test materials and completed work for compliance with the specified requirements. Samples and lot sizes for routine testing shall be at the Supervisor's discretion.

All sections of completed work including all test results carried out by the Contractor, shall be submitted to the Supervisor for routine inspection and testing and the Contractor shall not cover up or construct any work on top of sections of completed work before written approval has been given by the Supervisor.

The Contractor shall arrange the submission of work for testing in such a manner that the Supervisor will have the opportunity to inspect and test the Works

SECTION 3 - SETTING OUT & TOLERANCES

301 SETTING OUT

a) Basic Survey

The basic survey provided by the Supervisor to the Contractor shall include:

- (i) A traverse line which is referenced by steel pins in concrete located alongside the works, and
- (ii) A computer printout of the geometric centerline which will enable the Contractor to set out these lines.

| | |
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| | Any abortive setting out resulting from survey errors on the part of the Contractor, and any construction work carried out on the basis of such abortive setting out, be rectified entirely at the Contractor's expense. |
| | Detailed Setting Out |
| | Reference pegs shall be 50 mm x 50 mm in section, 600 mm long, driven 400 mm firmly into the ground and painted white above ground. The offset from the centreline shall be indicated by a small nail, 20 mm to 25 mm long, with its head driven flush with the top of the peg. |
| | Chainages, offset and reference elevation shall be clearly indicated on the side(s) the peg to the satisfaction of the Supervisor, This pin shall be co-ordinated and heightened 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. |
| | All the main points of curves shall be referenced clear off the works on either side the centerline by pins in concrete class 20, All reference pegs shall be maintained long as they are required by the Supervisor to check the accuracy of the Works, |
| | After cutting of benches and prior to commencement of earthworks or sub-grade works, Contractor shall take cross-sections again and submit the copy of the same Engineer for agreement. These cross-sections shall then be used as basis of measurement for all subsequent layers, unless otherwise stated. |
| | Commencement of the works shall not be permitted until this basic survey data been provided and approved by the Engineer for at least 5 Km of the road. |

c) Grid System

The start and finish of geometric elements along the centerline of the horizontal alignment and intermediate points at regular intervals between these have been identified by coordinates which refer to UTM Grid System, The datum refers to Survey of Kenya Beacons, The Contractor shall make himself fully conversant with this system prior to commencement of any survey work.

302 TOLERANCES

a) Surface regularity

The tolerances below a straight edge for Base and Bituminous wearing course given in Table 3-1 are amended from 6 mm to 4mm

b) Pavement Widths

The edges of the wearing course, base and sub-base shall nowhere lie closer to the carriageway centreline than the dimensions shown on or calculated from the design data given on the drawings or as amended by the Supervisor in writing to the Contractor, and the half widths of wearing course, base and sub-base measured at any point along the road shall not exceed the nominal width by more than 50 mm for wearing course, base and sub-base.

c) Drainage

The maximum deviation from the specified horizontal line of a pipe culvert shall be 30 mm in 3 m and the vertical line 30 mm in 15 m. The Contractor shall correct any excess deviation before proceeding with the work.

The invert level of drainage ditches both lined and unlined shall be within +0 mm to -50 mm of that specified by the Supervisor and trimmed such that water does not pond. In the event of the Contractor over-excavating any lined or unlined drainage ditches or channels outside the specified tolerances, the Contractor will be held responsible for any additional work ordered by the Supervisor as being, in his opinion, necessary to maintain acceptable invert grades. Such remedial work shall be carried out entirely at the Contractor's expense. Replacement of the over-excavated material within the ditches and channels will not be permitted, unless such material is compacted and that part of the channel is lined, all to the satisfaction of the Supervisor. The Contractor should be aware that the most likely form of remedial work to be ordered by the Supervisor for unlined ditches would be the deepening of the remainder of the ditch or channel downstream of the over-excavated section for such length as the Supervisor deems necessary to avoid ponding, and, in his opinion, sufficient to adequately cope with the design flows.

SECTION 4- SITE CLEARANCE AND TOP SOIL STRIPPING

401 SITE CLEARANCE

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

402 REMOVAL OF TOPSOIL

Topsoil shall include up to 200mm depth of any unsuitable material encountered and shall be removed only in areas instructed by the Supervisor. Topsoil shall be removed to a depth as directed by the Supervisor and evenly spread within the road reserve, or stockpiled for top soiling of side slopes as directed by, and to the satisfaction of the Supervisor.

403 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS

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

SECTION 5 - EARTHWORKS

504 PREPARATION PRIOR TO FORMING EMBANKMENT

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

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

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

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

505 CONSTRUCTION OF EMBANKMENTS

Only material approved by the Engineer shall be used in embankments. Fill material shall comply with the following requirements:

- Organic matter less than 5% by weight
- Swell less than 3%
- Plasticity Index less than 50%

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 10% measured after a four (4) days soak on a laboratory mix compacted to a dry density of 100% MDD (AASHTO T99).

Improved subgrade is defined on the Drawings or as shall be specified by the Engineer and shall comply requirements:

- CBR of not less than 14% measured after 4 days soak on a laboratory mix compacted to a dry density of 95% (AASHTO T99)
- Plasticity Index less than 30%
- Swell less than 1% on the laboratory mix sample.
- Placed in layers not exceeding 175mm thick.

The improved subgrade thickness shall be as follows:

- Class S1 Native Subgrade (CBR 2-5%) : 325mm
- Class S2 Native Subgrade (CBR 5-10%) : 200mm

Improved subgrade shall not be required where the average bearing strength of the in-situ soil exceeds 10%.

508 COMPACTION OF EARTHWORKS

At pipe culverts, all fill above ground level around the culverts shall be compacted to density of 100%

MDD (AASHTO T.99) up to the level of the top of the pipe or top of the surround(s), if any and for a width equal to the internal diameter of the pipe on either side of the pipe(s) or surround(s) as applicable.

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

Notwithstanding the provision of clause 503 of the Standard Specification, compaction of sub-grade material (i.e. material immediately below formation) in cut areas shall not be carried out by the Contractor in areas where the formation is formed in hard material, unless specific instructions to the contrary are issued by the Engineer.

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

511 BORROW PITS

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

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

517 MEASUREMENT AND PAYMENT

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

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

601 GENERAL

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

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

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

SECTION 7 - EXCAVATION AND FILLING FOR STRUCTURES

703 EXCAVATION OF FOUNDATIONS FOR STRUCTURES

Before commencing excavation for the foundation of any structure, the Contractor shall open up one or more trial pits within the areas of the foundation as directed by the Engineer's representative before excavating for the foundation. Where a trial pit is excavated to a level below the founding level of the structure, it shall be backfilled to that level with approved material or concrete as directed by the Engineer's representative.

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

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

707 BACK-FILLING FOR STRUCTURES

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

709 EXCAVATIONS FOR RIVER TRAINING AND NEW WATER COURSES

Payments for river training and establishment of new water-courses 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 will be undertaken as a soil conservation measure, with soil erosion minimised by ensuring that proper protection works are carried out along the drains using stone pitching. Most of the sections shall be stone pitched especially areas where we have steep slopes to minimise undermining of the road by rain water or as may be instructed by the Engineer.

Stone pitching to drains, inlets and outlets of culverts to embankments and around structures shall consist of sound unweathered rock, which when soaked will withstand a crushing stress of 20N/mm^2 , and approved by the Engineer.

The stone as dressed shall be roughly cubical in shape with minimum dimensions of 150 x 150mm for normal thickness of stone pitching. Grouting will be done for all stone pitching areas and the top line of the stone pitching should be grouted/sealed with concrete class 15/20.

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

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 re-construction shall be carried out in accordance with Clause 710 of the Standard Specifications.

711 GABIONS

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

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

The Works shall involve removal of the damaged gabions / rocks, excavation to the correct levels and grades as directed by the Engineer, and in accordance with Clause 711 of the Standard Specifications and reconstruction with new gabions and other necessary materials as necessary. The damaged gabions shall be recovered and transported to the nearest KeRRA Engineer's Yard.

712 RIP-RAP PROTECTION WORK

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

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

714 BACKFILL BELOW STRUCTURES

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

SECTION 8 - CULVERTS AND DRAINAGE WORKS

801 SCOPE OF SECTION

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

In addition, this Section covers: -

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

804 EXCAVATION FOR CULVERTS AND DRAINAGE WORKS

In the Standard Specifications, make the following amendments: -

- a) In paragraph 6, line 3, and in paragraph 7, line 5 and in paragraph 11, line 6, delete "95%" and insert "100%".

b) Removal of Existing Pipe Culverts

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

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

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

(a) Removal of Other Existing Drainage Structures

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

(b) Excavation for Culverts and Drainage Works

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

805 EXCAVATION IN HARD MATERIAL

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

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

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

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

809 BEDDING AND LAYING OF PIPE CULVERTS

Concrete pipes shall be laid on a 150mm thick concrete bed of class 15/20 and the pipes shall be bedded on 1:3 cement: sand mortar at least 50mm thick, 150mm wide and extending the full length of the barrel.

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

810 JOINTING CONCRETE PIPES

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

812 BACKFILLING OVER PIPE CULVERTS

In the Standard Specifications, clause 812

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

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

814.1 SUBSOIL DRAINS

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

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

814.2 FILTER FABRIC TO SUBSOIL DRAINS

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

815 INVERT BLOCK DRAINS AND HALF ROUND CHANNELS

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

817 REPAIRS TO DRAINS

Cleaning and Repair of Existing Drains

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

The work shall consist of:

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

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

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 bills 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 80mm thickness and lengths or widths not exceeding 1000mm. Joints shall be at least 15mm wide filled with 1:2 cement sand mortar.

Spoil Material

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

818 SCOUR CHECKS

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

819 CLEANING AND MAINTENANCE

De-silting of Pipe Culverts

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

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

821 CONCRETE GUTTERS AT BUS-BAYS

Where raised Kerbs are provided at bus-bays, openings shall be provided through the raised Kerbs to facilitate drainage as shown on the drawings or directed by the Engineer.

The opening shall be constructed through the bus-bay berm and embankment backslope behind the berm into the adjoining roadside ditch.

The opening shall be of 200 mm width other dimensions being left as they are shown on the drawings, or as instructed by the Engineer.

Measurements and payment for gutters at bus-bays shall be per linear metre, the rate being inclusive of the costs for setting out, excavation to line and level, trimming, compacting the invert trench, disposal of excavated surplus material, providing, transporting and laying, of concrete and the necessary formwork, backfilling, watering and compacting of the concrete as required.

SECTION 9 - PASSAGE OF TRAFFIC

901 SCOPE OF THE SECTION

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

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

When carrying out the Works the Contractor shall have full regard for the safety of all road users.

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

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

904 CONSTRUCTION OF DEVIATIONS

a) **General**

The existing level of public traffic is light and the contractor is expected to generally pass the public traffic through the works along lengths of the project road. But in circumstances where this is not practically feasible, the contractor will bring this to the attention of the Engineer, and if directed by the Engineer, the contractor will construct and maintain deviations in accordance with Section 9 of the Standard Specifications.

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

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

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

b) **Geometry**

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

c) **Construction**

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

In addition to provision of this clause, Contractor is required to sprinkle water at least 4 times a day at the rate of 1 to 1.4 litres/m²/day at regular interval to minimise the effects of dust. Latest sprinkling time shall be one hour before the sunset.

906 PASSAGE OF TRAFFIC THROUGH THE WORKS

The Contractor shall arrange for passage of traffic through the works during construction whenever it is not practicable to make deviations. The cost of doing so shall be deemed to have been included elsewhere in his rates and no separate payment shall be made for this. To this end, the Contractor shall be deemed to have inspected the site for himself and noted any locations where this may apply.

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

907 SIGNS, BARRIERS AND LIGHTS

Contractor shall provide signs, barriers and lights as shown in the drawing in Book of Drawings at the locations where the traffic is being carried off the existing road to the deviation and back again to existing road. The Contractor

shall provide ramps and carry out any other measures as instructed by the Engineer to safely carry traffic from the road to deviation.

Contrary to what has been specified in this clause the road signs provided shall be fully 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, Contractor shall maintain close liaison with the relevant authorities to clear any broken down or accident vehicles from the deviations and the main road, in order to maintain smooth and safe flow of the traffic.

912 MEASUREMENT AND PAYMENT

(a) Passage of traffic through the works

Payment shall be made on Lump Sum basis.

(b) Construct Deviation

(i) Road Deviation

The Contractor shall be paid only 50% of the rate for this when he completes deviation road to the satisfaction of the Engineer. The balance shall be paid in equal monthly instalments over the contract period, as he satisfactorily maintains the deviation (as per clause 904 and 905 above) when it is in operation.

(ii) Deviation using Pipe Culverts

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

(c) Assistance to Public

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

SECTION 11 – SHOULDERS TO PAVEMENT

1101 GENERAL

Shoulders shall be constructed as per the drawings or as directed by the Engineer.

1102 MATERIAL FOR CONSTRUCTION OF SHOULDERS

The shoulders shall be constructed as directed by the Engineer, in accordance with sections 11, 12, 14 and 15 of the Standard Specification. The material for shoulders shall be the same as that of base and sub-base layers in the carriageway.

1105 SURFACE TREATMENT OF SHOULDERS

The shoulders to the whole stretch of the road shall be as per the drawings or as directed by the Engineer.

1106 MEASUREMENT AND PAYMENT

Payment for shoulder construction shall be in accordance with the relevant clauses in sections 11, 12, 14, and 15 of the relevant Specifications. Payment for fill material on shoulder shall be in accordance with Section 5 of this specification.

SECTION 12 - NATURAL MATERIAL SUB-BASE AND BASE

1201 GENERAL

(a) Definitions

The term “natural material” includes lateritic gravel, quartzitic gravel, calcareous gravel, soft stone, coral rag, conglomerate, sand or clayey sand, a combination of any of these materials or a mixture of natural gravel and upto 30% of stone (crushed or not). A natural material is also referred to as “gravel”.

(b) Sources of materials

Natural material for subbase and base may be obtained from any of the following sources: -

- (i) Borrow pits
- (ii) Spoil areas
- (iii) Excavation in cuttings, widened if necessary.

In all cases the Engineer will instruct the Contractor as to the source of material to be used and the location in which it is to be placed.

(c) Inspection of site

Where a source of material is available for inspection during the Tender Period the Contractor shall satisfy himself as to the nature and amount of work involved particularly in respect of the volume of overburden, the quality and hardness of material, the degree of selection necessary, the method of extraction, and access to the source.

(d) Borrow pits

The Contractor shall comply with all the requirements of Section 6 of this Specification in respect of borrow pits.

1202 CLASSIFICATION OF MATERIAL

Natural material shall be material which can be extracted from a borrow area or a road cutting by ripping to a depth of 300 mm with a single tine hydraulic ripper acceptable to the Engineer drawn by a track type crawler tractor in good order complete with all equipment and accessories as supplied and rated at 300 BHP flywheel power and over with an operating weight of not less than 37.2 tonne and being operated in accordance with the manufacturer’s recommendations.

The material may require the use of either a grid or sheep foot roller with more than 8000 kg mass per metre width of roll to break it down and/or screening to achieve the specified grading.

1203 MATERIAL REQUIREMENTS

(a) Gravel with Minimum Soaked CBR Value of 25% (G25)

Material for G25 subbase shall include natural gravel or a mixture of natural gravel and up to 30% of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 63mm
- Passing 0.075mm sieve : Maximum 35%
- Plasticity Index : Maximum 15%
- CBR (4 days soak) : Minimum 25%

(b) Gravel with Minimum Soaked CBR Value of 30% (G30)

Material for G30 subbase shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the specifications given in Section 1203(a) of the Standard Specifications for Road and Bridge Construction but with maximum PI of 12%.

The material shall comply to the following grading envelope after compaction:

| BS Sieve size (mm) | Percentage by weight passing |
|--------------------|------------------------------|
| 63 | 100 |
| 37.5 | 80-100 |
| 20 | 60-100 |
| 5 | 30-100 |
| 1.18 | 17-75 |
| 0.3 | 9-50 |
| 0.075 | 5-25 |
| | |

(c) Gravel with Minimum Soaked CBR Value of 50% (G50)

Material for G50 base shall include natural gravel or a mixture of natural gravel and up to 30% of sand or crushed

stone aggregates and shall conform to the following requirements:

- (a) Maximum size : 50mm
- (b) Passing 0.075mm sieve : 4 - 20%
- (c) Plasticity Index : Maximum 12%
- (d) Plasticity Modulus : Maximum 250
- (e) LAA : Maximum 70%
- (f) CBR (4 days soak) : Minimum 50%

The material shall conform to the following grading envelope after compaction:

| BS Sieve size (mm) | Percentage by weight passing |
|--------------------|------------------------------|
| 50 | 100 |
| 37.5 | 95 - 100 |
| 28 | 80-100 |
| 20 | 60 - 100 |
| 10 | 35-90 |
| 5 | 20-75 |
| 2 | 12-50 |
| 1 | 10-40 |
| 0.425 | 7-33 |
| 0.075 | 4-20 |

(g) Gravel with Minimum Soaked CBR Value of 60% (G60)

Material for G80 base shall include natural gravel or a mixture of natural gravel and up to 80% of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 4 - 20%
- Plasticity Index : Maximum 10%
- Plasticity Modulus : Maximum 250
- LAA : Maximum 70%
- CBR (4 days soak) : Minimum 60%

The material shall conform to the following grading envelope after compaction:

| BS Sieve size (mm) | Percentage by weight passing |
|--------------------|------------------------------|
| 50 | 100 |
| 37.5 | 95 - 100 |
| 28 | 80-100 |
| 20 | 60 - 100 |
| 10 | 35-90 |
| 5 | 20-75 |
| 2 | 12-50 |
| 1 | 10-40 |
| 0.425 | 7-33 |
| 0.075 | 4-20 |

(h) Gravel with Minimum Soaked CBR Value of 80% (G80)

Material for G80 base shall include natural gravel or a mixture of natural gravel and up to 80% of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 4 - 20%
- Plasticity Index : Maximum 10%
- Plasticity Modulus : Maximum 250
- LAA : Maximum 50%
- CBR (4 days soak) : Minimum 80%

The material shall conform to the following grading envelope after compaction:

| BS Sieve size (mm) | Percentage by weight passing |
|---------------------------|-------------------------------------|
| 50 | 100 |
| 37.5 | 95 - 100 |
| 28 | 80-100 |
| 20 | 60 - 100 |
| 10 | 35-90 |
| 5 | 20-75 |
| 2 | 12-50 |
| 1 | 10-40 |
| 0.425 | 7-33 |
| 0.075 | 4-20 |

(i) Material for Cement/Lime Improved Gravel of CBR 60% (CIG 60)

Material for CIG 60 base shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 5-35%
- Plasticity Index : Maximum 20%
- CBR (4 days soak) : Minimum 25%

After treatment the material shall have a CBR of at least 60% measured after 7 day cure and 7 day soak on the site mix compacted to at least 95% MDD AASHTO T180 and the treated material shall have a plasticity index less than 8% and a plasticity modulus less than 250.

(j) Material for Cement/Lime Improved Gravel of CBR 100% (CIG 100)

Material for CIG 100 base shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the following requirements:

- Maximum size : 50mm
- Passing 0.075mm sieve : 5-35%
- Plasticity Index : Maximum 20%
- CBR (4 days soak) : Minimum 25%

After treatment the material shall have a CBR of at least 100% measured after 7 day cure and 7 day soak on the site mix compacted to at least 95% MDD AASHTO T180 and the treated material shall have a plasticity index less than 6% and a plasticity modulus less than 250.

(k) Material for Cement/Lime Improved Gravel of CBR 160% (CIG 160)

Material for CIG 160 base shall include natural gravel or a mixture of natural gravel and up to 30 percent of sand or crushed stone aggregates and shall conform to the requirements given in Section 1203(d) of the Standard Specifications for Road and Bridge Construction but shall have Plasticity Index not exceeding 20%- and 4-day soak CBR of at least 25%.

SECTION 13-GRADED CRUSHED/ HAND PACKED STONE SUBBASE AND BASE

GRADED CRUSHED STONE

1301 The material for graded crushed stone shall comply with the requirements of stone Class C for 0/40 mm

1303 MATERIAL REQUIREMENTS

(a) Properties

Graded Crushed Stone for base and sub-base shall conform to the specifications given in Section 13 of the Standard Specifications and shall be stone Class c in accordance with Clause 1303(b) of the standard specification.

(b) Grading

The Nominal size of the base and subbase material shall be 0/40 mm in accordance with clause 1303 (c) of the standard specifications

1306 LAYING AND COMPACTING GRADED CRUSHED BASE-COURSE

Laying of the GCS shall be by self propelled paver approved by the Engineer

1309 TREATED MATERIALS

Contrary to the provisions of the Standard Specifications, mixing of GCS and cement shall be by a continuous pug-mixer approved by the engineer

1310 MEASUREMENT AND PAYMENT

Contrary to the Standard Specifications, the rate inserted for the GCS and Cement shall allow for winning, mixing, watering, laying by paver and compaction as required or called for in the Standard Specifications or as directed by the Engineer

1311 HAND PACKED STONE

Hand packed stone base is a layer of hand laid stone of defined size and durable in nature, laid in a manner such that when proof rolled and compacted it forms a stable and dense matrix as a road base.

a) Material for Hand Packed Stone Base

This shall consist of durable stone with nominal base dimensions of 75 mm square and minimum height of 150 mm or when compacted to give a layer of 150 mm. The stone shall be class C with the following requirements:

| | |
|-----|---------|
| LAA | 45 max |
| ACV | 32 max |
| SSS | 12 max |
| FI | 30 max |
| CR | 60 min. |

It shall be free from foreign matter. The fines passing 0.425 mm sieve shall be NONPLASTIC

b) Laying

The stone shall be laid by hand closely together. The stone shall be carefully bedded and tightly wedged with suitable spalls. The base of the stone shall alternate with the apex in all directions or as directed by the Engineer. The layer shall be proof rolled with a loaded scrapper or truck with a minimum axle load of 8 tonnes in the presence of the Engineer who shall approve of its stability before compaction.

c) Compaction

This shall be by a steel wheeled roller of at least five tonnes per metre width of roll. It shall consist of four static runs or until there is no movement under the roller. There shall follow vibratory compaction until an average dry density of 85% minimum of specific gravity of stone has been achieved. No result shall be below 82% of specific gravity. The surface of the compacted layer shall then be levelled by quarry dust (0/6 mm). The dust shall have the following specifications:

The stone shall be class C

Grading

| Sieve Size | % Passing |
|------------|-----------|
| 10 | 100 |
| 6.3 | 90-100 |
| 4 | 75-95 |
| 2 | 50-70 |
| 1 | 33-50 |
| 0.425 | 20-33 |
| 0.300 | 16-28 |
| 0.150 | 10-20 |
| 0.075 | 6-12 |

The dust shall be free from foreign matter and fines passing 0.425 mm sieve shall be NON-PLASTIC. The maximum layer shall be 40 mm or as directed by the Engineer

d) Measurement and Payment

Payment shall be by the cubic metre laid (m^3). Measurement of volume shall be determined as the product of length and compacted thickness laid. The rate quoted for this item should include the cost for laying the levelling quarry dust layer, as no extra payment shall be made for this layer.

SECTION 14-CEMENT AND LIME TREATED MATERIALS

1403 CEMENT TREATMENT

a) **Cement**

In variation to this Sub-Clause, cement for improvement shall be ORDINARY PORTLAND CEMENT (OPC) complying with KS 1725:

2001 CEM I 42.5 N or equivalent, subject to the Engineer's approval. The cement content of the stabilised material shall be as indicated by the Engineer and will normally be about 4%. 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.

b) **Moisture content**

The moisture content of the stabilised material shall be as directed by the Engineer but nevertheless within the range of 85% to 105% of the Optimum Moisture Content (AASHTO T180).

c) **Mixing and Placing**

The material to be stabilised and the cement shall be mixed by an approved mixing plant which will either be a mix-in-place pulvimixer or a stationary mixing plant for material to be used for pavement construction, widening and shoulders.

LIME TREATMENT

Lime treatment will be as outlined in the Standard Specifications for road and bridge construction. The lime content of the stabilised material shall be as indicated by the Engineer and will normally be about 2-4%.

1409 PROTECTION AND CURING

Protection and curing shall be carried out in accordance with the provisions of Clause 1409(i) of the Standard Specification but provision shall be made to wet the surface from time to time as directed by the Engineer.

1410 TRAFFIC

Traffic across the works will be restricted as outlined in the Standard Specifications.

1412 MEASUREMENT AND PAYMENT

Improvement Agent: the provision of the improvement agent shall be measured by the tonne calculated as the specific weight of agent added to the material.

Mix-in improvement Agent: Mixing improvement agent 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.

The Contractor may be required to carry out research on different soils stabilizing agents. Rates in relevant bills of quantities to apply.

SECTION 14 A- LEAN CONCRETE AND PAVING BLOCKS

14A/09 CONCRETE PAVING BLOCKS

Concrete paving blocks shall be those meeting the requirements of Section 20 of the Standard Specifications. Where required for carriageway and shoulders wearing courses, the thickness shall be 80mm, while for walkways the thickness shall be 50mm.

The paving blocks shall be laid on a primed base course layer meeting the requirements of Section 12 and 14 of the Standard Specifications. The primer shall be MC 30, meeting the requirements of section 15 of the Standard Specifications.

Edge restraints shall be constructed using road kerbs and flush kerbs meeting the specifications requirements of Section 20 of the Standard Specifications before laying of the paving blocks. The road kerbs and flush kerbs edge restraints shall be constructed with 10mm drainage joints for the paved carriageway and shoulders.

A laying layer of 30 mm thick sand/quarry dust shall be provided uniformly across the surface to receive the paving blocks. The blocks shall then be hand laid in position and vibrated using a plate compactor with specifications approved by the Engineer.

SECTION 15 - BITUMINOUS SURFACE TREATMENTS

PART A - GENERAL

1501A GENERAL

Details of the spray rates for bitumen and the spread rates for chippings will be directed by the Engineer but the under listed is anticipated and can be used for guidance purpose i.e;

- a) Chippings
 - 14/20mm size pre-coated chippings at a spread rate of 60-90 square meters percubic meter.
 - 10/14mm size pre-coated chippings at a spread rate of 80-120square meters percubic meter.
 - 6/10mm size pre-coated chippings at spread rate of 80-120 square meters per meter.

- b) Bitumen Spray Rates

- cubic
 - 1.0 – 1.4 l/m²for the first seal
 - 0.6 - 1.0 l/m²for the second seal.

The Average Least Dimension (ALD) shall be determined in the field after crushingthe rock for chippings and then determine the actual spray rates and chipping spread rates

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 MC 30 unless otherwise directed by the Engineer.

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

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

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

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

1503B PREPARATION OF SURFACE

In addition to requirements of Clause 1503B of the Standard Specifications, the Contractor shall prepare and repair cracks, edges, potholes and other failures as follows: -

- Where instructed, the Contractor shall prepare areas for the repair of potholes, road edges and other repair areas by excavating off unsuitable or failed material and debris, trimming off excavated edges, cleaning and compacting the resulting surfaces and applying MC 30 cut-back bitumen prime coat and bitumen emulsion KI-60 tack coat, all as directed by the Engineer. Measurement and payment shall be made under the relevant item of Bill No 15.
- Where the surface repair on potholes and edges are to be carried out, Asphalt Concrete Type I (0/14 gradation) shall be used. Bituminous material for repair of failures and other repair areas shall be paid for under the relevant item of Bill No 16

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, and conforming to Clause 211 of the Standard Specification.

Chippings

Chippings shall be of class 1 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 1501C 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 PRE-COATED 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 MC 30 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.

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, 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

PART B: ASPHALT CONCRETE FOR SURFACING

1601B Asphaltic Concrete Type II shall be used and shall meet all the requirements of the relevant Clauses of both Standard Specifications for Roads and Bridges construction of Ministry of Transport and Communication and the current (August 1987) Ministry of Roads and Public Works Road Design Manual Part III. Where the requirements of the two differ, those of Standard Specifications for Roads and Bridges shall prevail.

The material requirements will be as follows:

- a) Bitumen shall be 80/100 penetration grade

b)Aggregates:

Stone Class bGrading 0/14

c) Mineral filler - as per Clause 1602B (c)

Introduce the following amendments to Section 16 of Standard Specifications:

-1602B(b) - the aggregate for asphalt concrete Type I shall comply with therequirementsfor coarse aggregates class b as specified in clause 1602B(b) ofstandardspecifications

- 1602B(c) - the grading for aggregate for binder course shall conform to therequirementsfor Type I binder course asphalt concrete as given in table 16B-1

- 1604B - the requirements for asphalt concrete shall conform to the specificationsfor Type I Binder course as given in clause 1604(B) of StandardSpecifications table 16B-2

-1607B(b) Variation in binder content - there shall be no extra payment forvariation of binder content from the that specified in the design mix.

SECTION 17 - CONCRETE WORKS

1703 MATERIALS FOR CONCRETE

This work shall consist of placing selected approved material of 250mm minimum diameter on the foundation put after excavation to receive levelling concrete in accordance with these specifications and in conformity with the lines, grades and cross sections shown on the Drawings as directed by the Engineer.

(a) Materials

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

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

(b) Construction Method

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

(c) Measurement and payment

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

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

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

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

unless otherwise directed by the Engineer.

(a) Materials for Levelling Concrete

Requirement for the concrete class 15/20 is specified as follows:- Design compressive strength (28) days :

15N/mm² Maximum size of coarse aggregate : 20mm

Maximum cement content : 300 kg/m³. Maximum water/cement ration of 50% with slump of 80mm.

(b) Construction Method

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

(c) Measurement and payment

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

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

Pay item No. 17/02 Levelling Concrete Works (Class 15/20) for Box Culvert and wing walls inclusive of Cost of Form works.

1703(B) REINFORCING BARS OF WALLS AND SLABS

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

(a) Material:

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

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

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

(b) Construction Method

(i) Bar Bending Schedule:

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

(ii) Cutting and Bending:

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

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

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

pin having a diameter not less than 7.5 times the bar diameter as shown on the Drawings. Reinforcing bars shall be accurately formed to the shapes and dimensions indicated on the Drawings, and shall be fabricated in a manner that will not injure the materials.

(c) Placing

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

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

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

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

(d) Splicing and Joint

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

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

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

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

(e) Measurement and Payment

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

These weights are given in the following table: -

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

1703 (C) FORMWORK FOR CULVERT WALLS AND SLABS

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

(a) Materials

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

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

Release Agents – Release agents shall be either neat oils containing a surface activating agent, cream

emulsions, or chemical agents to be approved by the Engineer.

(b) Construction Method

i. Formworks

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

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

Unless otherwise described in the Contract, all form joints for exposed surfaces of concrete shall form a regular pattern with horizontal and vertical lines continuous throughout each structure and all construction joints shall coincide with these horizontal and vertical lines. PVC pipes of 50mm diameter for weep holes shall be arranged as shown on the Drawings.

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

The inside surface of forms shall be cleaned and coated with a releasing agent to prevent adhesion of the concrete. Release agents shall be applied strictly in accordance with the manufacturer's detailed instructions. The release agent shall be applied to the formwork prior to erection. Release agent must not come into contact with reinforcement. Immediately before concrete is placed, the forms shall be thoroughly cleaned and freed from sawdust, shavings, dust, mud or other debris by hosing with water. Temporary openings shall be provided in the forms to drain away the water and rubbish.

ii. Scaffolding

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

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

iii. Removal of formwork

The time at which the formwork is struck shall be the Contractor's responsibility and the forms shall not be removed until the concrete strength has reached 20 N/mm².

iv. Measurement and Payment

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

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

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

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

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

Design compressive strength (28 days) : 25N/mm²

Maximum size of coarse aggregates : 20mm
Maximum water/cement ratio of 45% with slump of 80mm

a) Concrete Materials

1. Cement:

Cement shall be of Ordinary Portland type and shall conform to the requirements of BS 12 or equivalent.

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

Conveyance of cement by jute bags shall not be permitted. Storage in the Contractor’s silo or storehouse shall not exceed more than two (2) months, and age of cement after manufacture at mill shall not exceed more than four months. The Contractor shall submit to the Engineer for his approval the result of quality certificate done prepared by the manufacturer.

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

2. Aggregates

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

Grading of aggregates shall conform to the following requirements:

a) Grading of Fine Aggregates

| Sieve Size | Percentage by Weight Passing |
|------------|------------------------------|
| 10 mm | 100 |
| 6.3mm | 89-100 |
| 2.5 mm | 60-100 |
| 1.2 mm | 30-100 |
| 0.6 mm | 15- 54 |
| 0.3 mm | 5- 40 |
| 0.15 mm | 0 - 15 |

Grading of Coarse Aggregates

| Size of Coarse Aggregate | 40 | 30 | 25 | 20 | 15 | 10 | 5 | 2.5 |
|--------------------------|----|----|----|----|----|----|---|-----|
| | | | | | | | | |

| | | | | |
|--|-------|----------|---------|------|
| Amounts finer than each standard sieve percentage by weight | 100 - | - 90-100 | - 30-69 | 0-10 |
| | - | | | |

c) Other requirements for aggregates are as follows:

i. Fine Aggregates

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

ii. Coarse Aggregate

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

3. Water

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

4. Admixture

Only admixture, which have been tested and approved in the site laboratory through trial mixing for design proportion shall be used.

Before selection of admixture, the Contractor shall submit to the Engineer the specific information or guarantees prepared by the admixture supplier.

The Contractor shall not exclude the admixture from concrete proportions.

b) Proportioning Concrete

The Contractor shall consult with the Engineer as to mix proportions at least thirty (30) days prior to beginning the concrete work.

The actual mix proportions of cement, aggregates, water and admixture shall be determined by the Contractor under supervision of the Engineer in the site laboratory.

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

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

c) Concrete Work

- (i) Batching shall be done by weight with accuracy of: Cement : ½ percent
- Aggregate : ½ percent
- Water and Admixture : 1 percent.

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

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

(iii) Mixing and delivery

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

(iv) Concrete in hot weather

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

(v) Concreting at night

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

(vi) Placing

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

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

d) Measurement and Payment

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

SECTION 20 - ROAD FURNITURE

2001 ROAD RESERVE BOUNDARY POSTS

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

| | |
|-------------|---|
| 2003 | EDGE MARKER POSTS |
| | Edge marker posts 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.

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 reflectorised hot applied thermoplastic material in accordance with Clause 219 of the Standard Specification.

The rates inserted in the Bills of Quantities for road marking shall include for prior application of approved tack coat.

2006 GUARDRAILS

Contrary to the Standard Specification, guardrail posts shall be concrete 200 mm diameter set vertically at least 1.2m into the shoulder as directed by the Engineer. Spacer blocks shall also be made of concrete. Beams for guardrails shall be "Armco Flex-beam" or similar obtained from a manufacturer approved by the Engineer.

2007 KERBS

(a) Vertical Joints

Vertical joints between adjacent kerbs shall not be greater than 5 mm in width and shall have 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.

2009 RUMBLE STRIPS

Where directed by the Engineer, the Contractor shall provide, place, trim, shape and compact to line and level asphaltic concrete rumble strips on the finished shoulders. This shall be done to the satisfaction of the Engineer.

2009B 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

2109: Maintenance of Existing Bailey Bridges

The operation shall consist of but not limited to:-

- 1 Removal of damaged and unserviceable bridge parts for safe disposal by the Contractor.
- 2 Replacement of missing, damaged and unserviceable bridge parts.
- 3 Repair and reuse serviceable bridge parts
- 4 Removal of rust on the metal parts of the bridge.
- 5 Application of aluminium- based paint as specified and directed by the Engineer.
- 6 Any other work that may be deemed necessary by the Engineer.

Payment for this item shall be a Lump Sum rate provided by the Contractor.

SECTION 22-DAY-WORKS

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 23- PILING WORKS

2301 METHOD STATEMENT FOR INSTALLATION OF BORED CAST IN PLACE PILES

The work shall include preparation of dry working platform for piles to piers P2, T2 and T3, setting out, excavation and drilling of pile shaft, cleaning and inspection of drilled holes, tying, fixing and placing of reinforcement, concreting and head treatment of piles, test pile and testing.

(a) Dry Working Platform

A dry working platform shall be constructed for the piling works to pier P2, T2 and T3

The working platform shall be principally sandy material with a clay core over the perimeter of the pile head area. The working platform shall be protected against any damage that may be caused by rising river levels by sand bags. The top of the working platform shall be in non-cohesive granular material to ensure the top surface of working platform is maintained free from mud and slippery conditions, during piling works.

b) Test Piles and testing of Piles

(i) Capacity of Test Assembly

The test assembly shall be capable of the safe application of the following loads. The test piles shall be set up at locations be determined by the Engineer or his representative.

Working loads for the piles shall be as follows

Pier T3: 1200 mm Φ vertical piles =4370 KN or 437 tonnes

Pier T2: 1000mm Φ raked piles =3575 KN or 358 tonnes
Pier P2: 800 mm Φ vertical piles = 3610 KN or 362 tonnes

Testing of the piles shall be carried out to 2 times the working loads.

(ii) Test Assembly

The layout of the test assembly to be used is shown on drawing attached. The test assembly will be constructed and supported such that safe access to all parts of the assembly may be made at all times during a test. The force to load the pile shall be provided by jacking against the reaction of four tension piles.

1. Tension Piles

At least four tension piles shall be used for each test assembly. Working piles will not be used as tension piles unless approved by the Engineer. If working piles are used the movement shall be measured to within an accuracy of 0.5mm. Ground Anchors will not be used.

2. Method of Applying Load to the Test Piles

The test force shall be applied concentrically to the test pile by means of a single hydraulic jack. The permissible extension of the jack will be such that for each trial pile the pile can be moved continuously and without repacking for a distance 15% of the test pile base diameter. Allowance will be made for “take-up” of the reaction assembly.

3. Measurement of Load

The whole load will be measured by a single load cell or proving ring calibrated in divisions not exceeding 1% of the maximum load to be applied. The load cell or proving ring shall be calibrated immediately prior to the test and a certificate of calibration will be submitted to the Engineer. All increments of load shall not be allowed to fall below 1% of the specified load. Further calibration will be made after each series of tests whenever adjustments are made to the devices.

4. Measurement of Pile Movement by Dial Gauges

Vertical movement shall be measured by four gauge extensometers having 50 mm travel and graduated in 0.01 mm divisions. Dial gauge readings shall take precedence over precise level measurements on the test pile for the purpose of this test.

The extensometers shall be positioned mutually at right angles and at equal distance from the centre of the test pile. The plungers of the extensometers shall bear on plane glass or machined metal plates set level.

5. Protection of the Test Assembly

The entire measuring assembly may be protected throughout testing against rain, direct sunlight and any other disturbance that could affect the reliability of readings. Construction equipment and persons who are not involved in the testing shall be kept away from the test to avoid disturbance to the measurement apparatus.

(iii) Test procedure

1. Concrete Strength

Pile selected for testing shall not be loaded until the concrete strength as shown by cube tests or rebound hammer, to be at least twice the pile stress at the greatest test load (ignoring any reinforcement) or the pile concrete is at least twenty eight days old whichever gives the longer period of time.

2. Supervision of Tests

The contractor will keep the tests under continuous and competent supervision to the satisfaction of the Engineer. The contractor shall give the engineer 3 days notice before the commencement of the tests.

3. Facilities for the Engineer

All necessary facilities will be provided to enable the Engineer to take and check readings during the progress of the tests.

4. Dial Gauge Readings

Dial gauge readings of pile movement will be made at frequent intervals during each pile loading cycle as agreed with the Engineer.

5. Rate of vertical Movement Defining Settlement

Each increment of load is to be maintained until the rate of settlement does not exceed 0.2 mm in half an hour measured over a half hour interval and the amount of settlement shall be that recorded when this rate is reached. The maximum load shall be maintained for 6 hours on the final load cycle prior to unloading.

6. Test Load Cycle

Loading and unloading will be made in the following sequence and for the given durations. For each application of the loads the load shall be held for the lesser of the period shown or until the rate of the settlement is less than 0.25mm/hr and slowing down.

| Load Holding Load | Percentage of | Minimum Time of Working Load |
|-------------------|---------------|------------------------------|
| 25 | | 1 hour |
| 50 | | 1 hour |
| 75 | | 1 hour |
| 100 | | 1 hour |
| 75 | | 10 Min |
| 50 | | 10 Min |
| 25 | | 10 Min |
| 0 | | 1 Hour |
| 100 | | 1 hour |
| 125 | | 1 hour |
| 150 | | 1 hour |
| 175 | | 1 hour |
| 200 | | 6 hours |
| 175 | | 10 min |
| 150 | | 10 min |
| 125 | | 10 min |
| 100 | | 10 min |
| 50 | | 10 min |
| 25 | | 10 min |
| 0 | | 10 min |
| 0 | | 1 hour |

7. Test Reports

At the conclusion of work each day the contractor will send to the Engineer a copy of the daily record

sheets of all records of the tests. The schedule of record data shall be as indicated in clause 2115.15 (b) of the special specifications.

c) Order of piling works

The Engineer will be given at least five days before installation of test piles. Prior to the installation of foundation piles, the test pile with four anchor piles will be installed at a location to be determined by the Engineer.

A working program on the order of pile installation shall be given to the Engineer one week before works on the piles is started. Piling will be carried out first on Southern side followed by Northern side. Piling will be carried out on Pier piles followed by Abutment piles. Any changes in the works program will be advised to the Engineer in good time before they are implemented.

d) Setting Out

The pile locations will be set out, from the pier and abutment bearing centres as established accurately for the bridge alignment. Setting out shall be by use of Distomat and theodolite. Each point will be marked clearly with steel pegs and protected against interference. Prior to piling the Engineer's approval will be required for the setting out.

e) Excavation and Drilling of Pile shaft

Excavation of the pile shaft shall be by auger boring. This shall be carried out inside a temporary steel casing and shall be supplied for the full length of the bore.

The bottom of the temporary casing shall be kept sufficiently far below the boring to prevent the inflow of soil and the formation of cavities in the surrounding ground. A recommended depth of 1.5m will be adopted subject to the approval of the Engineer.

Soils removed from the pile borehole will be examined and compared with the description stated on the site investigation borehole records.

The sequence of excavation of the pile shafts shall be agreed with the Engineer prior to the boring. This will be set out in order to ensure that newly concreted piles are not affected by boring in adjacent ground.

f) Cleaning and Inspection of Hole

On completion of the drilling of the pile shaft, the hole will be cleaned to remove all loose material and foreign matter existing at the bottom of the hole. The bored hole shall be checked for verticality to ensure that the tolerances and depths of pile required have been achieved.

Physical inspection of the hole shall be made by providing adequate lighting, down the shaft.

g) Reinforcement

The reinforcement cage shall be cut, tied and fixed prior to the completion of the boring to suit the pile length and head. Concrete spacer blocks for the base of the steel cage and sides will ensure cover to reinforcement. These will be adequately provided, but in no case lesser than 3 meter intervals.

Minimum lap lengths shall be maintained as stated in the drawings or as directed by the Engineer. In order to prevent failure of the re-bar cage joints due to its own weight or on impact with the bottom of the excavation, guide hoops shall be bound sufficiently or intermittent fillet welds shall be used on the corresponding bars at the lap joints as directed by the Engineer.

h) Concreting

Concrete shall be mixed in accordance with the requirements of section 17 of the Standard Specification of Roads and Bridge construction 1986, and conforming to material requirements, slump and strength specifications given in the drawings.

The concrete shall be poured by means of a tremie pipe of internal diameter 150mm. During the placing of concrete,

the bottom of the tremie pipe will be maintained at least 2m into the newly placed concrete.

The finished level of the concrete shall be at least 1 meter higher than the design cut off level to permit the removal of laitance formed at the top of pile and to facilitate effective head treatment.

The temporary casing shall be withdrawn after the concreting of the shaft in stages and as agreed with the Engineer.

The holes forming the free bore from top of pile to the ground level shall be filled with clay material, upon completion of concrete works.

i) Levelling Concrete (Seal Concrete)

On completion of piling, the ground around the pile cap shall be excavated to the level of the bottom of the pile cap protected by a cofferdam. Levelling concrete class 20/20 shall be placed on the bottom of the excavation of the cofferdam, by use of a tremie pipe to help pump out water inside the cofferdam. The bottom of the cofferdam shall thereafter be maintained dry by continuous pumping from sumps to facilitate head treatment and concreting of pile cap.

j) Pile Head Treatment

After the levelling concrete has hardened and the cofferdam has been dewatered by pumping, the top surface and head of pile shall be cut and cleaned to the design cut off level to prepare for the steel fixing and concrete casting of the pile cap.

k) Sheet piles and their Installation on Pier T3

Pile driving shall be by use of a vibro head powered by a hydraulic system. On completion of the excavation of piles heads, the vibro head shall be set up and sheet piles assembled and driven in place. The level of the sheet piles to be driven shall be determined by the Engineer.

The sheet piles to be used shall be Frodingham or other similar of dimensions shown in the drawing. The sheet piles shall be coated with tar to the approval of the Engineer.

2302 BORED CAST IN PLACE PILES

Material and Workmanship

a) Bentonite

If necessary the Engineer shall instruct Contractor to use bentonite for the support sides of the hole. If bentonite is used it shall comply with Publication 163: **Drilling fluid materials** of the Engineering Equipment and Materials Users Association.

A certificate shall be obtained by the Contractor from the manufacturer of the bentonite powder, showing the properties of each consignment delivered to the Site. This certificate shall be made available to the Engineer on request. The properties to be given by the manufacturer are the apparent viscosity range (in centipoises) and the gel strength range (in newtons per square meter) for solids in water.

Bentonite shall be mixed thoroughly with clean fresh water to make a suspension which will maintain the stability of the pile excavation for the period necessary to place concrete and complete construction. The temperatures of the water used in mixing the bentonite suspension, and of the suspension when supplied to the borehole, shall be not lower than 5 oC.

Where saline or chemically contaminated groundwater occurs, special precautions shall be taken to modify the bentonite suspension or prehydrate the bentonite in fresh water so as to render it suitable in all respects for the construction of piles.

The frequency of testing drilling fluid and the method and procedure of sampling shall be proposed by the Contractor prior to the commencement of the work. The frequency may be subsequently be varied as required, depending on the consistency of the results obtained.

Control tests shall be carried out on the bentonite suspension, using suitable apparatus. The density of freshly mixed bentonite suspension shall be measured daily as a check on the quality of the suspension being formed. The measuring device shall be calibrated to read to within 0.005 g/ml. Tests to determine density, viscosity, shear strength and pH value shall be applied to bentonite supplied to pile boring. For average soil conditions the results shall generally be within the ranges stated in Table 2114-1. The tests shall be carried out until a consistent working pattern has been established, account being taken of the mixing process, any blending of freshly mixed bentonite suspension and previously used bentonite suspension and any process which may be used to remove impurities from previously used bentonite suspension. When the results show consistent behavior, the tests for shear strength and pH value may be discontinued, and tests to determine density and viscosity shall be carried out as agreed with the Engineer. In the event of a change in the established working pattern, tests for shear strength and pH value shall be reintroduced for a period if required.

Table 2114-1

| Property to be Measured | Range of results at 20 °C | Test Method |
|--|----------------------------------|--|
| Density | Less than 1.10g/ml | Mud density balance |
| Viscosity | 30-90s | Marsh cone method |
| | or less than 20 cP | |
| Shear strength (10 minute gel strength) | 1.4-10N/m ² | Shearometer |
| | 4-40 N/m ² | Fann Viscometer |
| pH | 9.5 – 12 | pH indicator paper strips or electrical pH meter to BS3445 |

b) Steel Reinforcement

Reinforcement shall comply with Section 17 of the Standard Specification. It shall be made up into rigid cages which will not distort during installation or when placing concrete. Longitudinal bars up to 12 meters shall be in single lengths. Joints in longer bars shall be formed by lapping as specified in the drawing or acceptable to the Engineer. The number of joints in longitudinal steel bars shall be kept to a minimum. Joints in steel reinforcement shall be such that the full strength of each bar is effective across the joint and shall be made so that there is no detrimental displacement of reinforcement during the construction of the pile, following the guidance of BS 8110. Reinforcement shall be maintained in its

correct position during concreting of the pile, to allow a vertical tolerance of +150/-50 mm on the level of the reinforcement projecting above the final cut-off level. Joints shall be staggered along the length of the cage. Cover to reinforcement shall be not less than 50 mm except at bottom base of pile where minimum cover shall be 100mm. Spacers shall be designed and manufactured using durable materials which shall not lead to corrosion of the reinforcement or spalling of the concrete cover.

c) Concrete

Concrete shall be of the class 35/20 and shall comply with Section 17 of the Standard Specification.

The consistency of the concrete and the shape of the aggregates shall be suitable for placing and for properly filling the voids formed in the ground to ensure that a dense homogenous pile is produced, having regard to the method of compaction inherent in the type of piling system adopted. If necessary the concrete shall be suitable for self compaction without segregation. The workability and method of placing of the concrete shall be such that a continuous monolithic concrete or grout shaft of the full cross-section is formed. Concrete shall be transported from the mixer to the pile in such a manner that segregation of the mix does not occur. The concrete shall be placed without such interruption as would allow the previously placed batch to have achieved a stiffness which prevent proper amalgamation of the two concrete batches.

Workability measured at the time of discharge into the pile bore shall be in accordance with the limits shown in Table 2114-2

Table 2114-2 Piling Mix Workability

| Piling mix workability | Workability Target flow, mm. | Workability Slump range, mm | Typical conditions of use (The concrete and aggregate sizes must be compatible with reinforcement spacing) |
|------------------------|------------------------------|-----------------------------|--|
| A | Not applicable | 75-125 | Placed into water free unlined or permanently lined bore of 600mm diameter or over, or where casting level lies below temporary casing; reinforcement spaced at 100mm centres or greater, leaving ample room for free movement of concrete between bars. |
| B | Target flow 500+/- 50 | Slump 100 – 175 | Where reinforcement is spaced at less than 100 centres; where cut off level of concrete is within temporary casing; where pile bore is water free and the diameter is less than 600mm. |
| C | Target flow 550+/-50 | Slump 150 or more | Where concrete is to be placed by tremie under water or support fluid or by pumping or by continuous flight auger. |

Internal vibrators shall not be used to compact concrete. The cement content in any mix shall be not less than 400kg/m³

Sequence of Forming Piles

The sequence and method of forming piles shall be acceptable to the Engineer. Where there is evidence that the

sequence of construction adversely affect piles which have already been installed, the Engineer may require the Contractor to revise the sequence.

Forming Holes for Piles

Holes shall be formed vertically or to the rake shown on the drawings within the tolerances stated in Clause 2110.2. The position of completed holes shall be checked and agreed with the Engineer before any concrete is placed therein.

No hole shall be bored within a distance of three diameter of a recently constructed pile until the concrete in that pile is at least three days old.

During boring, samples of the spoil arising and of the ground water shall be taken as instructed by the Engineer, placed in clearly labelled polythene bags and transported to a laboratory nominated by the Engineer.

Adequate precautions shall be taken at all times by the use of casings or other means including the use of bentonite to prevent the surrounding material and excessive quantities of surface and ground water entering the holes during the construction of piles.

Temporary casings used in boreholes shall be of uniform cross-section and free from significant distortion throughout their length and from any projections or the like which might prevent withdrawal or cause damage to the pile during withdrawal. The Contractor is expected to exercise extra caution when withdrawing temporary casings from raked piles.

When holes are bored with bentonite the level of the bentonite shall be kept high enough to prevent any flow of groundwater into the hole. If a rapid loss of bentonite from the hole occurs, boring shall immediately cease and the Engineer shall be informed.

All reasonable steps shall be taken to prevent the spillage of bentonite suspension on the Site in areas outside the immediate vicinity of boring. Disposal of bentonite shall comply with the regulations of the local controlling authority.

Water shall not be pumped from boreholes unless the source of the water has first been sealed with a lining or plug.

Any unexpected change in ground characteristics shall be immediately reported to the Engineer and any change in the procedure for forming holes which are thereby made necessary shall be agreed with the Engineer.

An enlarged base mechanically formed shall not be smaller than the dimensions specified and shall be concentric with the pile shaft to within a tolerance of 10% of the shaft diameter. The sloping face of the frustum forming the enlargement shall make an angle to the horizontal of not less than 55° except where the gross end-bearing pressure does not exceed 400 kN/m², when it may be reduced to 45°.

Inspection of Holes for Piles

All holes shall be subject to approval by the Engineer prior to concreting, and the Contractor shall inform the Engineer immediately after completion of the excavation of each hole.

All loose and disturbed soil, slurries and contaminated material shall be removed from the shaft and base of each pile. All linings and casings shall be smooth and clean and free from adhering concrete.

The holes shall be de-watered whenever possible in cases where the subsequent ingress of water can be prevented, unless in the opinion of the Engineer de-watering might lead to disruption of the ground or prejudice the formation of a sound pile.

The Contractor shall provide all reasonable facilities including lights, binoculars and any other equipment to enable the Engineer to inspect the holes and to take any measurements that he may require.

Concreting Piles

The time interval between completion of boring and placing concrete shall be as short as possible, and in any case shall not be longer than 6 hours.

Concrete shall be placed in accordance with the requirements of Section 17 of the Standard Specification without causing segregation. Care shall be taken to ensure that the concrete at the bottom of the piles is not deficient in cement.

Wherever possible, concrete shall be placed in the dry. Where holes cannot be dewatered or where after de-watering the ingress of water would prejudice the formation of a sound pile, the concrete shall be placed under water or bentonite and the concrete mix and strength shall be adjusted as specified or as agreed by the Engineer.

When placing concrete in the dry, it shall be discharged into a conical hopper, with a short length of pipe attached, placed centrally over the head of the tremie unless otherwise approved and shall not be discharged freely into the water or drilling fluid. Before placing concrete, measures shall be taken to ensure that there is no accumulation of silt or other material at the base of the boring and the Contractor shall ensure that heavily contaminated bentonite suspension shall be taken from the base of the boring using an approved sampling device. If the specific gravity of the suspension exceeds 1.25 the placing of concrete shall not proceed. In this event the Contractor shall modify or replace the bentonite as approved to meet the Specification.

During and after concreting care shall be taken to avoid damage to the concrete from pumping and dewatering operations.

The hopper and pipe of the tremie shall be clean and watertight throughout. The pipe shall extend to the base of the boring and sliding plug or barrier shall be placed in the pipe to prevent direct contact between the first charge of concrete in the pipe of the tremie and the water or drilling fluid. The pipe shall at all times penetrate the concrete which has previously been placed within a minimum embedment of 3m and shall not be withdrawn from the concrete until completion of concreting. At all times a sufficient quantity of concrete shall be maintained within the pipe to ensure that the pressure from it exceeds that from the water or drilling fluid. The internal diameter of the pipe of the tremie shall be not less than 150mm for concrete made with 20mm aggregate and not less than 200mm for concrete made with 40mm aggregate. It shall be so designed that external projections are minimized allowing the tremie to pass through reinforcing cages without causing damage. The internal face of the pipe of the tremie shall be free from projections.

Concrete in the pile shall be placed in one continuous operation. Precautions shall be taken to ensure that the concrete shall be sound and of full cross-section throughout. Where concreting is interrupted, the Contractor shall inform the Engineer immediately and shall carry out such measures as the Engineer may require. No spoil, liquid or other foreign matter shall be allowed to contaminate the concrete.

Any temporary lining tubes shall be withdrawn during concreting while the concrete is still workable and in such a way that no voids are produced and the stability of the hole is maintained.

The inflow of ground water shall be prevented by maintaining adequate head of concrete or by other means acceptable to the Engineer. Piles will not be accepted where there has been flow of ground water through or against unset concrete. The level of concrete shall at all times be at least one meter above the bottom of the lining tube.

The Contractor shall ensure that the concrete up to the cut-off level is sound and free from laitance, and he shall finish the concrete at least 300mm and not more than one meter above the specified cut-off level of any pile is to be below the standing water table, the concrete shall be cast to a minimum of 150mm above the water table.

Protection of Pile Heads

When the casting level of piles is below existing ground level the remaining empty bore shall be temporary backfilled with suitable material unless otherwise instructed by the Engineer.

Unsatisfactory or Incorrectly Positioned Piles

The effects of piles which have departures from position or alignment in excess of those permitted by the Specification or are considered unsatisfactory for any other reason shall be remedied by the Contractor in a manner acceptable to the Engineer.

All condemned or abandoned holes for piles shall be back-filled with concrete up to the cut-off levels or other level acceptable to the Engineer at the Contractor's expense.

Preparation of Pile Heads

Pile heads shall be prepared for incorporation into the Permanent works by cutting the concrete back to a sound surface at the required level without damaging the reinforcement. All dust and loose concrete shall then be removed. The length of reinforcement available for splicing shall not be less than 50 diameters.

Records

In addition to the piling records required under Clause 2109 of the special specification, the following information for bored cast-in-place is also to be submitted:-

- a) Type of equipment used and method of boring;
- b) Temporary casing, method of installation and extractions;
- c) Strata encountered during boring;
- d) Details of enlarged (if any);
- e) Standing ground water level;
- f) Date of concreting;
- g) Length of temporary casing;
- h) Details of bentonite fluid used;
- i) Details of soil samples taken and insitu tests carried out;
- j) Details of reinforcement;
- k) Method of placing concrete and conditions pertaining;
- l) Details of concrete, including concrete mix, aggregate type and source, cement type, slump and cube test results;
- m) Amount of concrete used in pile;
- n) Concrete level before and after extraction of casing.

Testing of Piles

Installation and testing of piles shall be carried out as specified in Clause 2115 of the Special Specification.

Working loads for the piles shall be as follows:-

Piers T3, T2 & P 2

- i. 1200mm Φ vertical piles on pier T3: 4370 KN
- ii. 1000mm Φ raked (5:1) piles on pier T2: 3575 KN
- iii. 800 mm Φ vertical piles on pier P2: 3610 KN

Measurements and Payments

Measurement and payments shall be made as specified in the special specifications and indicated in the Bills of quantities.

SECTION VII - 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 for emergency and/or instructed works will be paid as and when they occur using submitted rates and/or day works and shall require prior approval of the Employer.
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 Day-works) in the Bills of Quantities shall be expended in whole or in part at the discretion of the Engineer.
8. The price and rates entered in the Bills of Quantities shall, except in-so-far as it is otherwise provided under the Contract, include all Constructional plant to be used, labour, insurance, supervision, compliance testing, materials, erection, maintenance of works, overheads and profits, taxes and duties together with all general risks, liabilities and obligations set out or implied in the Contract, transport, electricity and telephones, water, use and replenishment of all consumables, including those required under the contract by the Engineer and his staff.
9. 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.
10. Unbalanced tenders and/or unrealistic rates shall lead to the tenderer being subjected to enhanced Performance Security requirements pursuant to Instruction to Tenderers section 38.2 (b) of Tender Data

Sheets.

Bills of Quantities are Annexed herewith .

PART III - CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION VIII - GENERAL CONDITIONS OF CONTRACT

These General Conditions of Contract (GCC), read in conjunction with the Special Conditions of Contract (SCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

General Conditions of Contract

A. General

1. Definitions

1.1 Bold face type is used to identify defined terms.

- a) **The Accepted Contract Amount** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.
- b) **The Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
- c) **The Adjudicator** is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.
- d) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
- e) **Compensation Events** are those defined in GCC Clause 42 hereunder.
- f) **The Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.
- g) **The Contract** is the Contract between the Procuring Entity and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.
- h) **The Contractor** is the party whose Bid to carry out the Works has been accepted by the Procuring Entity.
- i) **The Contractor's Bid** is the completed bidding document submitted by the Contractor to the Procuring Entity.
- j) **The Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.
- k) **Days** are calendar days; months are calendar months.
- l) **Day works** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- m) **A Defect** is any part of the Works not completed in accordance with the Contract.
- n) **The Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.
- o) **The Defects Liability Period** is the period **named in the SCC** pursuant to Sub-Clause 34.1 and calculated from the Completion Date.
- p) **Drawings** means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.
- q) **The Procuring Entity** is the party who employs the Contractor to carry out the Works, **as specified in the SCC**, who is also the Procuring Entity.
- r) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

- s) **“In writing” or “written”** means hand-written, type-written, printed or electronically made, and resulting in a permanent record;
- t) The Initial Contract Price is the Contract Price listed in the Procuring Entity's Letter of Acceptance.
- u) **The Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the SCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
- v) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- w) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
- x) **The Project Manager** is the person **named in the SCC** (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
- y) **SCC** means Special Conditions of Contract.
- z) **The Site** is the area of the works as **defined as such in the SCC**.
- aa) **Site Investigation Reports** are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- bb) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- cc) **The Start Date** is **given in the SCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- dd) **A Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- ee) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- ff) **A Variation** is an instruction given by the Project Manager which varies the Works.
- gg) **The Works** are what the Contract requires the Contractor to construct, install, and turn over to the Procuring Entity, **as defined in the SCC**.

2 Interpretation

- 21 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.
- 22 If sectional completion is specified in the SCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 23 The documents forming the Contract shall be interpreted in the following order of priority:
 - a) Agreement,
 - b) Letter of Acceptance,
 - c) Contractor's Bid,
 - d) Special Conditions of Contract,
 - e) General Conditions of Contract, including Appendices,
 - f) Specifications,
 - g) Drawings,
 - h) Bill of Quantities⁶, and
 - i) any other document **listed in the SCC** as forming part of the Contract.

⁶*In lump sum contracts, delete “Bill of Quantities” and replace with “Activity Schedule.”*

3 Language and Law

- 3.1 The language of the Contract is English Language and the law governing the Contract are the Laws of Kenya.
- 3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Procuring Entity's Country when
 - 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 from that country or any payments to any country, person, or entity in that country.

4 Project Manager's Decisions

- 4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Procuring Entity and the Contractor in the role representing the Procuring Entity.

5 Delegation

- 5.1 Otherwise **specified in the SCC**, the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.

6 Communications

- 6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

7 Subcontracting

- 7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Procuring Entity in writing. Subcontracting shall not alter the Contractor's obligations.

8 Other Contractors

- 8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the Schedule of Other Contractors, as **referred to in the SCC**. The Contractor shall also provide facilities and services for them as described in the Schedule. The Procuring Entity may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

9 Personnel and Equipment

- 9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.
- 9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.
- 9.3 If the Procuring Entity, Project Manager or Contractor determines, that any employee of the Contractor be determined to have engaged in Fraud and Corruption during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.

10 Procuring Entity's and Contractor's Risks

- 10.1 The Procuring Entity carries the risks which this Contract states are Procuring Entity's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Procuring Entity's Risks

11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Procuring Entity's risks:

- a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
 - i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
 - ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.
- b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is a Procuring Entity's risk except loss or damage due to

- aa) a Defect which existed on the Completion Date,
- bb) an event occurring before the Completion Date, which was not itself a Procuring Entity's risk, or
- cc) the activities of the Contractor on the Site after the Completion Date.

12. Contractor's Risks

12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Procuring Entity's risks are Contractor's risks.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Procuring Entity and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the SCC** for the following events which are due to the Contractor's risks:

- a) loss of or damage to the Works, Plant, and Materials;
- b) loss of or damage to Equipment;
- c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- d) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Procuring Entity may effect the insurance which the Contractor should have provided and recover the premiums the Procuring Entity has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.

13.5 Both parties shall comply with any conditions of the insurance policies.

14. Site Data

14.1 The Contractor shall be deemed to have examined any Site Data **referred to in the SCC**, supplemented by any information available to the Contractor.

15. Contractor to Construct the Works

15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

16. The Works to Be Completed by the Intended Completion Date

16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

17. Approval by the Project Manager

17.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.

17.2 The Contractor shall be responsible for design of Temporary Works.

17.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

17.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

17.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

18. Safety

18.1 The Contractor shall be responsible for the safety of all activities on the Site.

19. Discoveries

19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Procuring Entity. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

20. Possession of the Site

20.1 The Procuring Entity shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date **stated in the SCC**, the Procuring Entity shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

21. Access to the Site

21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

22. Instructions, Inspections and Audits

22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.

22.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and sub-consultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.

22.3 The Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Procuring Entity and/or persons appointed by the Public Procurement Regulatory Authority to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Public Procurement Regulatory Authority. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 25.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Public Procurement Regulatory Authority's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Public Procurement Regulatory Authority's prevailing sanctions procedures).

23. Appointment of the Adjudicator

- 23.1 The Adjudicator shall be appointed jointly by the Procuring Entity and the Contractor, at the time of the Procuring Entity's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the SCC, to appoint the Adjudicator within 14 days of receipt of such request.
- 23.2 Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.

24. Settlement of Claims and Disputes

24.1 Contractor's Claims

- 24.1.1 If the Contractor considers itself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the Project Manager, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.
- 24.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub- Clause shall apply.
- 24.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.
- 24.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Project Manager. Without admitting the Procuring Entity's liability, the Project Manager may, after receiving any notice under this Sub-Clause, monitor the record- keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Project Manager to inspect all these records, and shall (if instructed) submit copies to the Project Manager.
- 24.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Project Manager, the Contractor shall send to the Project Manager a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:
- a) this fully detailed claim shall be considered as interim;
 - b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Project Manager may reasonably require; and
 - c) the Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Project Manager.
- 24.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Project Manager and approved by the Contractor, the Project Manager shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.
- 24.1.7 Within the above defined period of 42 days, the Project Manager shall proceed in accordance with Sub-Clause
- 24.1.8 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the

additional payment (if any) to which the Contractor is entitled under the Contract.

24.1.9 Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

24.1.10 If the Project Manager does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Project Manager and any of the Parties may refer to Arbitration in accordance with Sub-Clause 24.4 [Arbitration].

24.1.11 The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause 24.3.

242 Amicable Settlement

24.2.1 Where a notice of a claim has been given, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a notice of a claim in accordance with Sub-Clause 24.1 above should move to commence arbitration after the fifty-sixth day from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

243 Matters that may be referred to arbitration

24.3.1 Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:

- a) The appointment of a replacement Project Manager upon the said person ceasing to act.
- b) Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.
- c) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- e) Any dispute arising in respect of war risks or war damage.
- f) All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Procuring Entity and the Contractor agree otherwise in writing.

244 Arbitration

24.4.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 24.3 shall be finally settled by arbitration.

24.4.2 No arbitration proceedings shall be commenced on any claim or dispute where notice of a claim or dispute has not been given by the applying party within ninety days of the occurrence or discovery of the matter or issue giving rise to the dispute.

24.4.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.

24.4.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.

24.4.5 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.

24.4.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Project Manager, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Project Manager from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

24.4.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.

24.4.8 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Project Manager shall not be altered by reason of any arbitration being conducted during the progress of the Works.

24.4.9 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the

Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

245 Arbitration with National Contractors

24.5.1 If the Contract is with national contractors, arbitration proceedings will be conducted in accordance with the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;

- i) Architectural Association of Kenya
- ii) Institute of Quantity Surveyors of Kenya
- iii) Association of Consulting Engineers of Kenya
- iv) Chartered Institute of Arbitrators (Kenya Branch)
- v) Institution of Engineers of Kenya

24.5.2 The institution written to first by the aggrieved party shall take precedence over all other institutions.

246 Alternative Arbitration Proceedings

24.6.1 Alternatively, the Parties may refer the matter to the Nairobi Centre for International Arbitration (NCIA) which offers a neutral venue for the conduct of national and international arbitration with commitment to providing institutional support to the arbitral process.

247 Failure to Comply with Arbitrator's Decision

24.7.1 The award of such Arbitrator shall be final and binding upon the parties.

24.7.2 In the event that a Party fails to comply with a final and binding Arbitrator's decision, then the other Party may, without prejudice to any other rights it may have, refer the matter to a competent court of law.

248 Contract operations to continue

24.8.1 Notwithstanding any reference to arbitration herein,

- a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- b) the Procuring Entity shall pay the Contractor any monies due the Contractor.

25. Fraud and Corruption

25.1 The Government requires compliance with the country's Anti-Corruption laws and its prevailing sanctions policies and procedures as set forth in the Constitution of Kenya and its Statutes.

25.2 The Procuring Entity requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

B. Time Control

26. Program

26.1 Within the time stated in the SCC, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.

26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

26.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the SCC from the next payment certificate and

continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.

264 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date

27.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

27.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

28. Acceleration

28.1 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.

28.2 If the Contractor's priced proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

29. Delays Ordered by the Project Manager

29.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

30. Management Meetings

30.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

31. Early Warning

31.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

31.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

C. Quality Control

32. Identifying Defects

32.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

33. Tests

- 33.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

34. Correction of Defects

- 34.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

35. Uncorrected Defects

- 35.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

36. Contract Price⁷

- 36.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.

37. Changes in the Contract Price⁸

- 37.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change. The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Procuring Entity.
- 37.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

38. Variations

- 38.1 All Variations shall be included in updated Programs⁹ produced by the Contractor.
- 38.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.
- 38.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.
- 38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

⁷In lump sum contracts, replace GCC Sub-Clauses 36.1 as follows:

36.1 The Contractor shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

⁸In lump sum contracts, replace entire GCC Clause 37 with new GCC Sub-Clause 37.1, as follows:

The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

⁹In lump sum contracts, add "and Activity Schedules" after "Programs." ¹⁰In lump sum contracts, delete this paragraph.

385 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning

386 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 39.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work

387 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

- a) the proposed change(s), and a description of the difference to the existing contract requirements;
- b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Procuring Entity may incur in implementing the value engineering proposal; and
- c) a description of any effect(s) of the change on performance/functionality.

388 The Procuring Entity may accept the value engineering proposal if the proposal demonstrates benefits that:

- a) accelerate the contract completion period; or
- b) reduce the Contract Price or the life cycle costs to the Procuring Entity; or
- c) improve the quality, efficiency, safety or sustainability of the Facilities; or
- d) yield any other benefits to the Procuring Entity, without compromising the functionality of the Works.

389 If the value engineering proposal is approved by the Procuring Entity and results in:

- a) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the **percentage specified in the SCC** of the reduction in the Contract Price; or
- b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

39. Cash Flow Forecasts

39.1 When the Program¹¹, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

40. Payment Certificates

40.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

40.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

40.3 The value of work executed shall be determined by the Project Manager.

40.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed¹².

40.5 The value of work executed shall include the valuation of Variations and Compensation Events.

40.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

40.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (which would be the tender price), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: $(\text{corrected tender price} - \text{tender price}) / \text{tender price} \times 100$.

40.8 Minimum Certificate amount **SHALL** be Ksh.7,000,000.00

41. Payments

- 41.1 Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of each certificate. If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 41.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.
- 41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

42. Compensation Events

- 42.1 The following shall be Compensation Events:
- d) The Procuring Entity does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.
 - e) The Procuring Entity modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
 - f) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
 - g) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
 - h) The Project Manager unreasonably does not approve a subcontract to be let.
 - i) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
 - j) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons.
 - k) Other contractors, public authorities, utilities, or the Procuring Entity does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
 - l) The advance payment is delayed.
 - m) The effects on the Contractor of any of the Procuring Entity's Risks.
 - n) The Project Manager unreasonably delays issuing a Certificate of Completion.
- 42.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
- 42.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

¹¹In lump sum contracts, add "or Activity Schedule" after "Program."

¹²In lump sum contracts, replace this paragraph with the following: "The value of work executed shall comprise the value of completed activities in the Activity Schedule."

424 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

43. Tax

431 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44.

44. Currency of Payment

441 All payments under the contract shall be made in Kenya Shillings

45. Price Adjustment

451 Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the SCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies:

$$P = A + B \text{ Im/Io}$$

where:

the Contract Price payable.

P is the adjustment factor for the portion of

A and B are coefficients¹³ **specified in the SCC**, representing the non-adjustable and adjustable portions, respectively, of the Contract Price payable and Im is the index prevailing at the end of the month being invoiced and IO is the index prevailing 30 days before Bid opening for inputs payable.

452 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

46. Retention

461 The Procuring Entity shall retain from each payment due to the Contractor the proportion stated in the **SCC** until Completion of the whole of the Works.

462 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.

47. Liquidated Damages

471 The Contractor shall pay liquidated damages to the Procuring Entity at the rate per day stated in the **SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

472 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 41.1.

48. Bonus

481 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the SCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

49. Advance Payment

- 49.1 The Procuring Entity shall make advance payment to the Contractor of the amounts stated in the SCC by the date stated in the SCC, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Procuring Entity in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.
- 49.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.
- 49.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

50. Securities

- 50.1 The Performance Security shall be provided to the Procuring Entity no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the SCC**, by a bank or surety acceptable to the Procuring Entity, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 day from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

51. Dayworks

- 51.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.
- 51.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.
- 51.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

52. Cost of Repairs

- 52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

53. Completion

- 53.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is completed.

54. Taking Over

- 54.1 The Procuring Entity shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

55. Final Account

- 55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.

¹³The sum of the two coefficients A and B should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the non-adjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other non-adjustable components. The sum of the adjustments for each currency are added to the Contract Price.

56. Operating and Maintenance Manuals

56.1 If “as built” Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the SCC.

56.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the SCC pursuant to GCC Sub-Clause 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.

57. Termination

57.1 The Procuring Entity or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

57.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
- b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
- c) the Procuring Entity or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- d) a payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within 84 days of the date of the Project Manager's certificate;
- e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- f) the Contractor does not maintain a Security, which is required;
- g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the SCC**; or
- h) if the Contractor, in the judgment of the Procuring Entity has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Procuring Entity may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

57.3 Notwithstanding the above, the Procuring Entity may terminate the Contract for convenience.

57.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

57.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

58. Payment upon Termination

58.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.

58.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

59. Property

59.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Procuring Entity if the Contract is terminated because of the Contractor's default.

60. Release from Performance

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

SECTION IX - SPECIAL CONDITIONS OF CONTRACT

Except where otherwise specified, all Special Conditions of Contract should be filled in by the Procuring Entity prior to issuance of the bidding document. Schedules and reports to be provided by the Procuring Entity should be annexed.

The following Particular Conditions shall supplement the GCC. Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

| Condition | GCC clause | Data |
|---|--------------|---|
| Procuring entity's name and address | 1 | Kenya Rural Roads Authority, P.O. BOX 48151- 00100, NAIROBI, KENYA |
| Time for completion | 1.1.4 | The Time for Completion are the following: A. Construction: 9 Months B. Maintenance and Rectification during Defects Liability Period: 3 Months C. Performance Based Routine Maintenance: N/A |
| Engineer's name and address | 1 | Director (RAM), Kenya Rural Roads Authority, Barabara Plaza, Airport South Roads, P.O. Box 48151-00100. Nairobi, Kenya. |
| Electronic transmission | 1.3 | Not allowed |
| Time for the parties entering into a contract agreement | 1.6 | Within 35 days from the date of Letter of Award |
| Time for access to the site | 2.1.1 | Possession of Site within 14 days from the date the Contract Agreement is signed Add Paragraph 2 as follows: <i>"The Engineer SHALL issue to the Contractor an Order to Commence Works within 28 Days"</i> |
| | 2.4.1 | Delete entire paragraph and insert the following: <i>"The Employer to make necessary arrangements to pay the Contractor in a timely manner"</i> |
| Engineers' authority to make variation | 3.1.2(b)(ii) | Variation would include increase the accepted contract amount by not exceeding...25...% of the contract price |
| | 3.1.2 | Amend the second 3.1.2 to 3.1.3 and 3.1.3 to be 3.1.4 |
| | 3.4.1 | Delete the entire paragraph and replace with: The Employer may at any time during the performance of the Contract replace the Engineer |
| | 4.1.1 | Delete <i>'...design to the extent specified in the Contract.....'</i> |

| | | |
|-----------------------------------|--------|---|
| Performance security | 4.2.2 | <p>Delete and replace with:</p> <p>“The Contractor shall provide security in, <u>respect of the value of the BID SUM for Spot Improvement works,</u> for his proper performance of the Contract within 28 days after receipt of the Letter of Acceptance. The Performance Security shall be in the form of a bank guarantee, as stipulated by the Employer in the Appendix to Bid. The performance security shall be denominated in the types and proportions of currencies in which the contract price is payable. The Contractor shall notify the Engineer when providing the Performance Security to the Employer”. The security SHALL be 5% of Bid Sum</p> <p>“If the performance security is a bank guarantee, it shall be issued either (a) by a bank located in the country of the Employer or a foreign bank through a correspondent bank located in the country of the Employer, or (b) directly by the foreign bank that has been determined in advance to be acceptable to the Employer.</p> <p>“Without limitation to the provisions of the preceding paragraph, whenever the Engineer determines an addition to the Contract Price as a result of a change in cost, the Contractor, at the Engineers written request, shall promptly increase the value of the Performance Security by an equal percentage”.</p> |
| | 4.2.3 | Replace 14 days with 21 Days |
| Contractors’ representatives name | 4.3 | <p>Delete entire Paragraph 1 to read:</p> <p>The Contractor SHALL prior to the commencement date submit to the Engineer for consent name and particulars of the person the contractor proposes to appoint as the Contractors representative If consent is withheld or subsequently revoked in terms of Sub-Clause 6.9 [Contractor's Personnel], or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.</p> |
| | 4.4.1 | <p>Delete and replace with:</p> <p><i>‘The contractor may subcontract part or all of the works subject to the approval of the employer’</i></p> |
| | 4.21.1 | Delete as follows: |

| | | |
|------------------------------------|-------|---|
| | |” by the Contractor” Replace with”by the Engineer.....” |
| Working hours | 6.5 | <p>The normal working hours are 8am to 5pm with 1hour lunch break for Monday to Friday and 8am to 1pm for Saturdays</p> <p>The Contractor shall allow in his programme for the following public holidays per calendar year during which the Contractor shall not be permitted to work.</p> <ul style="list-style-type: none"> • New Years Day (1st January) • Good Friday • Easter Monday • Labour day (1st May) • Madaraka Day (1st June) • Idd Ul Fitr • Mashujaa Day (20th October) • Jamhuri day (12th December) • Christmas Day (25th December) • Boxing day (26th December) <p>The Contractor shall also allow per calendar year for a further two unspecified public holidays which may be announced by the Government of Kenya with no prior notification upon which he shall not be permitted to work.</p> |
| | 6.7.3 | Amend the second 6.7.3 to read 6.7.4 |
| Key personnel name | 6.9 | <p>Key Personnel</p> <p>A. The key staff listed below must have minimum experience and qualifications as set out in Section III of the tender Document</p> <p>B. Key Personnel defined as the Contractor's personnel are:</p> <p>Site Agent, Deputy Site Agent, Site Engineer, Senior Foreman, Site Surveyor and Foremen</p> |
| Disorderly Conduct | 6.11 | The Engineer may require the contractor to remove from the works any person provided by the contractor who in the opinion of the Engineer misconducts himself or is incompetent or negligent in proper performance of his duties or whose presence on site is considered by the Engineer to be undesirable and such person shall not be again allowed upon the Works without the Consent of the Engineer. Any person removed from the Works shall be replaced as soon as possible be at liberty |
| Prohibition of Harmful Child Labor | 6.21 | Delete entire paragraph and replace with: “the employer shall not children any time during execution of the contract” |
| | 7.3.1 | Replace the Procuring Entity’s Personnel..... with the Engineer’s Personnel |

| | | |
|--|-----------------|---|
| Ownership of Plant and Materials | 7.7 | Delete as follows: <i>“Except as otherwise provided in the Contract, each item of Plant and Materials</i> ” Replace with <i>“all materials for Works.....”</i> |
| Commencement of work | 8.1.1 | Delete Items (b) and (d) |
| Defects notification period | 13.5.1b(b)(iii) | 183 days |
| Taking Over of the Works and Sections | 10.1 | The minimum length for Taking Over shall be as described in Section 107 of the Special Specifications |
| | 10.1.1 | Delete entire paragraph |
| | 10.1.3 | Delete entire paragraph |
| | 10.2.1 | Add after” <i>Procuring entity.....add “and the recommendations of the Inspection and Acceptance Committee duly appointed by the Employer.....”</i> |
| | 12.3.2 | Delete (a), (b) (i) |
| Engineers’ duties and authority | 3.1(b)(ii) | Variations resulting in an increase of the Accepted Contract Amount in excess of % shall require approval of the Procuring Entity. |
| Adjustments for changes in cost | 13.8.3 | Period"n"applicable to the adjustment multiplier "Pn":_f"not applicable"} |
| Sustainable procurement | 14.1 | |
| Performance security | 4.2 | The performance security will be in the form of a "demand bank guarantee" in the amount(s) {5} percent of the Accepted Contract Amount in the same currency(ies) of the Contract Amount. |
| Normal working hours | 4.2 | Hours per day |
| Delay damages for the works | 8.7 & 14.15(b) | Kshs. 5,000.00 per day |
| Maximum amount of delay damages | | 5% of Bid Sum |
| Provisional sums | 13.5. (b)(ii) | NONE |
| | 13.8.4 | Add as follows: <i>The basic applicable indicies shall be those prevailing indices available 28days prior to last day of bid submission</i> <i>The weightings for the indicies shall as given in TABLEA</i> |
| Total advance payment | 14.2.1 | I N/A |
| Repayment amortization rate of advance payment | 14.2.4 | N/A |
| | 14.2.6 | N/A |

| | | |
|--|-----------|--|
| Percentage of retention | 14.3 | 10% of Interim Payment Certificate |
| Limit of retention money | 14.3 | 5% of Bid Sum |
| | 14.3.2 | Delete b and d |
| | 14.3.2 | Delete the provisions of (e) and replace as follows: designated materials as listed below: i. Reinforcement and structural steel ii. Cement iii. Aggregates vii Flex beam Guard rails the materials on site shall not exceeding 75 percent of the value) |
| | 14.4.1 | Delete entire paragraph |
| | 14.4.2 | Amend quarterly to monthly |
| | 14.6.1 | <u>Delete entirely</u> |
| Minimum Amount of Interim Payment Certificates | 14.6.2 | Kshs. 4,500,000.00 |
| | 14.7.1 | Delete (a) |
| Publishing source of commercial interest rates for financial charges in case of delayed payment | 14.8 | Delete and replace 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 average bank lending rates obtained from Central Bank of Kenya. |
| Maximum total liability of the Contractor to the Procuring Entity | 17.6 | |
| Periods for submission of insurance: | 18.1 | <i>21 days</i> |
| a. evidence of insurance. | | 21days |
| b. relevant policies | | 21 days |
| Maximum number of deductibles for insurance of the Procuring Entity's risks | 18.2.4(d) | |
| Minimum amount of third-party insurance | 18.3 | KShs. 1,000,000.00 |
| | 20.1.3 | Amend the first 20.1.3 to read 20.1.3 A and the second "20.1.3" to read 20.1.3B |
| | 20.4.7 | Amend the first 20.4.7 to read 20.4.7 A and the second "20.4.7" to read 20.4.7B |
| | 20.4 | <u>Appointer of Arbitrator</u> <u>Chartered Institute of Arbitrators of Kenya</u> |
| The place of arbitration | 20.7.2 | The place of arbitration shall be The Chartered Institute of Arbitrators (Kenya)----- |

FORM No 1: 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 on the format below.

FORMAT

1. **For the attention of Tenderer's Authorized Representative**

- i) Name: *[insert Authorized Representative's name]*
- ii) Address: *[insert Authorized Representative's Address]*
- iii) Telephone: *[insert Authorized Representative's telephone/fax numbers]*
- iv) 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.]

2. **Date of transmission:** *[email]* on *[date]* (local time)

This Notification is sent by *(Name and designation)* _____

3. **Notification of Intention to Award**

- i) Procuring Entity: *[insert the name of the Procuring Entity]*
- ii) Project: *[insert name of project]*
- iii) Contract title: *[insert the name of the contract]*
- iv) Country: *[insert country where ITT is issued]*
- v) ITT No: *[insert ITT reference number from Procurement Plan]*

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:

4. **Request a debriefing in relation to the evaluation of your tender**

Submit a Procurement-related Complaint in relation to the decision to award the contract.

- a) The successful tenderer
 - i) Name of successful Tender _____
 - ii) Address of the successful Tender _____
 - iii) Contract price of the successful Tender Kenya Shillings _____ (in words _____)
- b) Other Tenderers

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. For Tenders not evaluated, give one main reason the Tender was unsuccessful.

| SNo | Name of Tender | Tender Price as read out | Tender's evaluated price (Note a) | One Reason Why not Evaluated |
|-----|----------------|--------------------------|-----------------------------------|------------------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| | | | | |

(Note a) State NE if not evaluated

5. **How to request a debriefing**

- a) DEADLINE: The deadline to request a debriefing expires at midnight on *[insert date]* (local time).
- b) 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 (5) Business Days of receipt of this Notification of Intention to Award.
- c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:
 - i) Attention: *[insert full name of person, if applicable]*
 - ii) Title/position: *[insert title/position]*
 - ii) Agency: *[insert name of Procuring Entity]*
 - iii) Email address: *[insert email address]*
- d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) 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 (3) 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.
- e) 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.
- f) 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) Days from the date of publication of the Contract Award Notice.

6. **How to make a complaint**

- a) Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, *[insert date]* (local time).
- b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:
 - i) Attention: *[insert full name of person, if applicable]*
 - ii) Title/position: *[insert title/position]*
 - iii) Agency: *[insert name of Procuring Entity]*
 - iv) Email address: *[insert email address]*
- c) 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.
- d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website info@ppra.go.ke or complaints@ppra.go.ke.
You should read these documents before preparing and submitting your complaint.
- e) There are four essential requirements:
 - i) 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.
 - ii) The complaint can only challenge the decision to award the contract.
 - iii) You must submit the complaint within the period stated above.
 - iv) You must include, in your complaint, all of the information required to support your complaint.

7. **Standstill Period**

- i) DEADLINE: The Standstill Period is due to end at midnight on *[insert date]* (local time).
- ii) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.

iii) The Standstill Period may be extended as stated in paragraph Section 5 (d) above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

Signature: _____ **Name:** _____

Title/position: _____ **Telephone:** ___ **Email:** _____

FORM NO. 2 - REQUEST FOR REVIEW

FORM FOR REVIEW(r.203(1))

PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO.....OF.....20.....

BETWEEN

.....**APPLICANT**

AND

.....**RESPONDENT (Procuring Entity)**

Request for review of the decision of the..... (Name of the Procuring Entity ofdated the...day of20.....in the matter of Tender No.....of20..... for(Tender description).

REQUEST FOR REVIEW

I/We.....,the above named Applicant(s), of address: Physical address.....P. O. Box No..... Tel. No.....Email, hereby request the Public Procurement Administrative Review Board to review the whole/part of the above mentioned decision on the following grounds , namely:

- 1.
- 2.

By this memorandum, the Applicant requests the Board for an order/orders that:

- 1.
- 2.

SIGNED(Applicant) Dated on.....day of/...20.....

FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on.....day of20.....

SIGNED

Board Secretary

FORM NO 3: LETTER OF AWARD

[letterhead paper of the Procuring Entity] [date]

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 Contract Data]* 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 *(name of Procuring Entity)*.

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 VIII, Contract Forms, of the Tender Document.

Authorized Signature:.....

Name and Title of Signatory:.....

Name of Procuring Entity.....

Attachment: *Contract Agreement*.....

FORM NO 4: CONTRACT AGREEMENT

THIS AGREEMENT made the _____ day of _____, 20____, between _____ of _____ (hereinafter “the Procuring Entity”), of the one part, and _____ of _____ (hereinafter “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 Special Conditions of Contract
 - e) the General Conditions of Contract;
 - f) the Specifications
 - 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 and sealed by _____ (for the Procuring Entity)

Signed and sealed by _____ (for the Contractor).

FORM NO. 5 - PERFORMANCE SECURITY

[Option 1 - Unconditional Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____ *[insert name and Address of Procuring Entity]* **Date:** _____

_____ *[Insert date of issue]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that _____ (hereinafter called "the Contractor") has entered into Contract No. _____ dated _____ with (name of Procuring Entity) _____ (the Procuring Entity as the Beneficiary), for the execution of _____ (hereinafter 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 Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (in words),¹ 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.....², and any demand for payment under it must be received by us at the 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."

[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.*

¹The 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 of the Contract or a freely convertible currency acceptable to the Beneficiary.

²Insert 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.

FORM No. 6 - PERFORMANCE SECURITY

[Option 2– Performance Bond]

[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[insert name and Address of Procuring Entity]* **Date:** _____
_____ *[Insert date of issue].*

PERFORMANCE BOND No.: _____

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. By this Bond _____ as Principal (hereinafter called “the Contractor”) and _____] as Surety (hereinafter called “the Surety”), are held and firmly bound unto _____] as Obligee (hereinafter called “the Procuring Entity”) in the amount of _____ for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the _____ day of _____, 20, for _____ in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.
3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:
 - 1) complete the Contract in accordance with its terms and conditions; or
 - 2) obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or
 - 3) pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.
4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.
5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named herein or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.
6. In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day _____ of _____ 20_____.

SIGNED ON _____ on behalf of By ___ in the capacity of In the presence of

SIGNED ON _____ on behalf of By ___ in the capacity of In the presence of

FORM NO. 7 - ADVANCE PAYMENT 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 _____ (hereinafter called "the Contractor") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ (in words) is to be made against an advance payment 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 _____ (in words _____)¹ 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 Contractor 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 Contractor 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 _____, 2,² whichever is earlier. Consequently, 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.

¹The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.

²Insert 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.

FORM NO. 8 - 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]* (hereinafter 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]* (hereinafter 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 _____])*¹ 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.....², 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.

[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.

¹The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.

²Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. 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.

FORM NO. 9 BENEFICIAL OWNERSHIP DISCLOSURE FORM

(Amended and issued pursuant to PPRA CIRCULAR No. 02/2022)

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 pursuant to Regulation 13 (2A) and 13 (6) of the Companies (Beneficial Ownership Information) Regulations, 2020. 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 legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.

Tender Reference No.: _____ [insert identification no]

Name of the Tender Title/Description: _____ [insert name of the assignment] to:
 _____ [insert complete name of Procuring Entity]

In response to the requirement in 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

| | Details of all Beneficial Owners | | % of shares a person holds in the company Directly or indirectly | % of voting rights a person holds in the company | Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No) | Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No) |
|-----------|---|--|---|--|--|--|
| 1. | Full Name | | Directly----- ----- % of shares | Directly.....% of voting rights | 1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes ----No---- 2. Is this right held directly or indirectly?: Direct..... ... Indirect..... | 1. Exercises significant influence or control over the Company body of the Company (tenderer) Yes ----No---- 2. Is this influence or control exercised directly or indirectly? Direct..... Indirect..... |
| | National identity card number or Passport number | | | | | |
| | Personal Identification Number (where applicable) | | Indirectly---- ----- % of shares | Indirectly----- % of voting rights | | |
| | Nationality | | | | | |
| | Date of birth [dd/mm/yyyy] | | | | | |
| | Postal address | | | | | |
| | Residential address | | | | | |
| | Telephone number | | | | | |
| | Email address | | | | | |
| | Occupation or profession | | | | | |

| Details of all Beneficial Owners | | % of shares a person holds in the company Directly or indirectly | % of voting rights a person holds in the company | Whether a person directly or indirectly holds a right to appoint or remove a member of the board of directors of the company or an equivalent governing body of the Tenderer (Yes / No) | Whether a person directly or indirectly exercises significant influence or control over the Company (tenderer) (Yes / No) |
|----------------------------------|---|---|--|---|---|
| 2. | Full Name | Directly----- ----- % of shares | Directly.....% of voting rights | 1. Having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer: Yes -----No---- 2. Is this right held directly or indirectly?: Direct..... ... Indirect..... | 1. Exercises significant influence or control over the Company body of the Company (tenderer) Yes -----No---- 2. Is this influence or control exercised directly or indirectly? Direct..... Indirect..... |
| | National identity card number or Passport number | | | | |
| | Personal Identification Number (where applicable) | Indirectly---- ----- % of shares | Indirectly----- % of voting rights | | |
| | Nationality(ies) | | | | |
| | Date of birth [dd/mm/yyyy] | | | | |
| | Postal address | | | | |
| | Residential address | | | | |
| | Telephone number | | | | |
| | Email address | | | | |
| Occupation or profession | | | | | |
| | | | | | |
| 3. e.t .c | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 13(5) of the Companies (Beneficial Ownership Information) Regulations, 2020.(Notwithstanding this paragraph Personally Identifiable Information in line with the Data Protection Act shall not be published or made public). *Note that Personally Identifiable Information (PII) is defined as any information that can be used to distinguish one person from another and can be used to deanonymize previously anonymous data. This information includes National identity card number or Passport number, Personal Identification Number, Date of birth, Residential address, email address and Telephone number.*

III) In determining who meets the threshold of who a beneficial owner is, the Tenderer must consider a natural person who in relation to the company:

- (a) holds at least ten percent of the issued shares in the company either directly or indirectly;
- (b) exercises at least ten percent of the voting rights in the company either directly or indirectly;
- (c) holds a right, directly or indirectly, to appoint or remove a director of the company; or
- (d) exercises significant influence or control, directly or indirectly, over the company.

IV) What is stated to herein above is true to the best of my knowledge, information and belief.

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]*

Designation 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 this [insert date of signing] day of..... [Insert month], [insert year]

Bidder Official Stamp

Public Procurement Regulatory Authority (PPRA)

KISM Towers, 6th Floor, Ngong Rd

P.O Box 58535- 00200, Nairobi Kenya

BILL OF QUANTITIES

SUMMARY OF BILL OF QUANTITIES

UPGRADING TO BITUMEN STANDARDS OF E612 KIBURU-KIANGAI ROAD

| Bill No. | DESCRIPTION | TENDER |
|---------------------------|---|-----------------------|
| | | AMOUNT (Kshs.) |
| 1 | Preliminaries and General Items | |
| 4 | Site Clearance and Top Soil Stripping | |
| 5 | Earthworks | |
| 7 | Excavation and filling for structures | |
| 8 | Culverts and Drainage Works | |
| 9 | Passage to Traffic | |
| 12 | Natural Gravel Base and Subbase | |
| 14 | Lime/Cement Improved gravel Subbase and Base | |
| 15 | Bituminous Surface Treatment and Surface Dressing | |
| 16 | Bituminous Mixes | |
| 20 | Road Furniture | |
| (A) | SUB-TOTAL | |
| | | |
| (B) | Add ...16% VAT of sub-total | |
| GRAND TOTAL (A+ B) | | |

UPGRADING TO BITUMEN STANDARDS OF E612 KIBURU-KIANGAI ROAD

**BILL NO. 1. PRELIMINARIES
AND GENERAL ITEMS**

| ITEM | DESCRIPTION | UNIT | QTY | RATE(Kshs) | AMOUNT(Kshs) |
|-------------|--|-------------|------------|-------------------|---------------------|
| 1.01 | Allow a Prime Cost Sum of Kshs 200,000 for the RE's miscellaneous account to be spent in whole or part as directed by the RE against receipts. | PC Sum | 200,000 | | |
| 1.02 | E.O. item 1.01 for Contractor's overheads and profits. | % of item | % | | |
| 1.03 | Allow a Prime Cost Sum of Kshs 800,000.00 for attendance upon the Resident Engineer' staff. | PC Sum | 800,000 | | |
| 1.04 | E.O. item 1.03 for Contractor's overheads and profits. | % of item | % | | |
| 1.05 | Provide, erect and maintain publicity signs as directed by the Engineer. | No | 2.00 | | |
| 1.06 | Allow a Prime Cost Sum of Kshs 50,000.00 for survey works as directed by the Resident Engineer. | PC Sum | 50,000 | | |
| 1.07 | E.O. item 1.06 for Contractor's overheads and profits. | % of item | % | | |
| 1.08 | Allow a Prime Cost Sum of Kshs 100,000.00 for testing of materials as directed by the Resident Engineer. | PC Sum | 100,000 | | |
| 1.09 | E.O. item 1.08 for Contractor's overheads and profits. | % of item | % | | |
| 1.10 | Allow a prime cost sum of Kshs.270,000.00 for relocation of services as instruted by the Engineer | PC Sum | 270,000 | | |
| 1.11 | EO item 1.10 for contractors overheads and profits | % of item | % | | |
| | Bill No.1 Total Carried Forward to Grand Summary | | | | |

**BILL NO. 4 : SITE CLEARANCE
AND TOP SOIL STRIPPING**

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|-------------|---|----------------|-------------------|--------------------|------------------------|
| 4.01 | Clear site on road reserve including removal of all growths, bushes, hedges, trees, stumps, grub up roots, and other deleterious materials and back-fill and compact to 100% MDD (AASHTO T99) with approved material as directed by the Engineer. | Ha. | 0.96 | | |
| 4.02 | Strip top soil upto 0.2m in thickness along alignment or material sites including removal of all grass and other vegetation, transport to spoil and spread or stock pile for re-use as directed by the Engineer. | m ³ | 1300.00 | | |
| | Bill No. 4 Total Carried Forward to Grand Summary | | | | |

BILL NO. 5 : EARTHWORKS

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|------|--|----------------|------------|-------------|-----------------|
| | NOTE: No separate payment shall be made for the overhaul of material and the cost of such haulage shall be included in the rates and/or prices inserted. | | | | |
| 5.01 | Fill in soft material including benching of shoulders and embankments and compaction to 95% MDD (AASHTO T99) in layers not exceeding 150mm. | m3 | 3,125.0 | | |
| 5.02 | Extra over item 5.01 for compaction of top 300mm subgrade to 100%MDD | m3 | 2,330.0 | | |
| 5.03 | Ditto item 5.01 but in hard material | m3 | 200 | | |
| 5.04 | Cut to spoil in soft material | m3 | 3,500 | | |
| 5.05 | Ditto item 5.03 but in hard material | m3 | 40 | | |
| 5.07 | compaction of top 300mm below formation level in cuts and fills to 100%MDD (AASHTO T99) | m3 | 2,250 | | |
| 5.08 | Compaction of original ground below fills to 95%MDD (AASHTO T99) | m3 | 1,250 | | |
| 5.09 | Top-soiling prior to planting grass as directed by the Engineer | m ² | 0 | | |
| 5.10 | Grassing as directed by the Engineer | m ² | 0 | | |
| | Bill No. 5 Total Carried Forward to Grand Summary | | | | |

BILL NO. 7 : EXCAVATION AND FILLING OF STRUCTURES

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|-------------|---|----------------|-------------------|--------------------|------------------------|
| | These work items cover all excavations and filling operations to bridges, box culverts, retaining walls and other major structures. | | | | |
| 7.01 | Provide and place 150mm thick stone pitching including grouting as directed by the Engineer including grouting | m ² | 750 | | |
| | | | | | |
| | | | | | |
| | Bill No. 7 Total Carried Forward to Grand Summary | | | | |

BILL NO. 8. CULVERTS AND DRAINAGE WORKS

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|-------------|---|----------------|-------------------|--------------------|------------------------|
| | Note: No separate payments shall be made for gravel for blinding or hauling to spoil unsuitable excavation materials and the cost of such shall be included in the rates and prices. | | | | |
| 8.01 | Excavate for inlet, outfall, mitre and catch water drains and cleaning of existing culverts in soft material | m ³ | 580.00 | | |
| 8.02 | As per item 8.01, but for hard material | m ³ | 45.00 | | |
| 8.03 | Excavation in soft material for pipe culverts, headwalls, wingwalls, apron, toewalls, and drop inlets and compact as directed by the engineer | m ³ | 1,500.00 | | |
| 8.04 | As per item 8.03, but for hard material | m ³ | 50.00 | | |
| 8.05 | Provide, lay and joint 600mm dia. concrete pipes (precast to BS 5911 Parts 1 & 3) for access roads | m | 260.00 | | |
| 8.06 | As for item 8.05 but 900mm dia concrete pipes (precast to BS 5911 parts 1 & 3) for cross culverts | m | 30.00 | | |
| 8.07 | As for item 8.05 but 1200mm dia concrete pipes (precast to BS 5911 parts 1 & 3) for cross culverts | m | 0.00 | | |
| 8.08 | provide, place class 15/20 concrete to beds, surround and haunches | m ³ | 245.00 | | |
| 8.09 | Provide, place and compact class 25(20) concrete for headwalls, wingwalls, aprons, and toewalls to access and cross pipe culverts including all form work and the provision and placing of reinforcement as shown in the drawings | m ³ | 130.00 | | |
| 8.10 | Construct in concrete class 15(20) side drains scour checks as instructed | m ³ | 20.00 | | |
| | | | | | |
| | Bill No. 8 Total Carried Forward to Grand Summary | | | | |

BILL NO. 9: PASSAGE OF TRAFFIC

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|------|---|------|------------|-------------|-----------------|
| | NOTE: Notwithstanding the provision of Section 9 of the Standard Specification, no extra payments shall be due as all costs shall be deemed to be included in the rates inserted herein | | | | |
| 9.02 | Allow for the passage of traffic through and around the works | LS | 1.0 | | |
| | Bill No. 9 Total Carried Forward to Grand Summary | | | | |

**BILL NO. 12 : NATURAL MATERIAL
FOR SUBBASE AND BASE**

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|-------|---|----------------|---------------|----------------|--------------------|
| | Note: No overhaul will be paid for separately under these items as it shall be deemed to have been included in the Contractor's rates | | | | |
| 12.01 | Provide gravel sub-base material, haul, spread, compact to at least 100% M.D.D (AASHTO T-180) and shape to level and tolerance. | m ³ | 990 | | |
| 12.02 | Ditto item 12.01 but for base | m ³ | 890 | | |
| | Bill No. 12 Total Carried Forward to Grand Summary | | | | |

**BILL NO. 14 : CEMENT OR LIME
TREATED SUBBASE AND BASE**

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|-------------|--|----------------|-------------------|--------------------|------------------------|
| | Note: No overhaul will be paid for separately under these items as it shall be deemed to have been included in the Contractor's rates | | | | |
| 14.01 | Provide and spread Cement as an improvement agent for base | Tonne | 100 | | |
| 14.02 | Mix and process natural material with improvement agent for pavement layers as instructed by the Engineer or as specified as instructed by the Engineer or as specified. | m ³ | 8,500 | | |
| 14.03 | Curing of cement / lime treated base and sub-base layers | m ² | 12,000 | | |
| | Bill No. 14 Total Carried Forward to Grand Summary | | | | |

BILL NO. 15: BITUMINOUS SURFACE TREATMENT & SURFACE DRESSING TO SHOULDERS

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|-------------|--|-------------|-------------------|--------------------|------------------------|
| 15.01 | Prepare surface of road base and shoulder and busbays, provide heat and spray MC-30 cutback bitumen prime coat at a rate of 0.8-1.2/m ² . | Litres | 6,500 | | |
| 15.02 | Provide & spray K1-60 as tack coat on carriageway, rate of 0.5-0.8 l/m ² | Litres | 4,000 | | |
| | Bill No. 15 Total Carried Forward to Grand Summary | | | | |

BILL NO. 16: BITUMINOUS MIXES

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|-------------|--|-------------|-------------------|--------------------|------------------------|
| 16.02 | Provide, lay and compact 35mm Asphalt Concrete Type II wearing course as directed by the Engineer at Bitumen Content of 5.5 - 7.0% by weight of total mix. | m3 | 200.00 | | |
| 16.03 | Provide and erect asphalt concrete type I bumps and rumble strips as directed by the engineer at bitumen content of 5.5-7.0% by weight of total mix | m3 | 20.00 | | |
| | Bill No. 16 Total Carried Forward to Grand Summary | | | | |

BILL NO. 20: ROAD FURNITURE

| ITEM | DESCRIPTION | UNIT | BILLED QTY | RATE (Kshs) | CONTRACT AMOUNT |
|-------------|---|----------------|-------------------|--------------------|------------------------|
| 20.04 | Provide and erect permanent road signs where instructed by the Resident Engineer and in accordance with Special Specifications Clause 2004 as follows: | | | | |
| | a) warning signs | No. | 10 | | |
| | c) Standard informatory signs | No. | 5 | | |
| | d) Non standard informator signs area | | | | |
| | i) Less than 1.0m2 | No. | 5 | | |
| 20.05 | Provide, deliver, paint and mark the road as specified or as directed by the Engineer, with white reflectionized thermoplastic paint from an approved supplier. | m ² | 225 | | |
| 20.06 | As item 20.05 but for yellow reflectionized thermoplastic paint | m ² | 110 | | |
| | Bill No. 20 Total Carried Forward to Grand Summary | | | | |