

COUNTY GOVERNMENT OF WAJIR



WAJIR MUNICIPALITY

PROPOSED UPGRADING OF WAJIR GIRLS- HADADO YAREY ROAD WITHIN WAJIR MUNICIPALITY TO BITUMEN STANDARDS

TENDER NUMBER: - WCG/OT/KUSP II/01/2025-2026

CLOSING DATE: 30TH JUNE 2026 AT 11:00

JUNE

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PROPOSED UPGRADING OF WAJIR GIRLS- HADADO YAREY ROAD WIYTHIN
WAJIR MUNICIPALITY TO BITUMEN STANDARDS

TENDER No: WCG/OT/KUSP II/01/2025-2026

ADDRESSES OF PROCURING ENTITY

- 1) Name Procuring Entity: WAJIR MUNICIPALITY
- 2) Postal Address: P.O. Box 9-70200
Physical Address: Governor's Office Tender Box Ground Floor Email
address: supplychain@wajir.go.ke
- 3) Invitation to Tender (ITT) No. WCG/OT/KUSP II/01/2025-2026

Tender Name: PROPOSED UPGRADING OF WAJIR GIRLS- HADADO YAREY ROAD WITHIN WAJIR
MUNICIPALITY TO BITUMEN STANDARDS

INVITATION TO TENDER

PROCURING ENTITY: WAJIR MUNICIPALITY, P.O. BOX 9-70200 WAJIR

CONTRACT NAME AND DESCRIPTION: PROPOSED UPGRADING OF WAJIR GIRLS- HADADO YAREY ROAD WITHIN WAJIR MUNICIPALITY TO BITUMEN STANDARDS

The Wajir County Government invites sealed tenders for the construction of PROPOSED UPGRADING OF WAJIR GIRLS- HADADO YAREY ROAD WITHIN WAJIR MUNICIPALITY TO BITUMEN STANDARDS

Tendering will be conducted under open competitive National method using a standardized tender document. Tendering is open to ALL qualified and interested Tenderers.

1. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours i.e. 0900 to 1600 hours] at the address given below.
2. A complete set of tender documents may be purchased or obtained by interested tenders upon payment of non- refundable fees of Kenya shillings One Thousand (1000) in cash or Banker's Cheque and payable to the address given below. Tender documents may be obtained electronically from the Website(s) www.wajir.go.ke or www.tenders.go.ke . Tender documents obtained electronically will be free of charge.
3. Tender documents may be viewed and downloaded for free from the website www.wajir.go.ke or www.tenders.go.ke. Tenderers who download the tender document must forward their particulars immediately to supplychain@wajir.go.ke to facilitate any further clarification or addendum.
4. All Tenders must be accompanied by bid security of Kshs. 2,000,000
5. The Tenderer shall chronologically and sequentially serialize all pages of the tender documents submitted in the format of 1, 2, 3, 4, 5..... Including the cover page and all other pages.
6. Completed tenders must be delivered to the address below on or before 30th June, 2026 at 11.00 am. Electronic Tenders will not be permitted.
7. Tenders will be opened on 30th June 2026 at 11.00 am. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.
8. Late tenders will be rejected.
9. The addresses referred to above are:
 - A. Address for obtaining further information and for purchasing tender documents
 - 1) Name of Procuring Entity: WAJIR MUNICIPALITY
 - 2) Physical address: GOVERNOR'S OFFICE GROUND FLOOR
 - 3) Postal Address: P.O. BOX 9-70200, WAJIR.
 - 4) Wajir Municipal Manager, Email: supplychain@wajir.go.ke

B. Address for Submission of Tenders.

- 1) Name of Procuring Entity: WAJIR MUNICIPALITY
- 2) Postal Address: P.O. BOX 9-70200, WAJIR
- 3) Physical address: GOVERNOR'S OFFICE TENDER BOX GROUND FLOOR

C. Address for Opening of Tenders.

- 1) Name of Procuring Entity: WAJIR MUNICIPALITY
- 2) Physical address: GOVERNOR'S OFFICE GROUND FLOOR



PUBLIC OF KENYA

COUNTY GOVERNMENT OF WAJIR

TENDER NOTICE.

The County Government of Wajir through the Department of Lands, Spatial Planning, Urban Areas and Municipality Development through the Second Kenya Urban Support Programs (KUSP II) would like to invite eligible bidders to submit sealed bids for the tender listed below.

S/NO	TENDER NUMBER	TENDER DESCRIPTION	NCA Registration Required	TENDER SECURITY	ELIGIBILITY CRITERIA
1	WCG/OT/KUS P II/01/2025-2026	Proposed Upgrading of Wajir Girls- Hadado Yarey Road Within Wajir Municipality to Bitumen Standards	NCA 4 and above	2,000,000	Open

Interested eligible bidders may download the bid documents with the Mandatory requirements, tender conditions and further instructions contained in the tender documents which can be downloaded free of charge at www.wajir.go.ke or www.tenders.go.ke. Interested bidders may obtain clarification from the office of the Head of Supply Chain Management Office 2nd floor County Headquarters during working hours or through email: - supplychain@wajir.go.ke. All interested bidders are required to continually check the County Government of Wajir website: www.wajir.go.ke for any tender addenda of clarifications that may arise before the submission date. Completed tender documents should be enclosed in a plain sealed envelope marked with the Tender Name, Reference Number and be deposited in the Tender Box situated at the Ground Floor at County Government of Wajir Headquarters offices on or before **Tuesday 30th June 2026 at 11:00 AM**. Opening of the bids will take place immediately thereafter at the Ground Floor Boardroom in the presence of Tenderers or their representatives who choose to attend.

ELIGIBILITY FOR TENDERING

Mandatory Documents

1. Copy of Certificate of Incorporation
2. Copy of **Valid** practicing License with National construction Authority in the classes specified above.
3. Copy of **Valid** Tax Compliance
4. Copy of Recent CR12 form (Issued in the last 6 months before Tender Opening Period Date)
5. Bidders shall **sequentially serialize** all pages of the bid documents

NOTE:

1. Director (s) bidding under different companies for the same tender shall be disqualified
2. Only those bidders registered in the Categories indicated in this tender notice shall bid for the respective tenders, a digression will lead to disqualification
3. Any form of Canvassing will lead to disqualification.

Late Bids Shall Not Be Accepted.

MUNICIPAL MANAGER, WAJIR
COUNTY GOVERNMENT OF WAJIR

PART 1 – TENDERING PROCEDURES

SECTION I - INSTRUCTIONS TO TENDERERS

A. General

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. Interpretations

Throughout this tendering document:

The term “in writing” means communicated in written form (e.g. by mail, e-mail, and fax, including if specified in the TDS, distributed or received through electronic-procurement system used by the Procuring Entity) with proof of receipt;

if the context so requires, “singular” means “plural” and vice versa; and “Day” means calendar day, unless otherwise specified as a “Business Day.” A Business Day is any day that is a working day of the Procuring Entity. It excludes the Procuring Entity's official public holidays.

3. Fraud and Corruption

- 3.1 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.
- 3.2 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.
- 3.3 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.
- 3.4 Tenderers shall permit and shall cause their agents (where declared or not), subcontractors, sub consultants, service providers, suppliers, and their personnel, to permit the Procuring Entity to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, tender submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Procuring Entity.

4. Eligible Tenderers

- 4.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 4.6 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 Form of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Tendering process and, in the event the JV is awarded the Contract, during contract execution. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender. The maximum number of JV members shall be specified in the TDS.

- 4.2 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 with such relatives are also not allowed to participate in any procurement proceedings.
- 4.3 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) Or 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) Or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity or 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 project specified in the TDS ITT 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; 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 tendering 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.
- 4.4 A firm that is 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.
- 4.5 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.9. A Tenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case maybe. 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.
- 4.6 Tenderer that has been debarred from participating in public procurement shall be ineligible to be prequalified for a tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRa: www.ppra.go.ke. or email: complaints@ppra.go.ke.
- 4.7 Tenderers that are state-owned enterprises or institutions in Kenya may be eligible to compete and be awarded a Contract(s) only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not under supervision of the Procuring Entity.
- 4.8 Tenderer shall not be under suspension from Tendering by the Procuring Entity as the result of the operation of a Tender-Securing or Proposal-Securing Declaration.
- 4.9 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, if 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.
- 4.10 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".
- 4.11 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.
- 4.12 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 for foreign contractors 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.

4.13 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

4.14 A Tenderer may be considered ineligible if he/she offers 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.

4.15 A Kenyan tenderer shall provide evidence of having fulfilled his/her tax obligations by producing a valid tax compliance or tax exemption certificate issued by the Kenya Revenue Authority.

5. Eligible Materials, Equipment, and Services

5.1 The materials, equipment and services to be supplied under the Contract may have their origin in any eligible country and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Procuring Entity's request, Tenderers may be required to provide evidence of the origin of materials, equipment and services.

5.2 For purposes of ITT 5.1 above, "origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that is substantially different in its basic characteristics or in purpose or utility from its components.

B. Contents of Tendering Document

6 Sections of Tendering Document

6.1 The tendering document consists of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITT 10.

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 (ITT) or the notice to the prequalified Tenderers issued by the Procuring Entity is not part of the tendering document.

6.3 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the tendering document, responses to requests for clarification, the minutes of the pre-Tender meeting (if any), or Addenda to the tendering document in accordance with ITT10. In case of any contradiction, documents obtained directly from the Procuring Entity

shall prevail.

- 6.4 The Tenderer is expected to examine all instructions, forms, terms, and specifications in the tendering document and to furnish with its Tender all information and documentation as is required by the tendering document.

7 Site Visit

- 7.1 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 the Services. The costs of visiting the Site shall be at the Tenderer's own expense.

8 Pre-Tender Meeting and a pre-arranged pretender site visit

- 8.1 The Procuring Entity shall specify in the TDS if a pre-tender conference will be held, when and where. The Procuring Entity shall also specify in the TDS if a pre-arranged pretender visit of the site of the works 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 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 anonymized (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 shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT 10 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 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 so specified in the TDS, the Procuring Entity shall also promptly publish its response at the web page identified in the TDS. Should the clarification result in changes to the essential elements of the Tender Documents, the Procuring Entity shall amend the Tender Documents appropriately following the procedure under ITT 10.

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 website 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 24.2 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 translation of the relevant passages in 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 Bills 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, or continued qualified status, as the case may be, 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 13.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a Form 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.

- 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 Bills 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. All blank spaces shall be filled in with the information requested. The Tenderer chronologically serialize all pages of the tender documents submitted.

15 Alternative Tenders

- 15.1 Unless otherwise indicated in the TDS, alternative Tenders shall not be considered.
- 15.2 When alternative times for reaching the required Service Levels or for the completion of Rehabilitation or Improvement Works are explicitly invited, a statement to that effect will be included in the TDS, as will the method of evaluating different times for completion.
- 15.3 Except as provided under ITT 15.4 below, Tenderers wishing to offer technical alternatives to the requirements of the tendering document must first price the Procuring Entity's design as described in the tendering document 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 Best Evaluated Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.
- 15.4 When specified in the TDS, Tenderers are permitted to submit alternative technical solutions for specified parts of the Rehabilitation and/or Improvement Works, and such parts will be identified in the TDS, as will the method for their evaluating, and described in Section VII, Works and Services' Requirements.

16 Tender Prices and Discounts

- 16.1 The prices and discounts quoted by the Tenderer in the Form of Tender and in the Bills 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 and Services described in the Bills of Quantities. Items against which no rate or price is entered by the Tenderer will not be paid for by the Procuring Entity when executed and shall be deemed covered by the rates for other items and prices in the Bills 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, excluding 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 16.1.
- 16.5 Unless otherwise provided in the TDS and the Contract, the rates and prices quoted by the Tenderer are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. 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 If so indicated in ITT 1.1, Tenders are being invited for individual lots (contracts) or for any combination of lots (packages). Tenderers wishing to offer any price reduction for the award of more than one Contract shall specify in their tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 14.4, provided the Tenders for all lots (contracts) are submitted and 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 28 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 The currency (ies) of the Tender and the currency (ies) of payments shall be the same and shall be as specified in the TDS.
- 17.2 Tenderers may be required by the Procuring Entity to justify, to the Procuring Entity's satisfaction, their foreign currency requirements, and to substantiate that the amounts shown in the Summary of Payment Currency Schedule, in which case a detailed breakdown of the foreign currency requirements shall be provided by Tenderers.

18 Documents Comprising the Technical Proposal

- 18.1 The Tenderer shall furnish a technical proposal (if so required) including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Tendering Forms, in sufficient detail to demonstrate the adequacy of the Tenderers' proposal to meet the work and services' requirements and the completion time.

19 Documents Establishing the Qualifications of the Tenderer

- 19.1 To establish Tenderer's eligibility in accordance with ITT 4, Tenderers shall complete the Form of Tender, included in Section IV, Tendering Forms.
- 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, Tendering Forms.
- 19.3 If a margin of preference applies as specified in accordance with ITT 36.1, domestic Tenderers, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 36.1.
- 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 particular 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 19.4. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.
- 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 tenderer will be rejected. Similarly, if the Procuring Entity is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.

- 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 19.9 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 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, 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 26.3.
- 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.
- 21.1 A Tender-Securing Declaration shall use the form included in Section IV, Tendering Forms.
- 21.2 The Tender Security shall be a demand guarantee at the Tenderer's option, in any of the following forms:
- a cash;
 - i. a bank guarantee;
 - ii. a guarantee by an insurance company registered and licensed by the Insurance Regulatory Authority listed by the Authority; or
 - iii. a guarantee issued by a financial institution approved and licensed by the Central Bank of Kenya, from a reputable source, and an eligible country.
 - iv. Other forms of Security as specified in the TDS.
- 21.3 If the unconditional guarantee is issued by a non-bank financial institution located outside Kenya, the issuing non-bank financial institution shall have a correspondent financial institution located in Kenya to make it enforceable unless the Procuring Entity has agreed in writing, prior to Tender submission, that a correspondent financial institution is not required. In the case of a bank guarantee, the Tender Security shall be submitted either using the Tender Security Form included

in Section IV, Tendering Forms, or in another substantially similar format approved by the Procuring Entity prior to Tender submission. 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 24.2.

- 21.4 If a Tender Security or Tender-Securing Declaration is specified pursuant to ITT 21.1, 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. The Procuring Entity shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined non responsive or a bidder declines to extend tender validity period.
- 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.
- 21.7 The Tender Security may be forfeited or the Tender-Securing Declaration executed:
 - i. 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 b if the successful Tenderer fails to:
 - i. sign the Contract in accordance with ITT 48; or
 - ii. furnish a performance security.
- 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 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 Form of intent referred to in ITT 4.1 and ITT 13.2.

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 so as 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 13; 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.
- 23.2 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.
- 23.3 Where a tender package or container cannot fit in the tender box, the procuring entity shall:
- a. Specify in the TDS where such documents should be received.
 - b. Maintain a record of tenders received and issue acknowledgement receipt note to each tenderer specifying time and date of receipt.
 - c. Ensure all tenders received are handed over to the tender opening committee for opening at the specified opening place and time.
- 23.4 If all envelopes are 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 and no later than the date and time indicated 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.
- 21.2 The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders by amending the tendering document in accordance with ITT 10, 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 22. Any Tender received by the Procuring Entity after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the

Tenderer.

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 20.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:
- a prepared and submitted in accordance with ITT 20 and ITT 21 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;" and
 - b received by the Procuring Entity prior to the deadline prescribed for submission of Tenders, in accordance with ITT 22.
- 26.2 Tenders requested to be withdrawn in accordance with ITT 24.1 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 Form or any extension thereof.

27 Tender Opening

- 27.1 Except in the cases specified in ITT 23 and ITT 24.2, the Procuring Entity shall publicly open and read out in accordance with this ITT all Tenders received by the deadline, at the date, time and place specified in the TDS, in the presence of Tenderers' designated representatives and anyone who chooses to attend. Any specific electronic Tender opening procedures required if electronic tendering is permitted in accordance with ITT 22.1, shall be as specified in the TDS.
- 27.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope 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, 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. The Form of Tender and the Bill of Quantities are to be initialed by representatives of the Procuring Entity attending Tender opening in the manner specified in the TDS.

- 27.7 The Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 23.1).
- 27.8 The Procuring Entity shall prepare a record of the Tender opening that shall include, as a minimum:
- i. The name of the Tenderer and whether there is a withdrawal, substitution, or modification;
 - ii. The Tender Price, per lot (contract) if applicable, including any discounts;
 - iii. Any alternative Tenders;
 - iv. The presence or absence of a Tender Security, if one was required.
 - v. Number of pages of each tender document submitted
- 27.9 The Tenderers' representatives who are present shall be requested to sign the record. The omission of a Tenderer's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Tenderers. A copy of the tender opening register shall be issued to a Tenderer upon request
- E. Evaluation and Comparison of Tenders
- 28 Confidentiality
- 29.0 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 such process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 43.
- 29.1 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.
- 29.2 Notwithstanding ITT 28.2, from the time of Tender opening to the time of Contract award, if any Tenderer wishes to contact the Procuring Entity on any matter related to the Tendering process, it may 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. 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 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 Contracting Agency'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 tendering document; "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the tendering document; and
 - b "Omission" is the failure to submit part or all of the information or documentation required in the tendering 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 tendering document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
- a. If accepted, would:
 - i. Affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
 - ii. Limit in any substantial way, in consistent with the tendering document, the Procuring Entity's rights or the Tenderer's obligations under the proposed Contract; or
 - b. 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 ITT18, Technical Proposal, in particular, to confirm that all requirements of Section VII, Specifications for Works and Services have been met without any material deviation, reservation or omission.
- 31.4 If a Tender is not substantially responsive to the requirements of the tendering 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 of time, to rectify nonmaterial non- conformities in the Tender related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the price of the Tender. Failure of the Tenderer to comply with the request may result in the rejection of its Tender.
- 32.3 Provided that a Tender is substantially responsive, the Procuring Entity shall rectify 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 Correction of 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 anyway 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, 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 award.

34 Conversion to Single Currency

34.1 For evaluation and comparison purposes, the currency(ies) of the Tender shall be converted into a single currency which is Kenya Shillings. The source of the exchange rates shall be the Central Bank of Kenya.

35 Nominated Subcontractors

35.1 Unless otherwise stated in the TDS, the Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity. In case the Procuring Entity nominates a subcontractor, the subcontract agreement shall be signed by the Subcontractor and the Procuring Entity. The main contract shall specify the working arrangements between the main contractor and the nominated subcontractor.

35.2 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.

35.1 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 so by the Procuring Entity in the TDS as can be met by subcontractors referred to here after 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.

36 Margin of Preference and Reservations

36.1 A margin of preference on local contractors may be allowed only when the contract is open to international competitive tendering where foreign contractors are expected to participate in the tendering process and where the contract exceeds the value/threshold specified in the Regulations.

36.2 A margin of preference shall not be allowed unless it is specified so in the TDS.

36.3 Contracts procured on basis of international competitive tendering shall not be subject to reservations exclusive to specific groups as provided in ITT 36.5.

36.4 An individual firm is considered a Kenyan tenderer for purposes of the margin of preference if it is registered in Kenya, has more than 51 percent ownership by nationals of Kenya, and if it does not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign contractors. JVs are considered as Kenyan Tenderer and eligible for domestic preference only if the individual member firms are registered in Kenya or have more than 51 percent ownership by nationals of Kenya, and the JV shall be registered in Kenya. The JV shall not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign firms.

36.5 Where it is intended to reserve a contract to a specific group of businesses (these groups are Small and Medium Enterprises, Women Enterprises, Youth Enterprises and Enterprises of persons living with disability, as the case may be), and who are appropriately registered as such by a competent authority, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses or firms belonging to the specified group are eligible to tender. No tender shall be reserved to more than one group. If not so stated in the Invitation to Tender and in the Tender documents, the invitation to tender will be open to all interested tenderers.

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 39.

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

- a Price adjustment due to discounts offered in accordance with ITT 16.4;
- b Price adjustment due to quantifiable non material non-conformities in accordance with ITT 32.3;
- c converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 34; 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 are allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) and for combinations, including any discounts offered in the Form of Tender, is specified in Section III, Evaluation and Qualification Criteria.

37.5 The price of the Rehabilitation and Improvement Works included in each Tender shall not be higher than the threshold indicated in the TDS. If the Tenderer estimates that its costs for the Rehabilitation and Improvement Works are higher than the threshold indicated in the TDS, it shall include the portion above the threshold in its price for the Maintenance Services. If the Tender price in the Best Evaluated Tender is above the threshold indicated in the TDS for the Rehabilitation and Improvement Works, the Procuring Entity may reject the Tender.

38 Comparison of Tenders

38.1 The Procuring Entity shall compare the evaluated costs of all substantially responsive Tenders in accordance with ITT 34.2 to determine the Tender that has the lowest evaluated cost.

38.2 After application of the criteria established in ITT 37.1 to ITT 37.5, the Evaluated Tender Price for comparison of Tenders will be:

- a The lump-sum price offered by the Tenderer for the Maintenance Services; plus
- b The lump-sum price offered by the Tenderer for the Rehabilitation Works, if the tendering document requires prices for this type of works; plus
- c the total price of the priced Bill of Quantities for the Improvement Works, if the tendering document requires prices for this type of works; plus
- d the total price of the priced Bill of Quantities for the Emergency Works.

39 Abnormally Low Tenders

39.1 An Abnormally Low Tender is one where the Tender price, in combination with other constituent elements of the Tender, appears unreasonably low to the extent that the Tender price raises material concerns as to the capability of the Tenderer to perform the Contract for the offered Tender price.

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 tendering 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 Tenders or Front Loaded

41.1 If the Tender that is evaluated as the lowest evaluated cost is, in the Procuring Entity's opinion, seriously unbalanced 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 tendering 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 amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding 20% of the Contract price; or
- c) Reject the Tender.

42 Qualification of the Tenderer

42.1 The Procuring Entity shall determine to its satisfaction whether the 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 or, if prequalification has taken place, continues to be eligible and continues to meet the qualifying 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 19.2. 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 TDS when prequalification has not taken place) 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 next lowest evaluated Tender to make a similar determination of that Tenderer's qualifications to perform satisfactorily.
- 43 Lowest Evaluated Tender
- 43.1 Having compared the evaluated costs 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 tendering document; and
 - b) The lowest evaluated cost.
- 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 Tendering 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.
- 45 Notice of Intention to enter in to a Contract
- 45.1 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 © 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;
- 46 Standstill Period
- 46.1 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. Where only one Tender is submitted, the Standstill Period shall not apply.
- 46.2 Where a Standstill Period applies, it shall commence 100when the Procuring Entity has transmitted to each Tenderer the Notification of Intention to Enter into a Contract with the successful Tenderer.
- 47 Debriefing by the Procuring Entity
- 47.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 43, an unsuccessful tenderer may make a 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.
- 45.2 Debriefings of unsuccessful Tenderers may be done in writing or verbally. The Tenderer shall bear its own costs of attending such a debriefing meeting.

F. Contract Negotiations and Award of Contract

48 Negotiations

- 48.1 Before signature of contract, the procuring Entity may conduct negotiations with the best evaluated tenderer. The negotiations will be held at the date and address indicated in the TDS with the Tender's Representatives who must have written power of attorney to negotiate a Contract on behalf of the Tenderer.
- 48.2 The Procuring Entity shall prepare minutes of negotiations that are signed by the Procuring Entity and the Tender's authorized representative.
- 48.3 The negotiations include discussions of the Schedule of Requirements, the proposed methodology, the Procuring Entity's inputs, the Special Conditions of the Contract, and finalizing the "Works and Services' Requirements" part of the Contract. These discussions shall not substantially alter the original scope of services or the terms of the contract, lest the quality of the final product, its price, or the relevance of the initial evaluation be affected.
- 48.4 The financial negotiations include the clarification of the tax liability in Kenya and how it should be reflected in the Contract. If the selection method included cost as a factor in the evaluation, the total price stated in the Financial Proposal for a Lump-Sum contract shall not be negotiated. The Procuring Entity may ask for clarifications and, if the costs are very high, ask to change the rates.
- 48.5 The negotiations are concluded with a review of the finalized draft Contract, which then shall be initiated by the Procuring Entity and the Tender's authorized representative. If the negotiations fail, the Procuring Entity shall inform the Tender in writing of all pending issues and disagreements and provide a final opportunity to the Tenderer to respond. If disagreement persists, the Procuring Entity shall terminate the negotiations informing the Tenderer of the reasons for doing so. The Procuring Entity will invite the next-ranked Tenderer to negotiate a Contract. Once the Procuring Entity commences negotiations with the next-ranked Tenderer, the Procuring Entity shall not reopen the earlier negotiations.

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 44.1, 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 Performance Security

- 51.1 Within twenty-one (21) days of the receipt of the Letter of Award from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and if required in the TDS, using for that purpose the Performance Security Forms included in Section VIII, Contract Forms, or another form acceptable to the Procuring Entity. If the Performance Security furnished by the successful Tenderer is in the form of a bond, it shall be issued by a bonding or insurance company

that has been verified by the successful Tenderer to be acceptable to the Procuring Entity. A foreign institution providing a bond shall have a correspondent financial institution located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent financial institution is not required.

51.2 Failure of the successful Tenderer to submit the above-mentioned Performance Security 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 Publication of Procurement Contract

52.1 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; names of all Tenderers that submitted Tenders, and their Tender prices as read out at Tender opening.

53 Procurement Related Complaints

53.1 The procedures for making a Procurement-related Complaint are as specified in the TDS.

SECTION II - TENDER DATA SHEET

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

[Where an e-procurement system is used, modify the relevant parts of the TDS accordingly to reflect the e-procurement process.]

[Instructions for completing the Tender Data Sheet are provided, as needed, in the notes in italics mentioned for the relevant ITT.]

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
A. General	
ITT 1.1	The reference number of the Invitation to Tender is: WCG/OT/KUSP II/01/2025-2026 The Procuring Entity is: WAJIR MUNICIPALITY The name of the Contract: Proposed Upgrading of Wajir Girls- Hadado Yarey Road Within Wajir Municipality to Bitumen Standards
ITT 1.2 (a)	Electronic –Procurement System Electronic-procurement system shall not be used.
ITT 4.1	Maximum number of members in the JV shall be: NOT APPLICABLE
ITT 4.11	The Tenderer will require to register with Municipal Manager, Wajir Municipality whose contact addresses are: Physical address: Governor’s Office, County Government of Wajir Headquarters Contact person: Municipal Manager, Wajir Municipality
B. Tendering Document	
8.1	(A) Pre-Tender conference <i>shall not</i> take place. (B) A pre-arranged pretender visit of the site of the works <i>shall not be</i> conducted. However, Tenderers are required to make their own arrangements to visit the projects sites/roads to appraise themselves of the site conditions before submitting their bids.
ITT 8.2	The Tenderer will submit any questions in writing, to reach the Procuring Entity not later than Seven (7) Days to the closure/opening date of the tender.
ITT 8.4	The Procuring Entity’s website where Minutes of the pre-Tender meeting and the pre-arranged pretender will be published is NOT APPLICABLE.
ITT 9.1	For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity’s address is:

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	(1) Name of Procuring Entity WAJIR MUNICIPALITY (2) Physical address: GOVERNOR'S OFFICE GROUND FLOOR (3) Postal Address: P.O. BOX 9-70200, Wajir (4) Attention: MUNICIPAL MANAGER, WAJIR MUNICIPALITY EMAIL: supplychain@wajir.go.ke
C. Preparation of Tenders	
ITP 13.1 (h)	The Tenderer shall submit the following additional mandatory documents in its Tender: 1. Certified Copy of Certificate of Registration/Incorporation 2. Copy of Valid Tax Compliance Certificate 3. Copy Of Registration Certificate with the National Construction Authority in Road Works Category 4 And Above Accompanied by A Valid Practicing License 4. Certified Copy of Recent Cr12 Form – With In 6 Months 5. Properly Filled Tendering Securing Form. 6. Written Power of Attorney for the Person Duly Authorized to Sign the Tender Certified by The Commissioner of Oath 7. Certified Copy of Current Single Business Permit from Wajir County Government 8. Bid Document Must Be in the Original and Copy and Must Be Sequentially Serialized on Every Page and Submission of Original and One Copy 9. Certified Copy of Director's Identity Card 10. Submit Tender Form in the Company Letter Head Duly Completed, Signed and Stamped by the Tenderer in the Format Provided 11. Must Submit a Duly Filled Up Confidential Business Questionnaire, Signed and Stamped. 12. Duly Filled Self Declaration of the Tenderer. 13. Signed Debarment Letter/Debarment Form 14. Duly Filled and Signed Certificate of Independent Tender Determination 15. Duly Filled and Signed Fraud and Corruption Declaration Form (SD2) 16. Duly Filled Declaration and Commitment to the Code Of Ethics <i>NB: CERTIFICATION MUST BE BY A COMMISSIONER FOR OATHS</i>
ITT 15.1	Alternative Tenders <i>shall not be</i> permitted.
ITT 15.3	Alternative times for reaching the required Service Levels and for the completion of the construction, Rehabilitation and/or Improvement Works shall not be permitted.
ITT 15.4	Alternative technical solutions for the shall not be permitted for the following parts of the Works:

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	If alternative technical solutions are permitted, the evaluation method will be as specified in Section III, Evaluation and Qualification Criteria. NOT APPLICABLE
ITT 16.5	The prices quoted by the Tenderer shall be: <i>FIXED</i>

ITT 17.1	The currency(ies) of the Tender and the payment currency(ies) shall be as described below: (a) The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya Shillings.
ITT 20.1	The Tender validity period shall be 210 days.
ITT 20.3	The Tender price shall be adjusted by the following factor(s): NOT APPLICABLE
ITT 21.1	A Tender-Securing Declaration <i>shall be</i> required.
ITT 21.2 (iv)	Other types of acceptable securities will NOT BE APPLICABLE
ITT 22.1	The tenderer shall prepare and submit ONE original Tender document and ONE Copy Tender Document.
ITT 22.3	The written confirmation of authorization to sign on behalf of the Tenderer shall consist of a signed written power of attorney by a commissioner for oaths

D. Submission and Opening of Tenders

ITT 23.1	(A) For <u>Tender submission purposes</u> only, the Procuring Entity's address is: (1) Name of Procuring Entity: WAJIR MUNICIPALITY (2) Postal Address: P.O.BOX 9-70200 WAJIR (3) Physical address: GOVERNOR'S OFFICE TENDER BOX GROUND FLOOR (4) Date and time for submission of Tenders 30 TH JUNE, 2026 AT 11.00AM (5) Tenders shall not be submitted electronically.
ITT 24.1	The Tender opening shall take place at: - Physical address: GOVERNOR'S OFFICE COUNTY GOVERNMENT OF WAJIR GROUND FLOOR Date: 30 TH JUNE, 2026 Time: 11.00AM
ITT 27.6	The tenders shall be initialed by representatives of the Procuring Entity attending Tender opening. Initialization shall be conducted as follows: - ALL MEMBERS OF TENDER OPENING COMMITTEE SHALL • Initialize summary page of BOQ • Form of Tender • Bid Bonds/Tender Securing Declaration Form • Cover page of the Bid Document • Last page of the Bid Document

Reference to ITC Clause	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	INITIALIZE ALL BOQ PAGES INCLUDING THE SUMMARY PAGE, FORM OF TENDER AND BID BONDS (WHERE APPLICABLE)

E. Evaluation and Comparison of Tenders

ITT 32.3	The adjustment shall be based on the average price of the item or component as quoted in other substantially responsive Tenders. If the price of the item or component cannot be derived from the price of other substantially responsive Tenders, the Procuring Entity shall use its best estimate: NOT APPLICABLE
ITT 35.1	The Procuring Entity does not intend to execute any specific elements of the Works by subcontractors selected/nominated by the Procuring Entity.
ITT 36.2	A margin of domestic preference <i>shall not</i> apply.
ITT 37.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.

ITT 42.1	Where prequalification has not taken place, the Procuring Entity shall permit that specific experience for parts of the Works and Service may be met by Specialized Subcontractors. NOT APPLICABLE
ITT 48.1	Contract negotiations with the best evaluated tenderer shall NOT APPLICABLE
ITT 53.1	The procedures for making a Procurement-related Complaint are available from the PPRA website info@ppra.go.ke or 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: MR. OMAR IBRAHIM HUSSEIN Title/position: MUNICIPAL MANAGER Procuring Entity: WAJIR MUNICIPALITY Email address: supplychain@wajir.go.ke 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. General Provisions

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

Evaluation and Contract Award Criteria

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

2. Preliminary examination for Determination of Responsiveness

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

Preliminary Evaluation Criteria

S/No.	Completeness and Responsiveness Criteria	References	Requirement
1.	Form of Tender	Section IV	Tenderer shall Prepare Form of Tender with its letter head clearly showing the Tenderer's complete name and business address.
2.	Tenderers Eligibility Confidential Business Questionnaire	Section IV	Properly fill, sign and Stamp Provide all required information
3.	Certificate of Independent tender determination	Section IV	Properly fill, sign and Stamp Provide all required information
4.	Self-Declaration Form (SD1, 2)	Section IV	Properly fill, sign and Stamp Provide all required information in the two forms

5.	Declaration and Commitment to Code of Ethics	Section IV	Properly fill, sign and Stamp Provide all required information
6.	Tax Compliance Certificate	Tender notice	Provide valid tax compliance certificate
7.	Registration with National Construction Authority (NCA)	Tender notice	Copy of valid certificate of Registration for Road Works in Category 4 and above accompanied by a valid practicing license
8.	Certificate of Incorporation	Item 1.4 of QC	Copy of certificate Certified by Commissioner for Oaths
9.	Certificate of Recent CR12	Tender notice	Provide a copy of Certified recent CR12 (within last six 6 months)
10.	Certificate of Registration in a target group	Tender notice	Certified copy of a valid certificate from National or County Treasury for relevant category (Women)
11.	Priced Bill of Quantities	Section IV (Bill of Quantities)	Fill all the bill of Quantities, sign stamp and counter sign any alteration(s)
12.	Projected Cash Flow	Section IV, Schedule A	Properly fill, sign and Stamp Provide all required information
13.	Site Organization	Section IV, Schedule B	Provide all required information
14.	Contractor's Equipment Form	Section IV, Schedule D	Fully fill all the required information, Sign and Stamp

S/No.	Completeness and Responsiveness Criteria	References	Requirement
15.	Key Personnel Schedule (Form PER I)	Section IV, Schedule F	Provide all required information, sign and stamp in the format provided. Declaration form to be filled, signed and stamped
16.	Key Personnel Schedule (Form PER II)	Section IV, Schedule F	Provide all required information, sign and stamp. Declaration form to be filled, signed and stamped.
17.	Tenderers Qualification Form	Section IV, Form ELI – 1.1	Form to be fully filled, signed and stamped as instructed.

18.	Non-Performed Contracts	Section IV, Form CON 1	Form to be fully filled, stamped and signed Provide all the information
19.	Financial situation and performance	Section IV, Form FIN-3.1(1,2 &3) Section IV, Form FIN-3.2 Section IV, Form FIN- 3.4	Form to be fully filled as required, stamped and signed Provide all the required information
20.	General Construction Experience	Section IV, Form EXP-4.1 -Section IV, Form EXP-4.2(a),(b)	Form to be fully filled as required, stamped and signed Provide all the required information
21.	Form of Tender Bond/Tender declaration Form	Section IV, Form of Tender bond/tender declaration form	Provide unconditional bank guarantee from a recognized financial institution with all the required conditions as per the provided format. Must be valid for 30 days after bid validity.
22.	Pending Litigation	Section IV, Tenderers qualification forms; Form CON-1	Form to be fully filled as required, stamped and signed Provide all the required information
23.	Litigation History	Section IV, Tenderers qualification forms; Form CON-1	Form to be fully filled as required, stamped and signed Provide all the required information

S/No.	Completeness and Responsiveness Criteria	References	Requirement
24.	Serializing of document	ITT No. 6	Serialize chronologically and sequentially all pages of the tender documents submitted in the format of i.e 1,2,3,4,5..... Including the cover page and all other pages

EVALUATION CRITERIA.

There are three levels of evaluation criteria subjected to Companies that bid for the Above Items. These are: -

- A. Mandatory Requirements
- B. Technical evaluation
- C. Financial Evaluation

A. MANDATORY REQUIREMENTS

S/NO	Requirements	Score
1.	Duly Filled, Signed and stamp Form of Tender - Securing Declaration	Mandatory
2.	Written Power of Attorney for the person dully authorized to bind the tenderer certified by the commissioner of Oath.	Mandatory
3.	Certified Certificate of incorporation or Registration Certificate	Mandatory
4.	Certified Copy of valid NCA certificate of Registration for Road works in Category NCA 4 and above accompanied by a valid practicing license	Mandatory
5.	Certified copy of the CR12 Certificate issued within the last six (6) months, indicating the current list of directors, beneficial owners, proprietor, or partners. The CR12 must be certified by a Commissioner for Oaths and shall be accompanied by certified copies of valid identification documents (National Identity Card or Passport) for each director.	Mandatory
6.	Certified Copy of Current Single business permit from Wajir County Government.	Mandatory
7.	Certified Copy of Valid Tax Compliance Certificate and Company KRA pin (Will be verified on the KRA TCC Checker)	Mandatory
8.	Bid document MUST be in the original and copy and MUST be <u>sequentially</u> <u>serialized</u> <u>(paginated)</u> on every page including and not limited to attachments Submission of two Tender documents securely bound (Spiral or book) and clearly marked (original and (copy) by the tenderer. No loose documents will be accepted.	Mandatory
10.	Submit Tender Form in the company Letter head duly Completed, Signed and Stamped by The Tenderer in the format provided.	Mandatory
11	Must submit a duly filled up Confidential Business Questionnaire, signed and stamped	Mandatory
12	Evidence of Physical Registered Office (Attach Utility Bills/ Lease Agreement /Rental Payment Receipt/Evidence of Ownership of The Premises).	Mandatory
13	Duly Filled, Signed and stamp debarment letter /Debarment form (SDI)	Mandatory
14	Duly Filled, Signed and stamp certificate of independent tender Determination	Mandatory
15	Duly Filled, Signed and stamp fraud and corruption declaration Form (SD2)	Mandatory
16	Duly Filled, Signed and stamp declaration and commitment to the code of ethics	Mandatory
Remarks (Responsive or Non-Responsive		R or NR

NB - All Mandatory Document will be verified from the respective institutions and must be certified by Commissioner of OATHS.

1. Assessment of adequacy of Technical Proposal with Requirements (if Applicable)

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

1	TECHNICAL STAFF		Max. 21 Marks
	(a) Site Manager		Max 9
	Qualification = Degree in Civil Engineering		0-3
	General Experience=5yrs		0-3
	Specific Experience=2yrs		0-3
	(b) Senior Foremen		Max 6
	Qualification = Diploma in Civil Engineering		0-2
	. General Experience=3yrs		0-2
	. Specific Experience=2yrs		0-2
	(c) Surveyor		Max 6
	. Qualification = Dip. Surveying		0-2
	. General Experience = 3yrs		0-2
	. Specific Experience = 2yr		0-2
2	PLANT AND EQUIPMENT LEASE/OWN	Min. No	Max 23
	Bitumen distributor	1	3
	Asphalt paver	1	3
	Tippers	3	6
	Pneumatic roller	1	3
	Motor Grader	1	4
	Air compressor	1	4
3	WORK EXPERIENCE		Max 10
	General Experience as Contractor in the last five years.		0-2
	Experience in road construction in the last three years.		0-3
	Specific Experience as a prime contractor, joint venture member, Management contractor or sub-contractor in One contract of minimum value Ksh 200,000,000 or Two (2) contracts of Combined value Ksh 200,000,000 and Above in the last five years.		0-5
4	WORK METHODOLOGY		Max 5
	Submission of a brief work methodology giving a brief description of how you intend to carry out the work including; Signed resourced work programme chart on A3 SHEET with SUPERIMPOSED cash flow projection, traffic management, quality assurance of works and general Site organization in not less than three (3) pages and not more than five (5) pages (typed, font 12 and single spaced).		0-5
5	TRAFFIC MANAGEMENT		Max 5
	Proposals on traffic control, workers safety & accident prevention measures		0-5

6	ENVIRONMENTAL MANAGEMENT	Max 5
	Proposal on social mitigation measures	0-5
7	QUALITY & QUANTITY MANAGEMENT	Max 6
	• Proposals on material testing	0-3
	• Proposal on measurements	0-3
8	CURRENT COMMITMENTS	Max 5
	The total value of outstanding works on the on-going contracts not exceeding Kshs. 300,000,000.00	0-5
TOTAL TECHNICAL SCORE		
9	FINANCIAL CAPACITY	Max. 20 MKS
	Working capital of Kshs. 15,000,000.00	0-5
	Certified Bank statement from a reputable bank. Contact information to be Aailed (for the last 6 Month. <i>Should be duly stamped and signed by a recognized financial institution.</i>)	0-5
	Audited Statements of account for the last 2 years presented in the Internationally Financial Reporting Standard	0-5
	Certified Credit Line from a reputable bank	0-5
TOTAL FINANCIAL SCORE		

FINAL SCORE SHEET

NO	CATEGORY	MAX MARKS
1	TECHNICAL EVALUATION	80
2	FINANCIAL EVALUATION	20
TOTAL		100

N/B: Technical + Financial= 100 Marks, Pass Mark is 70 marks. Tenderers that pass technical evaluation proceed to tender sum comparisons. The lowest responsive and technically qualified tenderer wins the bid.

N/B: Technical + Financial= 100 Marks, Pass Mark is 70 marks. Tenderers that pass technical evaluation proceed to tender sum comparisons. The lowest responsive and technically qualified tenderer wins the bid.

2. Tender Evaluation (ITT 37)-NOT APPLICABLE

Price evaluation: in addition to the criteria listed in ITT 37.2 (a) – (d) the following criteria shall apply:

- i) Alternative Completion Times, if permitted under ITT 13.2, will be evaluated as follows: N/A
- ii) Alternative Technical Solutions for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows. N/A
- iii) Other Criteria; if permitted under ITT 37.2 (d)

3. Multiple Contracts – NOT APPLICABLE

Multiple contracts will be permitted in accordance with ITT 35.4. Tenderers are evaluated on basis of Lots and the lowest evaluated tenderer identified for each Lot. The Procuring Entity will select one Option of the two Options listed below for award of Contracts.

OPTION 1

- i) If a tenderer wins only one Lot, the tenderer will be awarded a contract for that Lot, provided the tenderer meets the Eligibility and Qualification Criteria for that Lot.
- ii) If a tenderer wins more than one Lot, the tender will be awarded contracts for all won Lots, provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the Lots. The tenderer will be awarded the combination of Lots for which the tenderer qualifies and the others will be considered for award to second lowest the tenderers.

OPTION 2

The Procuring Entity will consider all possible combinations of won Lots [contract(s)] and determine the combinations with the lowest evaluated price. Tenders will then be awarded to the Tenderer or Tenderers in the combinations provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the won Lots.

4. Alternative Tenders (ITT 13.1) – NOT APPLICABLE

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

The Procuring Entity shall consider Tenders offered for alternatives as specified in Part 2– Works and Services' requirements. Only the technical alternatives, if any, of the Tenderer with the Best Evaluated Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.

5. Margin of Preference

- A. 7.1 If the TDS so specifies, the Procuring Entity will grant a margin of preference of fifteen percent (15%) to be loaded one valuated price of the foreign tenderers, where the percentage of shareholding of Kenyan citizens is less than fifty-one percent (51%).
- B. 7.2 Contractors applying for such preference shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a particular contractor or group of contractor's qualifies for a margin of preference.
- C. 7.3 After Tenders have been received and reviewed by the Procuring Entity, responsive Tenders shall be assessed to ascertain their percentage of shareholding of Kenyan citizens. Responsive tenders shall be classified into the following groups:
 - i) *Group A:* tenders offered by Kenyan Contractors and other Tenderers where Kenyan citizens hold shares of over fifty one percent (51%).
 - ii) *Group B:* tenders offered by foreign Contractors and other Tenderers where Kenyan citizens hold shares of less than fifty one percent (51%).
- D. 7.4 All evaluated tenders in each group shall, as a first evaluation step, be compared to determine the lowest tender, and the lowest evaluated tender in each group shall be further compared with each other. If, as a result of this comparison, a tender from Group A is the lowest, it shall be selected for the award. If a tender from Group B is the lowest, an amount equal to the percentage indicated in Item 3.1 of the respective tender price, including unconditional discounts and excluding provisional sums and the cost of day works, if any, shall be added to the evaluated price offered in each tender from Group B. All tenders shall then be compared using new prices with added prices to Group B and the lowest evaluated tender from Group A. If the tender from Group A is still the lowest tender,

it shall be selected for award. If not, the lowest evaluated tender from Group B based on the first evaluation price shall be selected.

6. Post qualification and Contract award (ITT 37), more specifically

- a) In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of prequalification data, if so required.
- b) In case the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tender shall be considered for contract award, subject to meeting each of the following conditions.
 - i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow of Kenya Shillings 40,000,000.00
 - ii) Minimum average annual construction turnover of Kenya Shillings 100,000,000.00, equivalent calculated as total certified payments received for contracts in progress and/or completed within the last two (2) years.
 - iii) At least three (3) No. contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor with a total cumulative value of Kenya shillings 100,000,000.00
 - iv) Contractor's Representative and Key Personnel, which are specified in the post qualification table 9 below
 - v) Contractors key equipment listed on table 10 below:
 - iv) Other conditions depending on their seriousness.
 - a) History of non-performing contracts:

Tenderer and each member of JV in case the Tenderer is a JV, shall demonstrate that non-performance of a contract did not occur because of the default of the Tenderer, or the member of a JV in the last three (3) years. The required information shall be furnished in the appropriate form.
 - b) Pending Litigation

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

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

7. Qualification Criteria

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	<i>Document To be Completed by Tenderer</i>	<i>For Procuring Entity's Use (Qualification met or Not Met)</i>
1	Nationality	Nationality in accordance with ITT 4.5	Forms ELI – 1.1 with attachments	
2	Conflict of Interest	No conflicts of interest in accordance with ITT 4.3	Confidential business questionnaire	
3	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority in accordance with ITT 4.15.	TDS; ITT 11.1 (h)	
4	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 4.6	ITT 13.1 (h)	
5	State-owned Enterprise	Meets conditions of ITT 3.7	Forms ELI – 1.1 with attachments	
6	Goods, equipment and services to be supplied under the contract	To have their origin in any country that is not determined ineligible under ITT 5.1	Forms ELI – 1.1 with attachments	
7	History of non-performing Contracts	Non-performance of a contract did not occur as a result of contractor default since 1 st January 2018.	Form CON-1	
8	Suspension Based on Execution of Tender/Proposal Securing Declaration by the Procuring Entity	Not under suspension based on-execution of a Tender/Proposal Securing Declaration pursuant to ITT 19.10.	Form of Tender	
45 Page				

9	Pending	Tender's financial position and prospective long-term profitability still	Form CON – 1	

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
	Litigation	sound according to criteria established in 3.1 and assuming that all pending litigation will NOT be resolved against the Tenderer.		
10	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer for the last three (3) years	Form CON – 1	
Financial Capability				
11	Financial Capabilities	(i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as Kenya Shillings 40,000,000.00 equivalent for the subject contract(s) net of the Tenderer's other commitments. (ii) The Tenderers shall also demonstrate, to the satisfaction of the Procuring Entity, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments. (iii) The audited balance sheets or, if not required by the laws of the Tenderer's country, other financial statements acceptable to the Procuring Entity, for the last two (2) years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability. All pages of audited financial statements must be initialized and stamped by both a practicing Auditor registered with ICPAK and one of the Directors. Auditor's practicing membership number from ICPAK must be indicated. The financial statements shall conform to the International Financial Reporting Standards (IRFS)	Form FIN – 3.1, with attachments	
12	Average Annual Construction	Minimum average annual construction turnover of Kenya 100,000,000.00 equivalent calculated as total certified payments	Form FIN – 3.2	

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
	Turnover	received for contracts in progress and/or completed within the last two (2) years, divided by two (2) years		
Experience				
13	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least the last five (5) years, starting 1 st January 2018.	4. Form EXP – 4.1 Experience	
14	Specific Construction & Contract Management Experience	A minimum number of three (3) similar contracts specified below that have been satisfactorily and substantially completed as a prime contractor, joint venture member, management contractor or sub-contractor between 1st January 2020 and tender submission deadline i.e. three (3) contracts, with a total cumulative value Kenya shillings 100,000,000.00 equivalent. The similarity of the contracts shall be based on the following: <i>[Based on Section VII, Scope of Works, specify the minimum key requirements in terms of physical size, complexity, construction method, technology and/or other characteristics including part of the requirements that may be met by specialized subcontractors, if permitted in accordance with ITT 34.3]</i>	Form EXP 4.2(a)	
Key Personnel Capability				
15		The site staff shall possess minimum levels set below NB: Attachment of CVs and certified copies Academic Certificates for all staff is mandatory; (Certification by Commissioner of Oaths)	Section IV; Schedule F	
	Project Engineer	Qualification: Bachelor in Civil Engineering. General Experience: 15 years Specific Experience in similar works: 10 years	Section IV; Schedule F	

		Registered with EBK		
	Site Agent	Qualification: Bachelor in Civil Engineering. General Experience: 10 years Specific Experience in similar works: 5 years Registered with EBK	Section IV; Schedule F	
	Senior Foremen (2No.)	Qualification: Diploma in Civil Engineering. General Experience: 5 years Specific Experience in similar works: 2 years	Section IV; Schedule F	
	Electrical Technicians (1)	Ordinary Diploma in Electrical Engineering • A valid Class A, B or C Electrician License from Energy and Petroleum regulatory Authority (EPRA). • More than 6 years of full-time technical experience at the level of Street Supervisor	Section IV; Schedule F	
	Craftsmen (1)	Government Trade Test Certificate in Electrical Engineering • Valid Class B or C Electrician License from Energy and Petroleum regulatory Authority (EPRA). • More than 5 years of full-time technical experience at the level of Street Technician	Section IV; Schedule F	

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	Document To be Completed by Tenderer	For Procuring Entity's Use (Qualification met or Not Met)
	Site Engineering surveyor	Degree in surveying General Experience: 5 years Specific Experience in similar works: 3 years	Section IV; Schedule F	
	One (1) Environmentalist	Degree in Environmental Science or related field - Registered NEMA Lead Expert - General Experience: 5 Years - Specific experience in similar works: 4 years	Section IV; Schedule F	
	One (1) Sociologist	Degree in Sociology / Community Development or equivalent - General Experience: 5 Years - Specific experience in similar works: 4 years	Section IV; Schedule F	
	Health and Safety Expert	First Degree in a relevant field - A Course in Occupation Health and Safety - General Experience: 6 Years - Specific experience in similar works: 4 years	Section IV; Schedule F	
Equipment				
16	Contractor's Equipment	-Bidder shall provide evidence of ownership whether owned or leased (except those from Mechanical & Transport Department (MOTIHUD which shall be valid for one (1) year) - Those leasing from private leases shall provide certified copies of Lease Agreement, be current and specific to the tender.	Form EQU and Equipment Table (9) below	

Work Methodology				
17	Work Methodology	Submission of a brief work methodology giving a brief description of how you intend to carry out the work including; Signed resourced work programme chart on A3 SHEET with SUPERIMPOSED cash flow projection, traffic management, quality assurance of works and general Site organization in not less than three (3) pages and not more than five (5) pages (typed, font 12 and single spaced).	Section IV; Schedule B & Schedule E	
Traffic Management				
18	Traffic Management, workers' safety and accident prevention Measures	Pursuant to Clause 31 of the GCC the following shall be provided; - Proposals on traffic control, workers safety & accident prevention measures		
Environmental Management				

1	2	3	4	5
Item No.	Qualification Subject	Qualification Requirement	<i>Document To be Completed by Tenderer</i>	<i>For Procuring Entity's Use (Qualification met or Not Met)</i>
19	Environmental and social management	Pursuant to sub-clause 19.2 (h) the following shall be provided; - Proposal on social mitigation measures		
Quality and Quantity Management				
20	Quality and Quantity Management	Tenderer should submit the following; (a) Proposals on material testing (b) Proposal on measurements		
Current Commitments				
21	On-going contracts	The total value of outstanding works on the on-going contracts must not exceed the average annual turnover for the last two years.	Form FIN - 3.4	

8. CONTRACTOR'S EQUIPMENT.

The Bidder shall indicate the core plant and equipment considered by the company to be necessary for undertaking the project together with proof of ownership or lease of the same. The lease must be current i.e. dated from April, 2021. Leases which are out dated will not be accepted. (* Mandatory minimum number of equipment required by the Employer for the execution of the project that the bidder shall make available for the Contract).

Item No.	Equipment Details	Ideal Number Required for the Contract Execution	No. of Equipment Owned by the Bidder	No. of equipment to be hired/Leased by the Bidder	No. of equipment to be made available for the Contract by the Bidder	Date of Arrival on Project (Days after commence)
	A) Concrete Equipment					
	(i) Mobile concrete mixers	1				
	(ii) Concrete vibrators	2				
	B) Transport (Tippers, dumpers, water tankers)					
	(i) 6 X 4 tippers payload 16 – 20 tones	3				
	(ii) Water tankers (18,000 – 20,000 lts. capacity)	1				
	C)Earth – Moving Equipment					
	(i) Wheeled loaders					
	(ii) Motor graders (93 - 205kW)	1				
	D) Excavators					
	1. Hydraulic crawler mounted (7 – 10 tonnes) – 0.25 – 0.4 m3 SAE bucket.	1				
	E) Rollers					
	(i) Self-propelled single drum vibrating (various types)					
	(ii) Pneumatic Roller	1				
	F) F) Others					

Item No.	Equipment Details	Ideal Number Required for the Contract Execution	No. of Equipment Owned by the Bidder	No. of equipment to be hired/Leased by the Bidder	No. of equipment to be made available for the Contract by the Bidder	Date of Arrival on Project (Days after commence)
	(i) Asphalt Paver	1				
	(ii) Pot hole cutter	1				
	(iii) Hand sprayer	1				
	(iv) Pedestrian Roller	1				
	(v) Air compressor	1				

I certify that the above information is correct.

Signature of Tenderer: Date:

9. Financial

The tenders that pass the technical assessment shall be subjected to costs comparison. The Best Evaluated Tender shall be determined as the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:

- c) Most responsive to the tendering document; and
- d) The lowest evaluated cost.

SECTION IV-TENDERING FORMS

FORM OF TENDER INSTRUCTION TO

TENDERERS

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

FORM OF TENDER

Date of this Tender submission: *[Insert date (as day, month and year) of Tender submission]* Invitation to Tender No.: *[insert identification]* Alternative No.: *[insert identification No if this is a Tender for an alternative]*

To:

_____ We

, the undersigned, declare that:

- a) *No reservations:* We have examined and have no reservations to the tendering document, including Addenda issued in accordance with Instructions to Tenderers (ITT);
- b) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance with ITT4;
- c) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing Declaration or Proposal-Securing Declaration in Kenya in accordance with ITT 4.8.
- d) *Conformity:* We offer to execute in conformity with the tendering document and in accordance with the construction or service schedule the following Works:
[Insert one of the options below as appropriate]
- e) *Tender Price:* The total price of our Tender, excluding any discounts offered in item (f) below is:

Description	Amount (in KSHS)
(a) Proposed upgrading of wajir girls- hadado yarey road 1.2km to bitumen standards	
..... <i>[amount in words] [Name of currency].</i>	

A. SUB-TOTAL	
B. TOTAL =	

- f) **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]
- g) **Discounts:** The discounts offered and the methodology for their application are:
- The discounts offered are:[Specify in detail each discount offered.]
 - 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];
- h) **Tender Validity Period:** Our Tender shall be valid for a period specified in TDS 18.1 (or as amended if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (or as amended if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- i) **Performance Security:** If our Tender is accepted, we commit to obtain a Performance Security in accordance with the tendering document;
- j) **One Tender per Tenderer:** We are not submitting any other Tender (s) as an individual Tenderer, and we are not participating in any other Tender(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITT 4.4, other than alternative Tenders submitted in accordance with ITT 13;
- k) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Procuring Entity. Further, we are not ineligible under Kenya laws or official regulations or pursuant to a decision of the United Nations Security Council;
- l) **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 4.7];
- m) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Tendering process or execution of the Contract: [insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].

Name of Recipient	Address	Reason	Amount

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

- n) **Binding Contract:** We understand that this Tender, together with your written acceptance thereof included in your Form of Acceptance, shall constitute a binding contract between us, until a formal contract is

prepared and executed;

- o) *Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Best Evaluated Tender or any other Tender that you may receive;*
- p) *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;*
- q) *Collusive practices: We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the "Certificate of Independent Tender Determination" attached below.*
- r) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from www.ppra.go.ke during the procurement process and the execution of any resulting contract.
- s) We, the Tenderer, have completed fully and signed the following Forms as part of our Tender:
- a) Tenderer's Eligibility; Confidential Business Questionnaire – to establish we are not in any conflict to interest.
 - b) Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.
 - a) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
 - b) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal.
- t) Further, we confirm that we have read and understood the full content and scope of fraud and corruption as informed in "Appendix 1- Fraud and Corruption" attached to the Form of Tender.

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

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

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

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

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

Name in the capacity of _____

Signed

Duly authorized to sign the Tender for and on behalf of

Dated on _____ day of _____, _____

Appendix to Form of Tender
(This appendix forms part of the bid)

CONDITIONS OF CONTRACT	CLAUSE	AMOUNT
Tender Security		N/A
Instructions in Writing	2.5	Execution of works under site instructions from Resident Engineer to commence within three (3) days
Amount of Performance Security (Unconditional Bank Guarantee)	10.1	1% (per cent) of Tender Sum in the form of Unconditional Bank Guarantee
Program to be submitted	14.1	Not later than Fourteen (14) days after issuance of Order to Commence in the format Prescribed in the Tender Document
Cash flow estimate to be submitted	14.3	Not later than Fourteen (14) days after issuance of Order to Commence
Minimum amount of Third Party Insurance	23.2	1% of the Contract Sum
Period for commencement, from Engineer's order to commence	41.1	14 days
Time for completion –Contract Period	40.1	Three (3) months
Time for completion for instructed Works	40.1	Three (3) months
Amount of liquidated damages	47.1	0.05% of Contract Sum per day
Limit of liquidated damages	47.1	5% of Contract Sum
Defects Liability period	60.3	3 months
Percentage of Retention	60.3	5% of Interim Payment Certificate
Limit of Retention Money	60.3	5% of Contract Sum
Minimum amount of interim certificates (Instructed Works)	60.2	Kshs 6,000,000.00
Time within which payment to be made after Interim Payment Certificate signed by Engineer	60.10	28 days
Time within which payment to be made after Final Payment Certificate signed by Engineer	60.10	28 days
Appointer of Adjudicator	67.3	The Chartered Institute of Arbitrators (Kenya)
Notice to Employer and Engineer	68.2	The Employers address is: The County Government of Wajir, P.O. Box 9-70200 <u>WAJIR</u> The Engineer's address is: Senior Superintending Engineer, P.O. Box 9-70200 <u>WAJIR</u> The Contractor address is: Name..... P.O Box..... City/Town..... Email..... Telephone.....

Signature of Tenderer.....

Date

(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.

- 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	

- Sole Proprietor, provide the following details.

Name in full _____ Age _____

Nationality _____ Country of Origin _____

Citizenship _____

- 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.		
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		

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

	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 deposed to herein above is true to the best of my knowledge, information and belief.

.....
(Title)

.....
(Signature)

.....
(Date)

Bidder Official Stamp

FORM SD2

SELF DECLARATION THAT THE TENDERER WILL NOT ENGAGE IN ANY CORRUPT OR FRAUDULENT PRACTICE

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

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

.....
(Title)

.....
(Signature)

.....
(Date)

Bidder's Official Stamp

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

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

2. Requirements

- 2.1 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.

- 2.2 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—
 - i. Shall not take part in the procurement proceedings;
 - ii. Shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
 - iii. Shall not be a subcontractor or 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 with in his or her duties shall 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.

2.3 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 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, records and other documents relating to the procurement process, selection and/or contract execution, and to have the 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.*

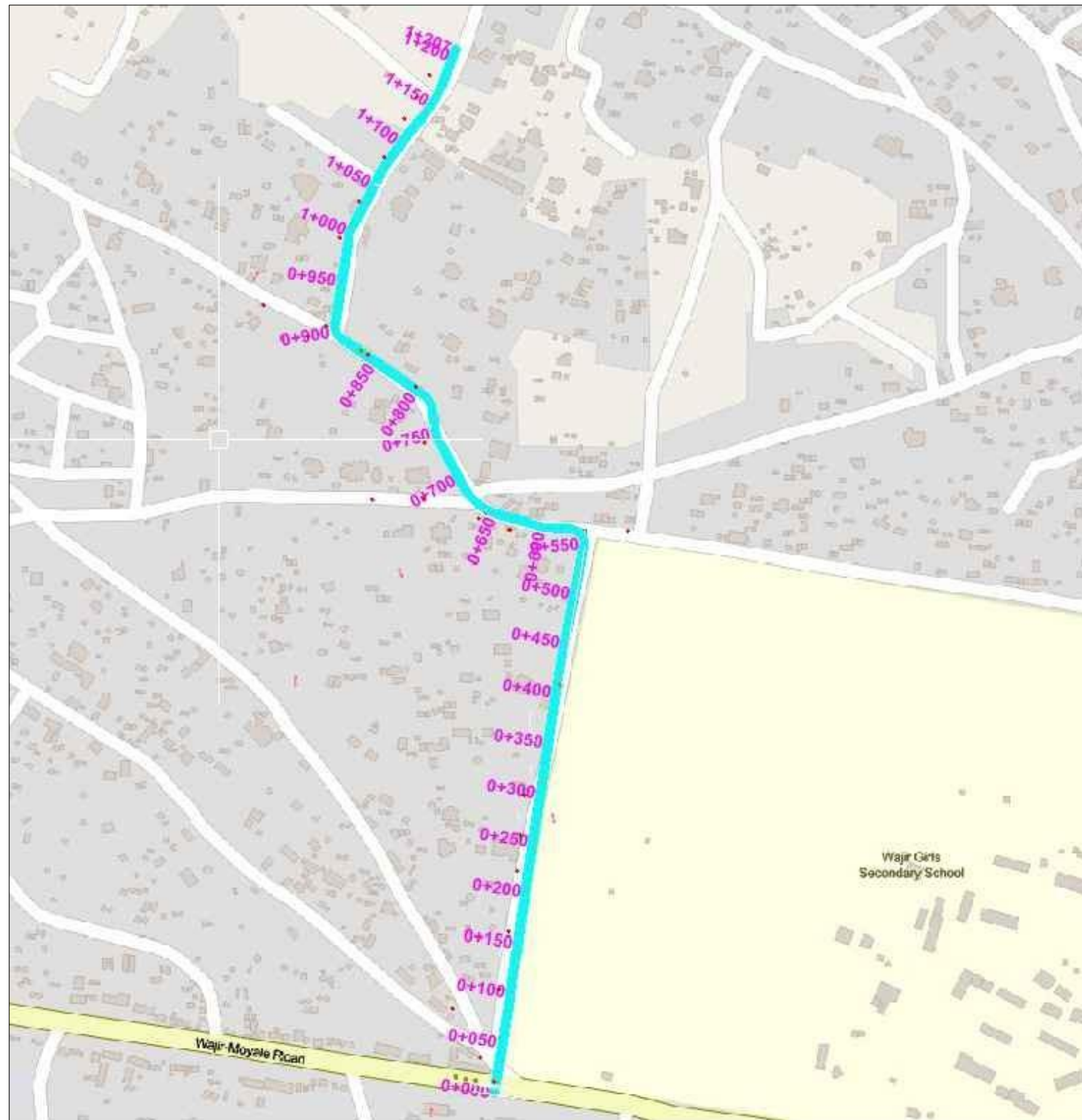
COUNTY GOVERNMENT OF WAJIR

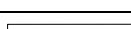


PROPOSED DESIGN OF THE HADADO YARE ROAD 1.2KM

PROJECT LOCATION

PROJECT LOCATION

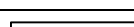


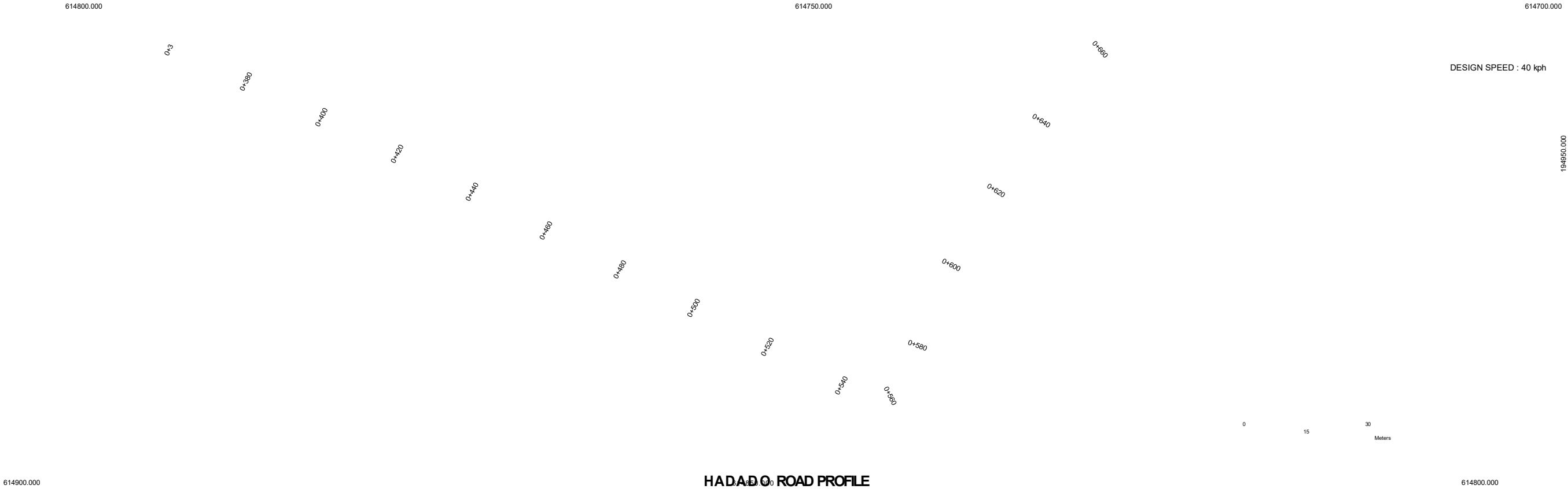
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				CHECKED BY: JM					DRAWING No.	HY-R2-03
				DESIGNED BY: JM					SHEET CONTENTS:	PROJECT LOCATION
				DRAWN BY: EWN						

PLAN AND PROFILE

ALIGNMENT SETTING OUT DATA

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0+040.00	194,307.6835m	614,753.7537m	N8° 54' 38"E
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0+160.00	194,426.2514m	614,772.2366m	N8° 43' 36"E
0+180.00	194,446.0214m	614,775.2613m	N8° 40' 14"E
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REV.No.	DATE	DESCRIPTION					PROPOSED DESIGN OF HADADO YARE ROAD.	DATE:	JUNE 2026						
										DRAWING No.	HY-R2-03				
												SHEET CONTENTS:	CENTRELINE SETTING OUT DATA		
														SHEET No:	01 OF 01



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ROAD LEVEL	264.74	264.22	264.77	264.27	264.84	264.48	264.87	264.45	264.91	264.52	264.95	264.57	264.99	264.66	265.04	264.70	265.09	264.71	265.14	264.82	265.19	264.77	265.24	264.76	265.29	264.82	265.34	264.95	265.39	264.99	265.44	264.98	265.49	265.21
CUT - / FILL	0.52		0.50		0.36		0.42		0.39		0.37		0.33		0.34		0.37		0.32		0.42		0.48		0.46		0.38		0.40		0.46		0.28	
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REVISIONS

CLIENT

SCALES

PRELIMINARY DESIGN

CHECKED BY:
JM
DESIGNED BY:
JM

COUNTY GOVERNMENT OF WAJIR

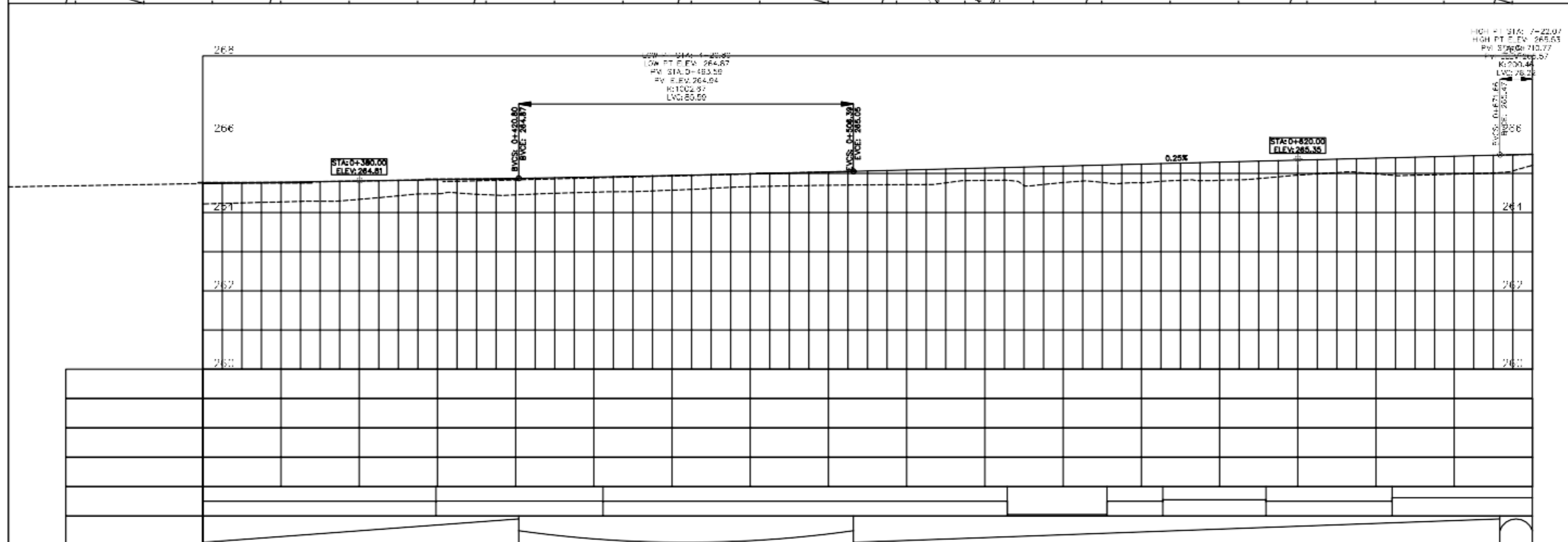
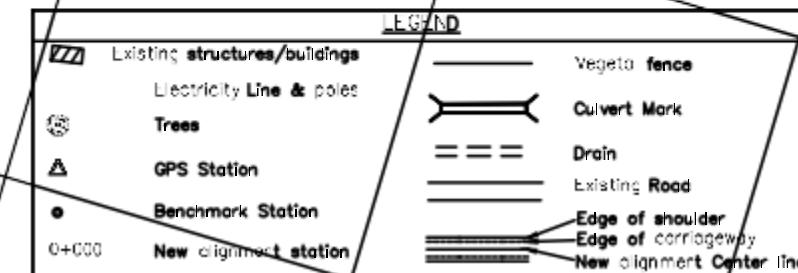
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DATE:

JUNE 2026

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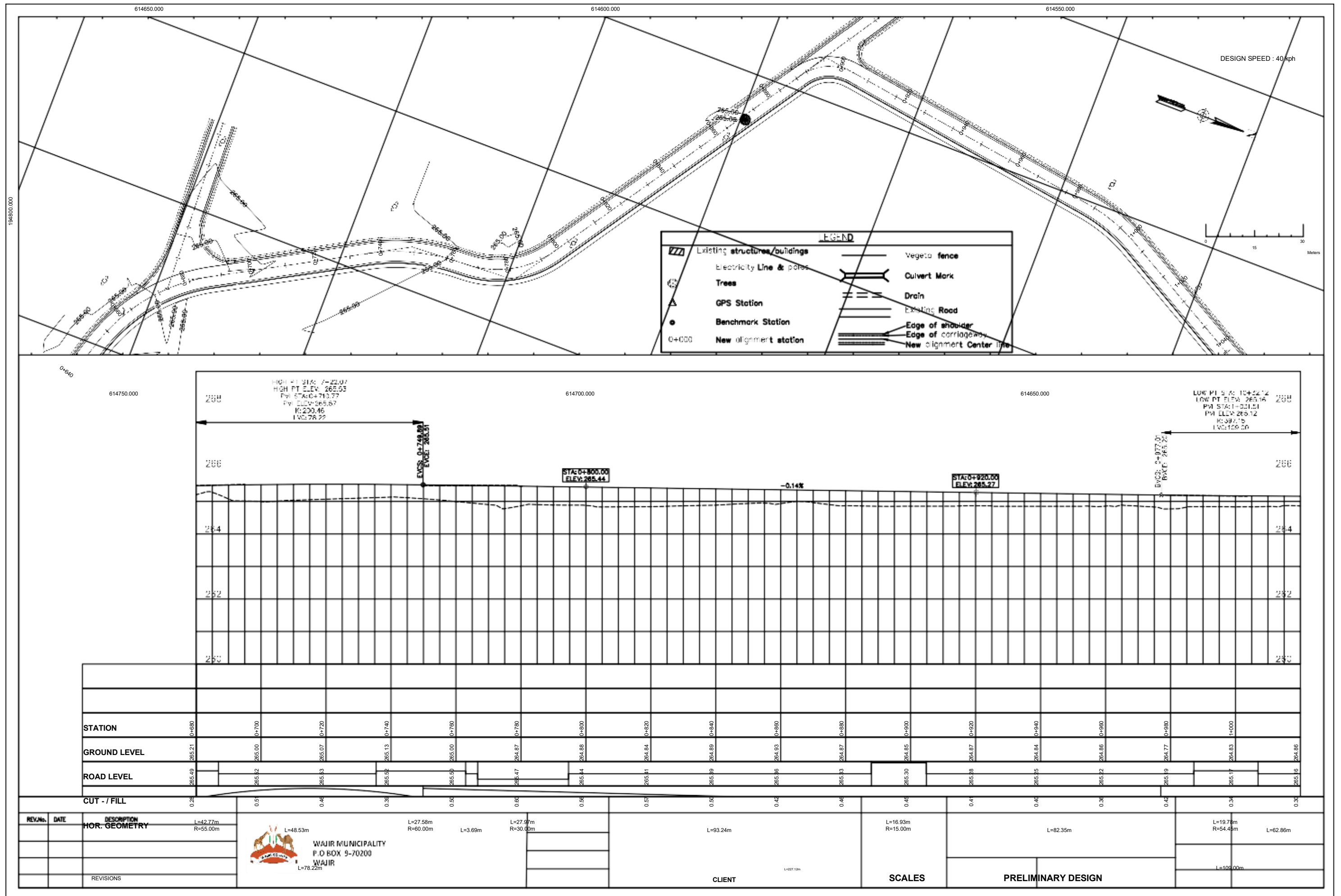
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WAJIR MUNICIPALITY
P.O BOX 9-70200
WAJIR



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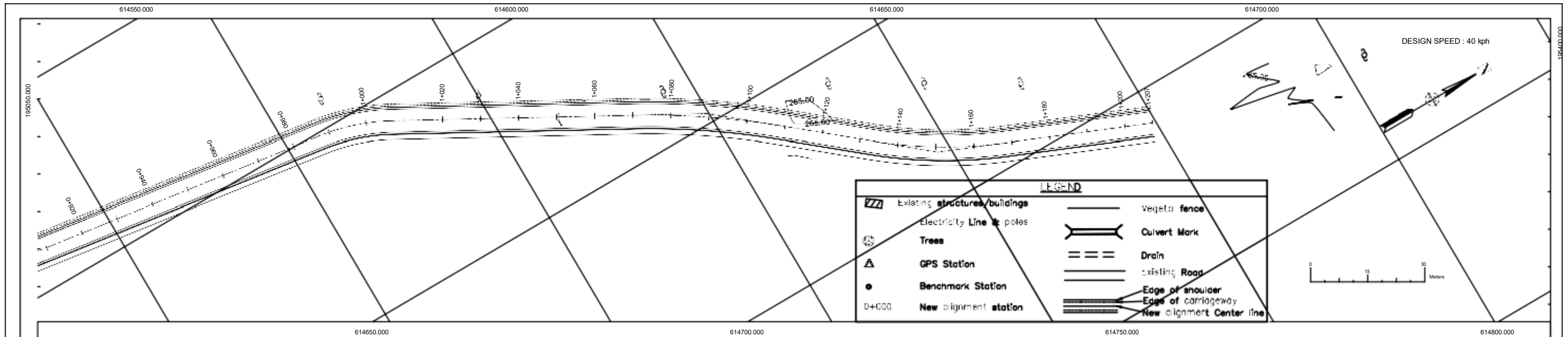
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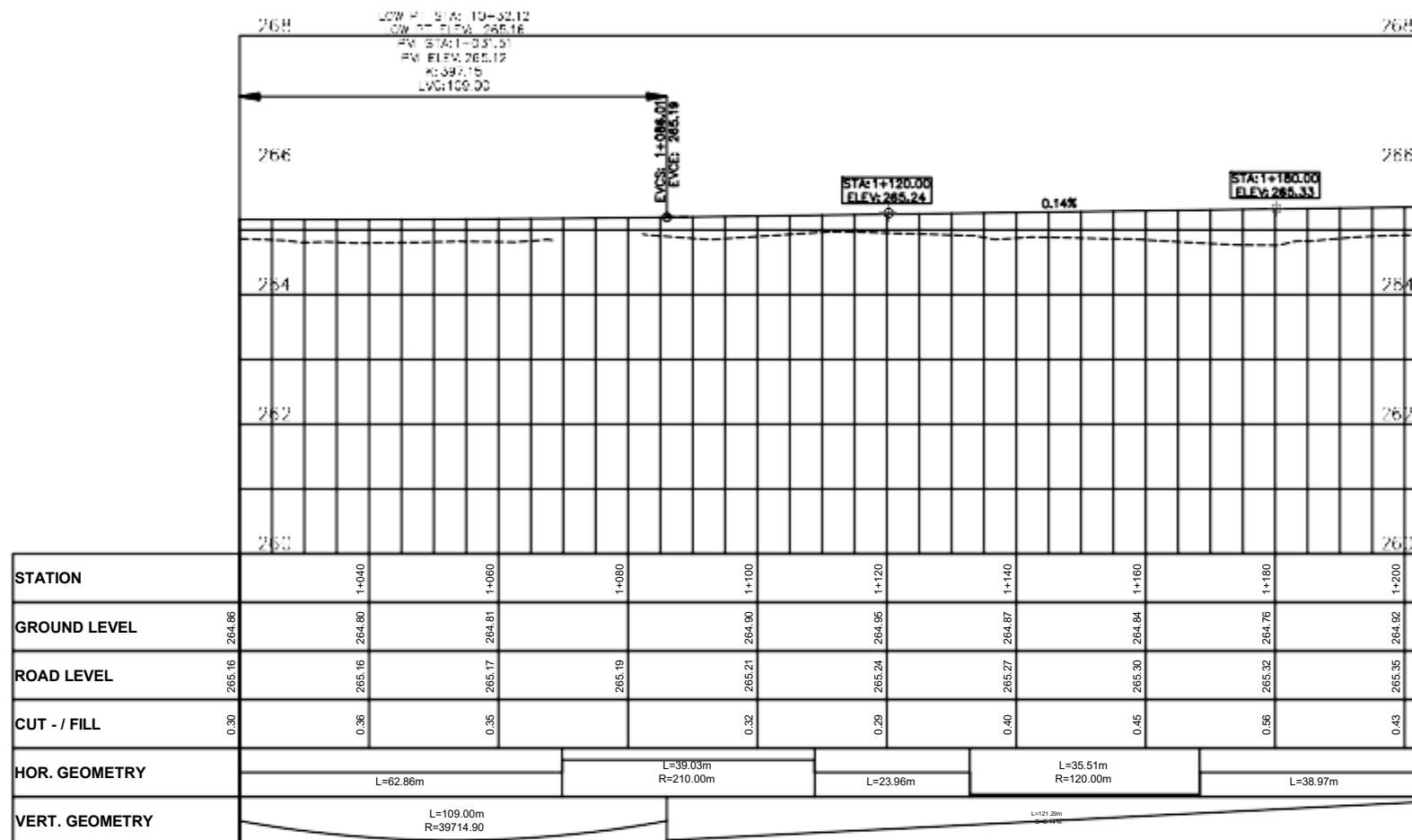
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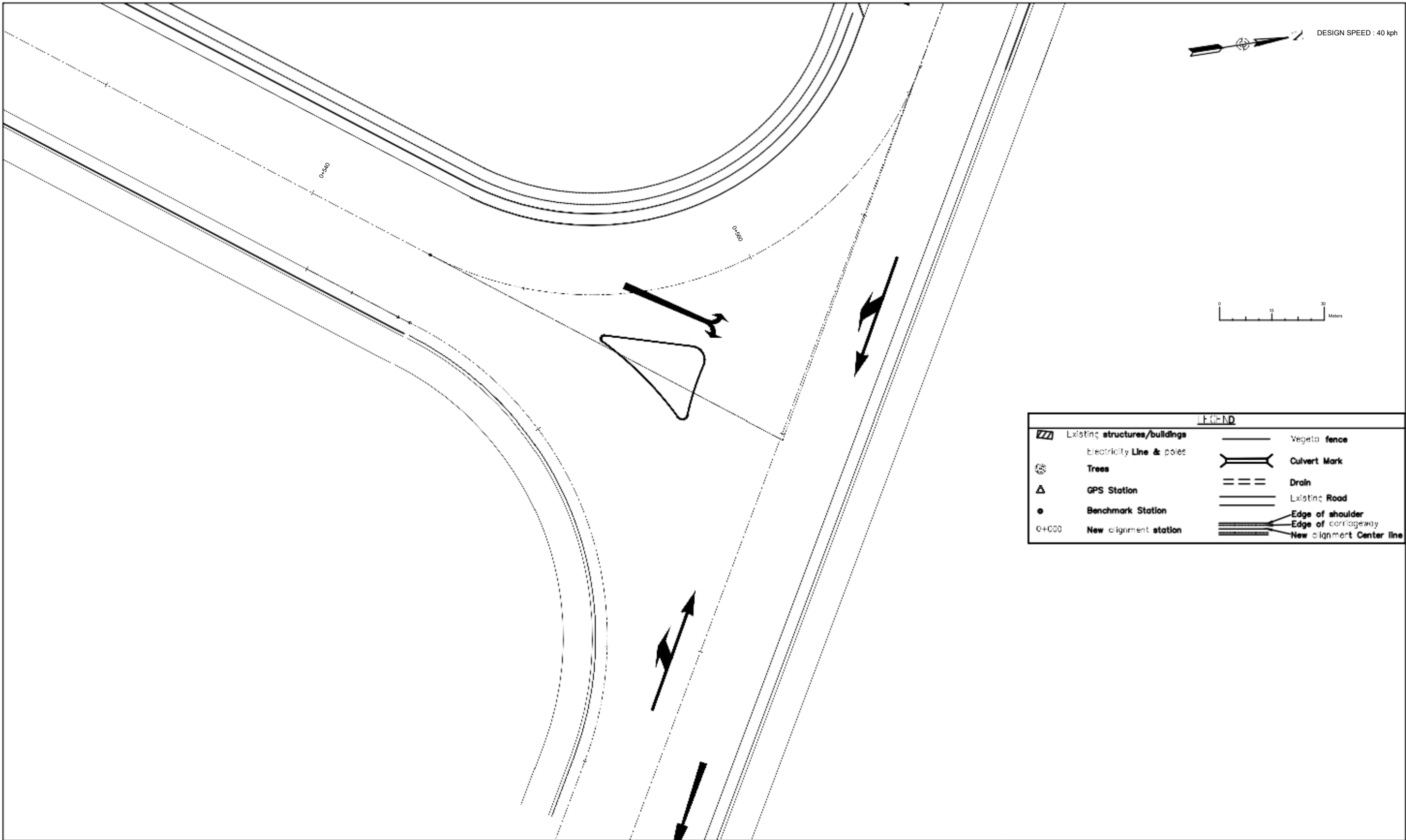
3 OF 4



HADADO ROAD PROFILE



REV. No.			DATE	REVISION DESCRIPTION	 WAJIR MUNICIPALITY P.O BOX 9-70200 WAJIR	CHECKED BY: JM	DESIGNED BY: JM	CLIENT COUNTY GOVERNMENT OF WAJIR	SCALES	PRELIMINARY DESIGN		DATE: JUNE 2020	DRAWING No. HY-PP-004
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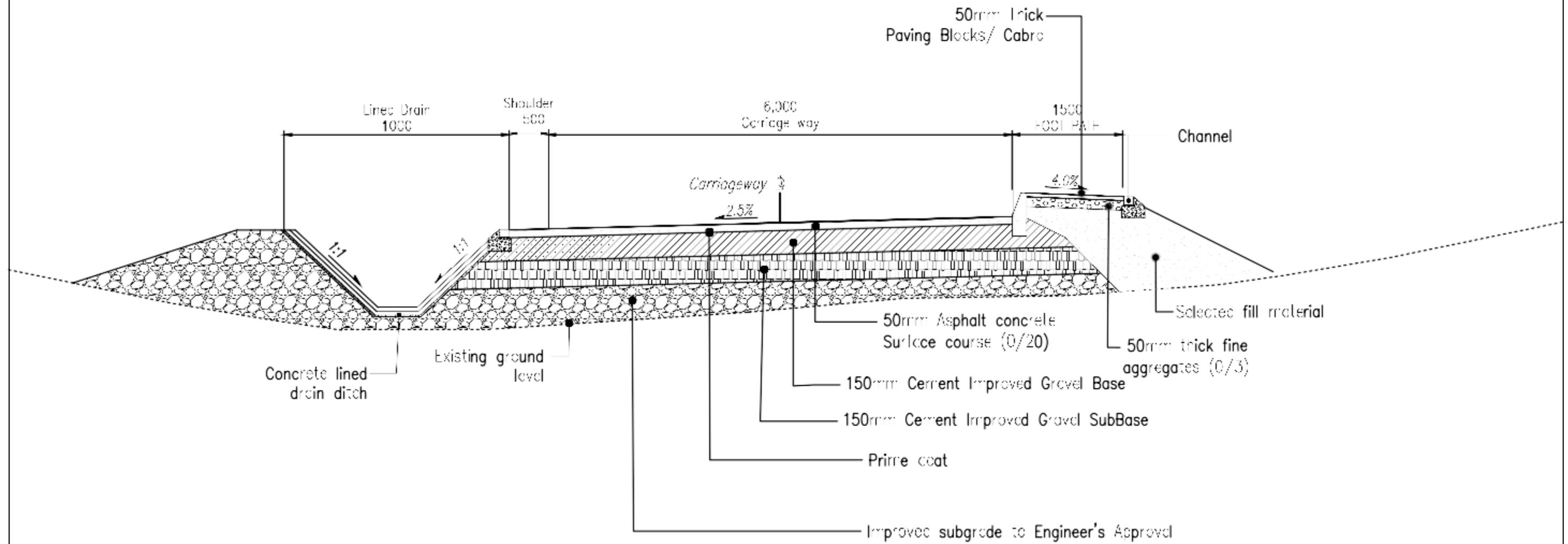


LEGEND	
	Existing structures/buildings
	Electricity Line & poles
	Trees
	GPS Station
	Benchmark Station
	New alignment station
	Vegetation fence
	Culvert Mark
	Drain
	Existing Road
	Edge of shoulder
	Edge of carriageway
	New alignment Center line

REVISIONS			 WAJIR MUNICIPALITY P.O BOX 9-70200 WAJIR	CHECKED BY: JM DESIGNED BY: JM	CLIENT COUNTY GOVERNMENT OF WAJIR	SCALES 1:75	PRELIMINARY DESIGN PROPOSED DESIGN OF HADADO YARE ROAD.		DATE: JUNE 2026	DRAWING No. HY-PP-001
REV.No.	DATE	DESCRIPTION								

DRAWN BY:
EWN

STANDARD DRAWINGS



TYPICAL CROSS - SECTION

REVISIONS			CLIENT	SCALES	PRELIMINARY DESIGN			
REV. No.	DATE	DESCRIPTION			TYPICAL CROSS SECTION.		DATE:	JUNE 2026
			COUNTY GOVERNMENT OF WAJIR	1:25			DRAWING No.	HY-RS-001
							SHEET No.	1 OF 1



WAJIR MUNICIPALITY
P.O BOX 9-70200
WAJIR

CHECKED BY:
JM
DESIGNED BY:
JM
DRAWN BY:
EWN

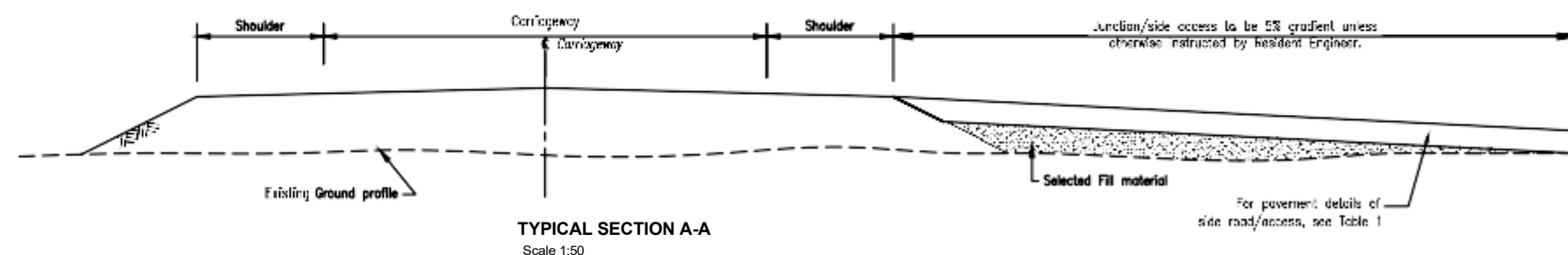
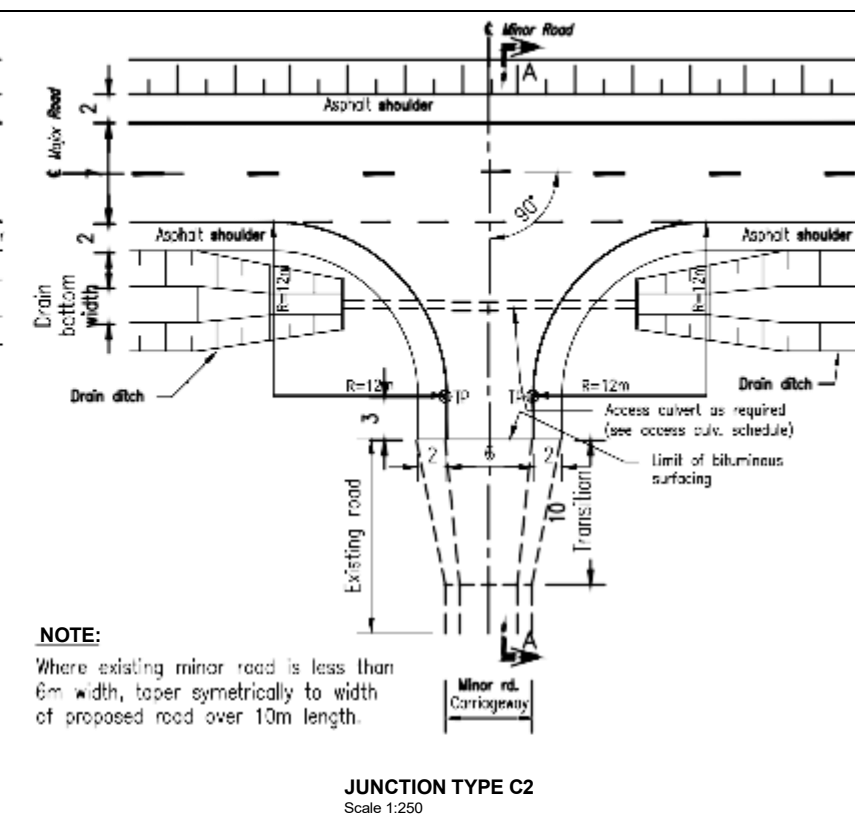
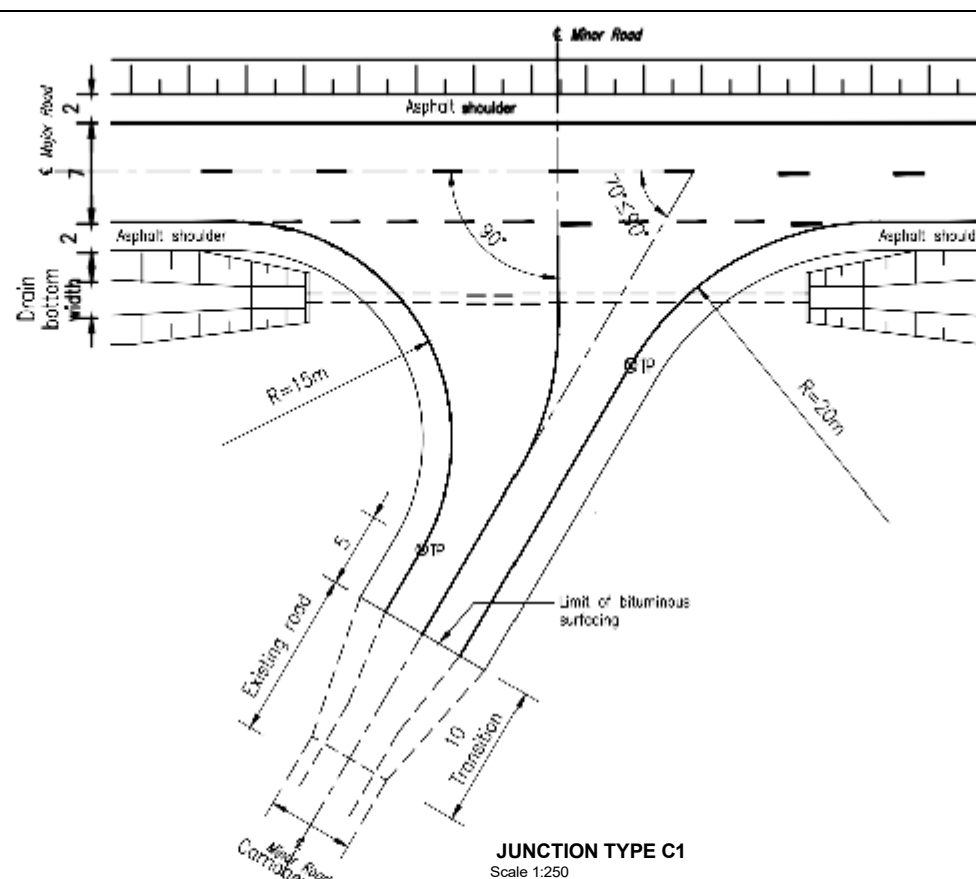
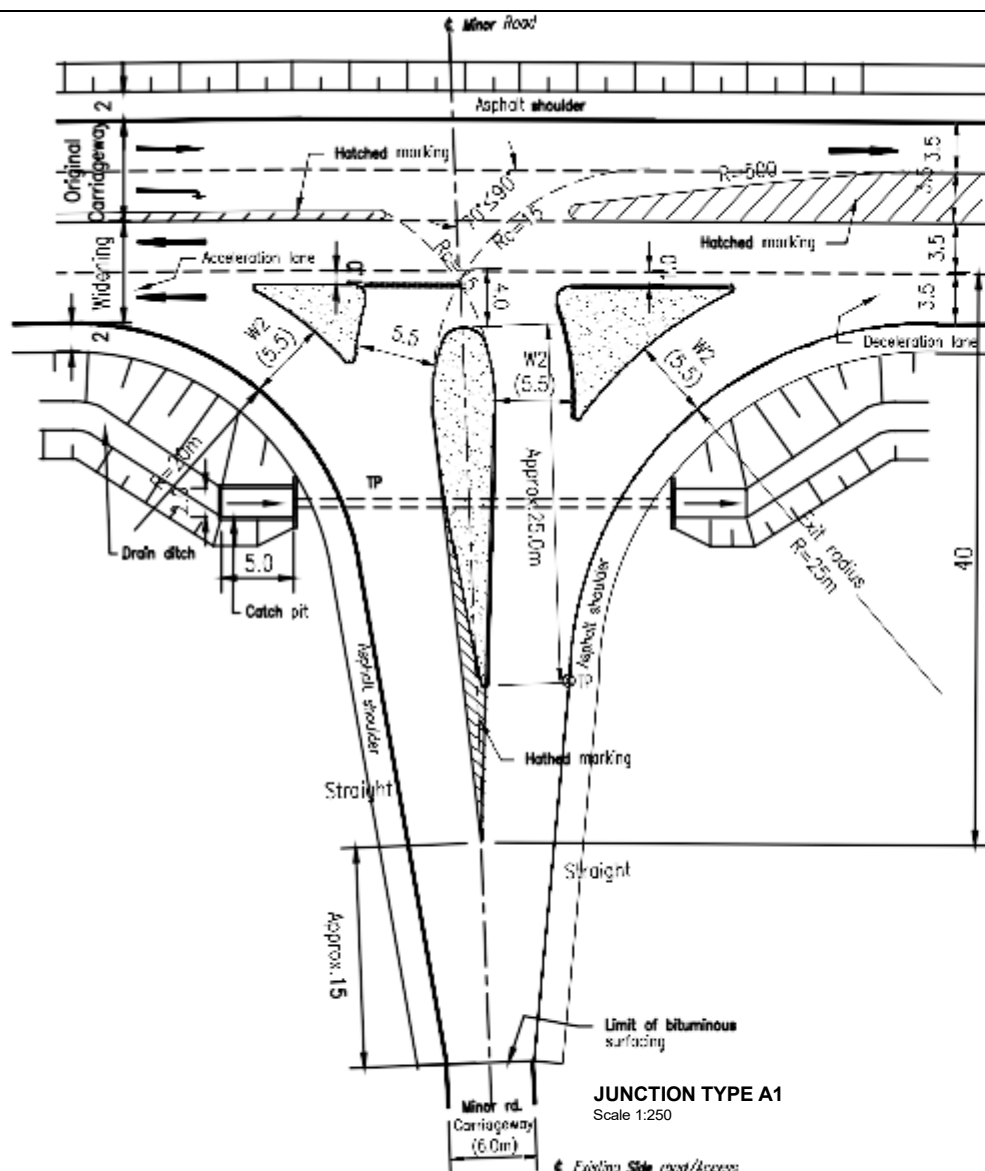
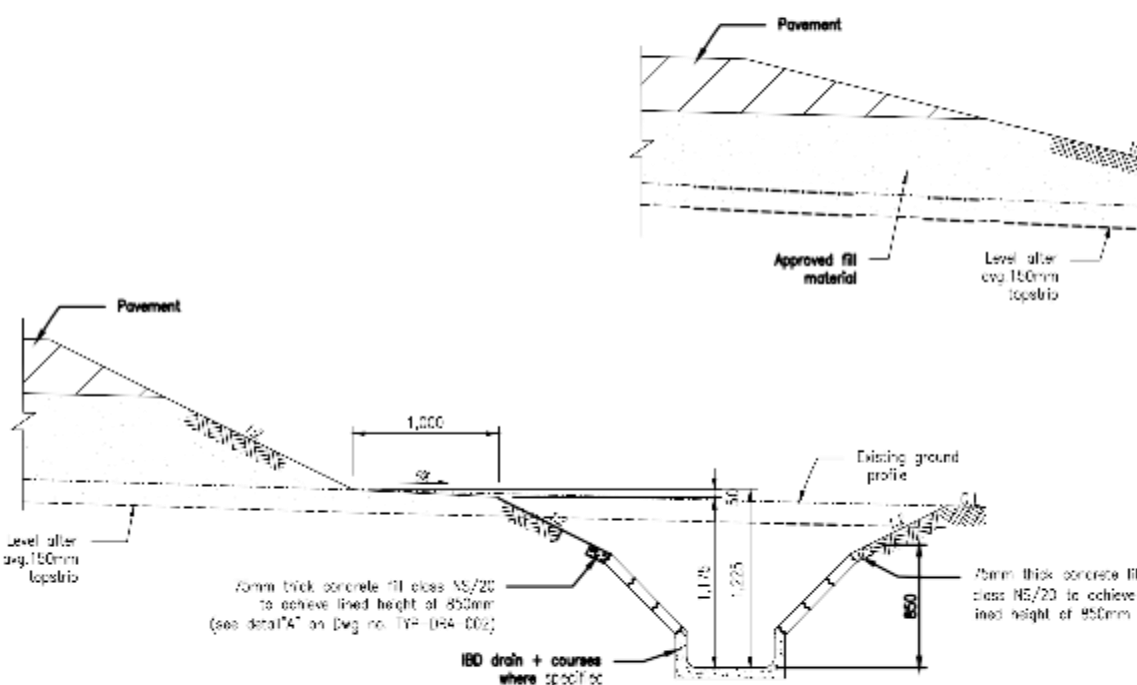
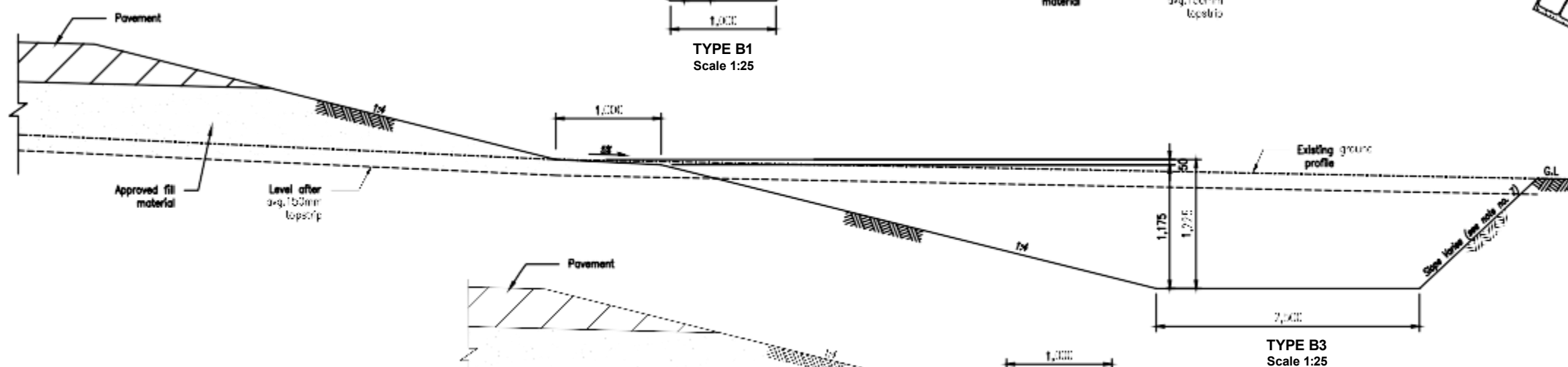
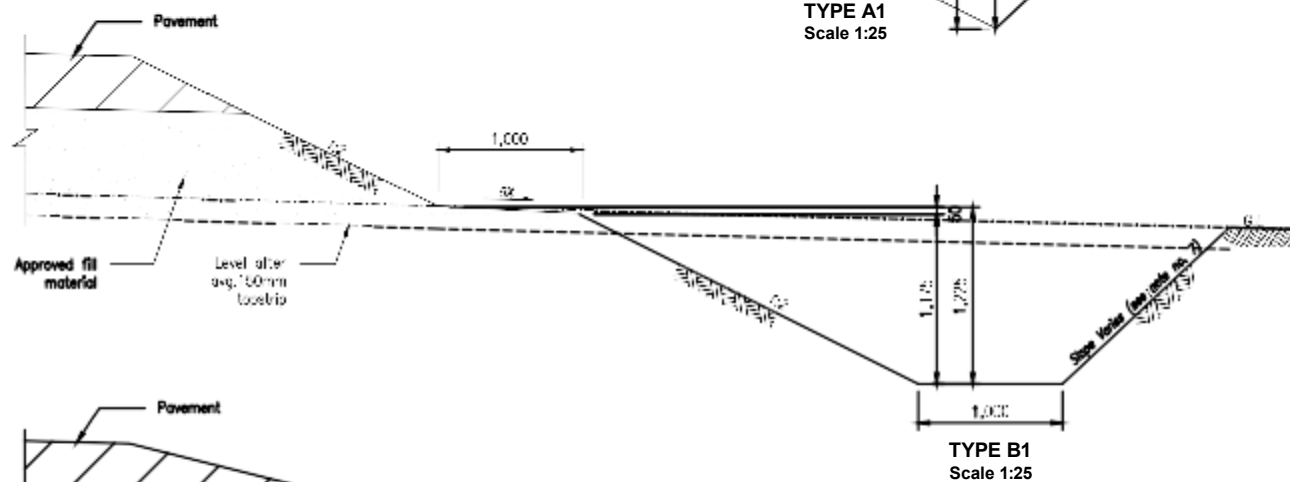
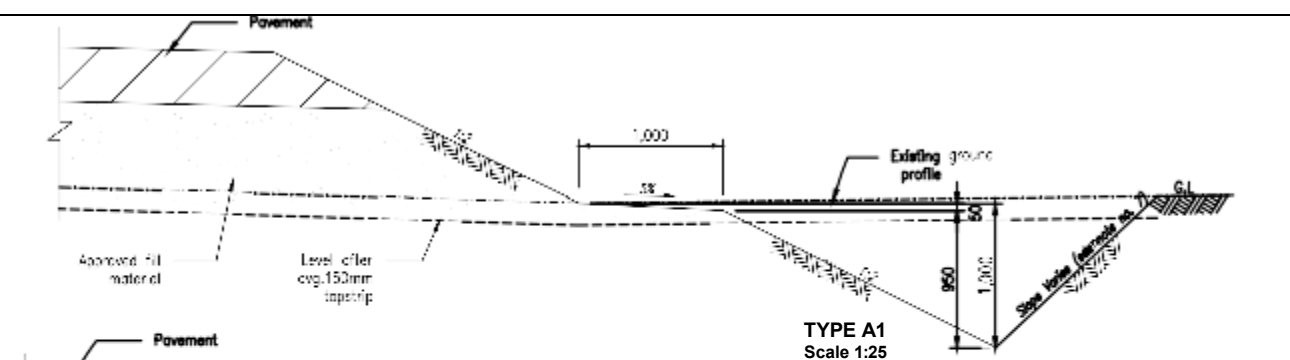


TABLE 1

JUNCTION / ACCESS TYPE	PAVEMENT STRUCTURE
A1	As main carriageway adjacent
C1 & C2	As main carriageway adjacent
D	Single seal surface dressing (6mm Pre-coated chippings) 150mm natural material base (not improved) 175mm natural material sub-base (not improved)

REVISIONS					CLIENT	SCALES	PRELIMINARY DESIGN			
REV.No.	DATE	DESCRIPTION		WAJIR MUNICIPALITY P.O BOX 9-70200 WAJIR	COUNTY GOVERNMENT OF WAJIR	AS SHOWN	PROPOSED DESIGN OF HADADO YARE ROAD.	DATE:	JUNE 2026	
							SHEET CONTENTS:	LAYOUT OF ROAD JUNCTIONS AND ACCESS TYPES.	SHEET No:	01 OF 01



Notes:

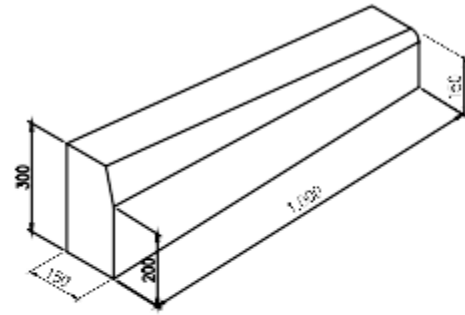
- (1). Dimensions are in millimetres, unless otherwise indicated. Lining details shall be as shown on this day unless otherwise instructed by the Resident Engineer.
- (2). B3 ditch type 'A' or 'B' with side-slab courses to be placed as scheduled or as directed by Resident Engineer on site.
- (3). For typical road cross sections in cut areas, refer to Day No. TYP-DRA-002.
- (4). For IBO types and details, refer to Day No. TYP-DRA-005.
- (5). For typical details of access across drain types, see Day No. TYP-DRA-007 & 008.
- (6). NS where referred to in concrete strength class means "non structural" and need not comply with any strength requirements as per clause 1.002 of the Standard Specification for Road and Bridge Construction.
- (7). For slope details refer to the specific cross section drawing. For general slope principles refer to Day No. TYP-DRA-002.
- (8). Transitions between different ditch types are to take place linearly over a distance of 25m between cross section points.

REVISIONS			 WAJIR MUNICIPALITY P.O BOX 9-70200 WAJIR	CLIENT	SCALES	PRELIMINARY DESIGN			
REV.No.	DATE	DESCRIPTION				PROPOSED DESIGN OF HADADO YARE ROAD.		DATE:	JUNE 2026
						SHEET CONTENTS: TYPICAL DRAIN DITCH CROSS SECTIONS IN FILL AREAS		DRAWING No.	HY-R2-03
								SHEET No:	01 OF 01
				COUNTY GOVERNMENT OF WAJIR	AS SHOWN				
			CHECKED BY: JM						
			DESIGNED BY: JM						
			DRAWN BY: EWN						

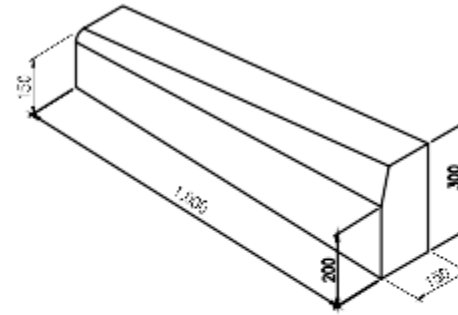


WAJIR MUNICIPALITY
P.O BOX 9-70200
WAJIR

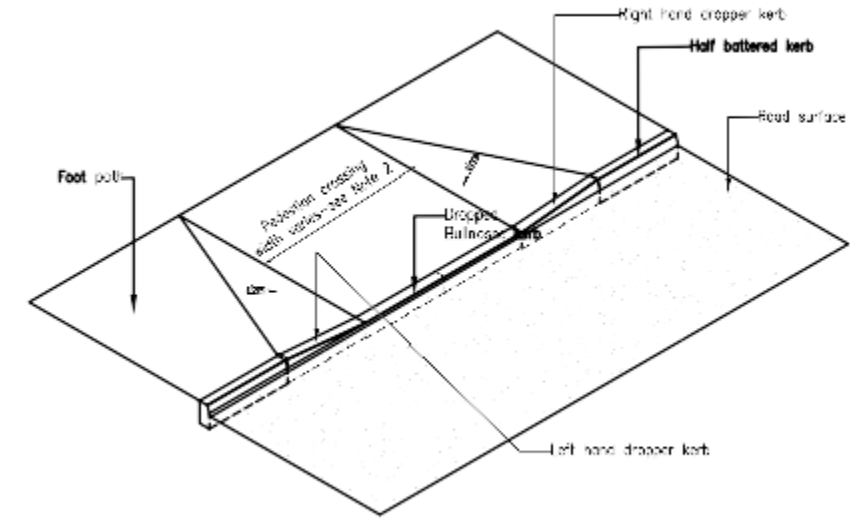
CHECKED BY:
JM
DESIGNED BY:
JM
DRAWN BY:
EWN



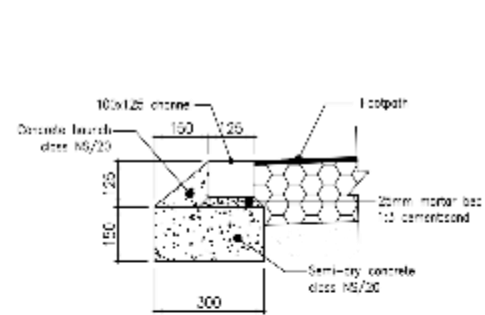
LEFT HAND DROPPER KERB.



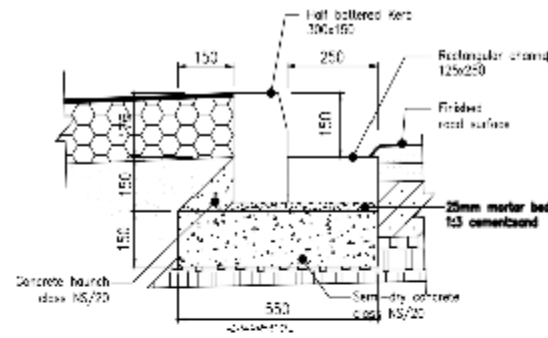
RIGHT HAND DROPPER KERB.



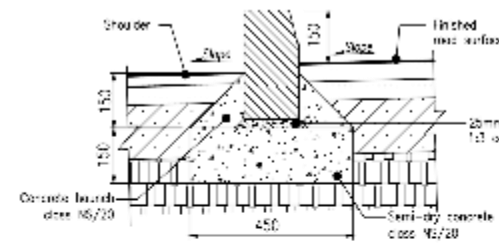
DROPPER KERB DETAIL AT PEDESTRIAN FOOTWAY CROSSING.
- Isometric view



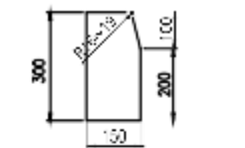
TYPICAL BEDDING AND BACKING
DETAIL FOR CHANNELBLOCK
(OUTER EDGE OF FOOTPATH)



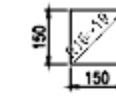
TYPICAL BEDDING AND BACKING
DETAIL FOR KERB - ONE SIDE
RAISED FOOTPATH/VERGE



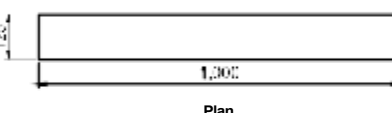
TYPICAL BEDDING AND BACKING
DETAIL FOR KERB AT RURAL BUS STOP



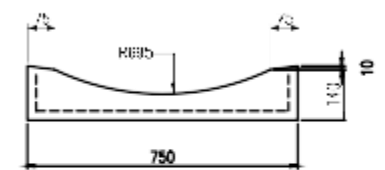
HALF BATTERED KERB



BULL-NOSED KERB



SQUARE CHANNEL

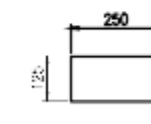


Section

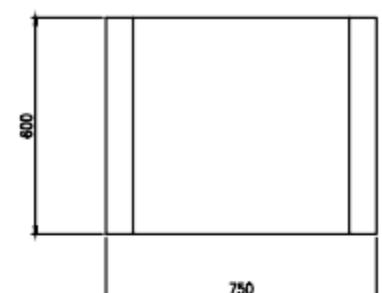


Plan

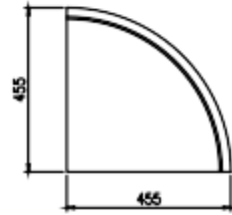
RECTANGULAR CHANNEL



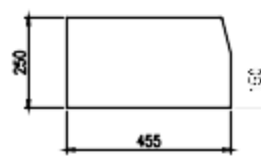
Section



Plan

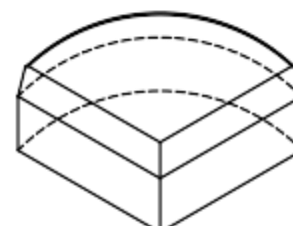


Plan

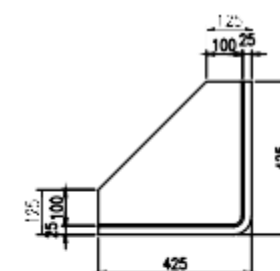


Section

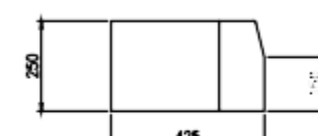
QUADRANT KERB.



Isometric view



Plan



Section

(1). Dimensions are in millimetres, unless otherwise indicated.

Notes: (2). Depth of dropped kerbing at pedestrian footway crossing points to be as per schedule, or as otherwise determined by the Resident Engineer.

(3). At dropped kerb position, surface shall be 50mm above carriageway surface.

QUADRANT KERB FOR PARKING BAYS.			DISHED CHANNEL		
REV.No.	DATE	DESCRIPTION	 WAJIR MUNICIPALITY P.O BOX 9-70200 WAJIR	CLIENT	SCALES PRELIMINARY DESIGN
		REVISIONS			

CHECKED BY:
JM

COUNTY GOVERNMENT OF WAJIR

DESIGNED BY:

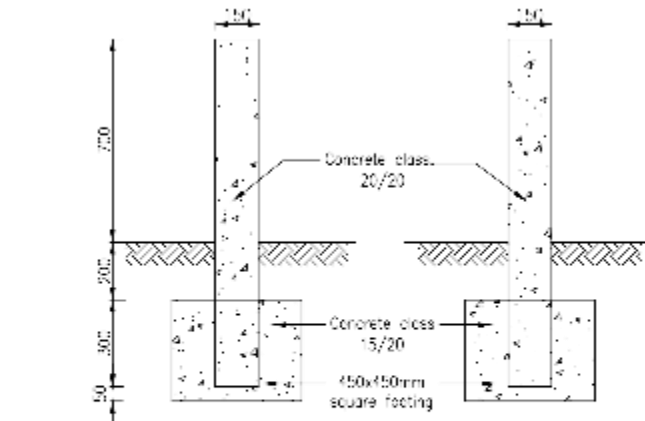
PROPOSED DESIGN OF HADADO YARE ROAD. DATE: JUNE 2026

RAWN BY:
EWN

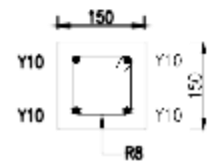
SHEET CONTENTS: KERBS AND CHANNELS

DRAWING No. HY-RS-04

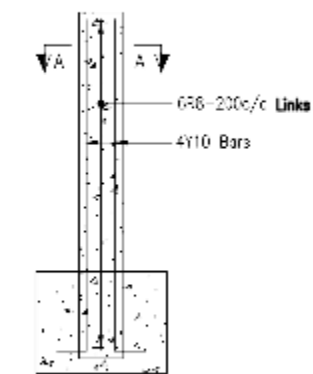
SHEET No: 01 OF 01



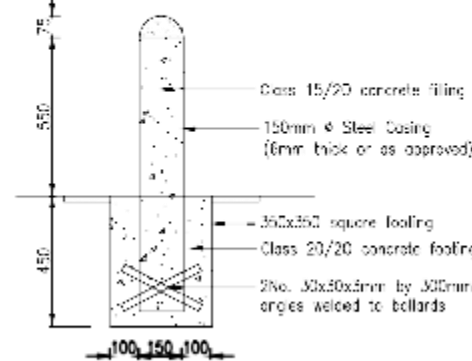
ROAD RESERVE BOUNDARY POST PLOT BOUNDARY BEACON



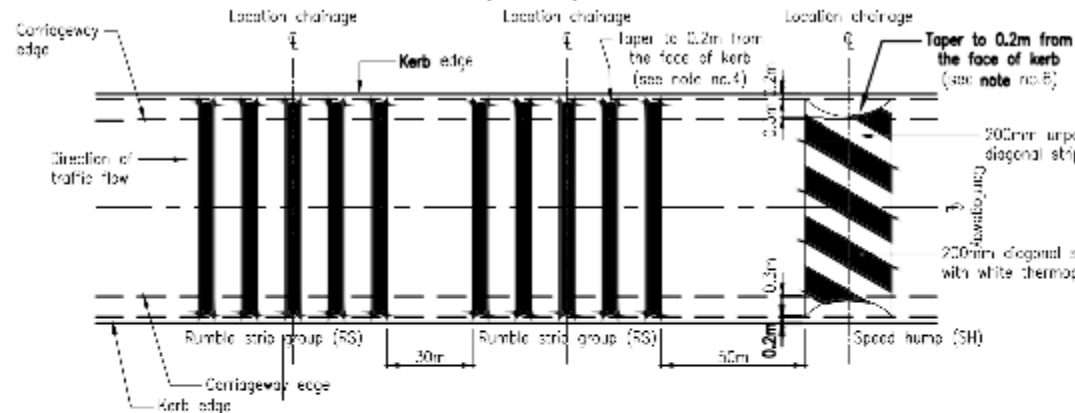
SECTION A - A



BOUNDARY POSTS REINFORCEMENT DETAILS



STEEL BOLLARD



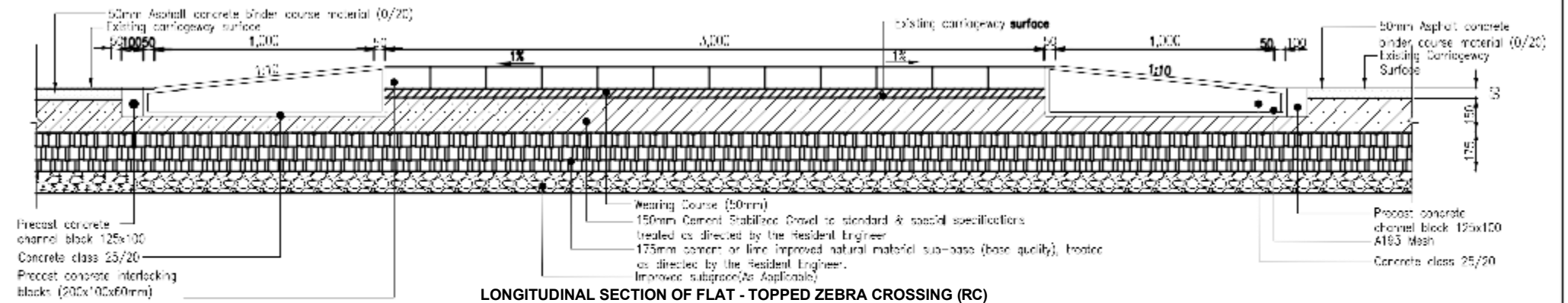
TYPICAL SPEED HUMP AND RUMBLE STRIPS ARRANGEMENT



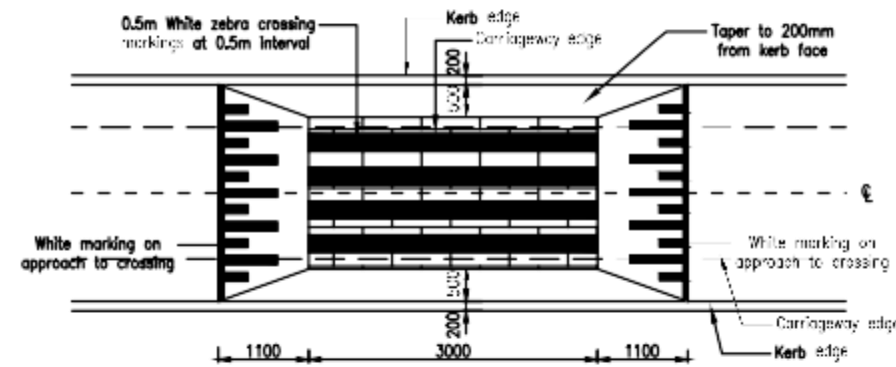
WAJIR MUNICIPALITY
P.O BOX 9-70200
WAJIR

CHECKED BY:
JM

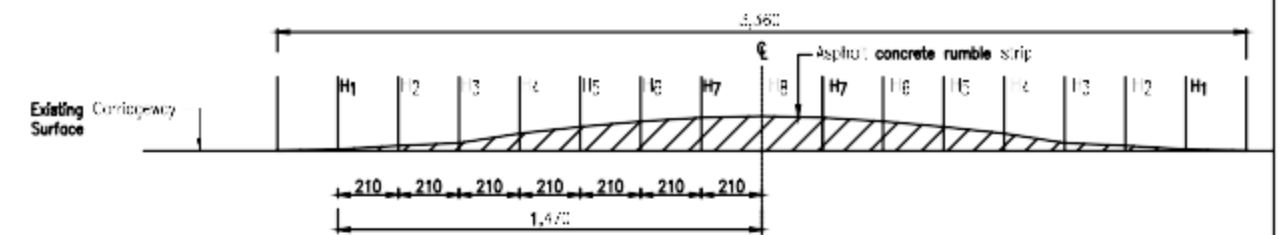
DESIGNED BY:
JM
DRAWN BY:



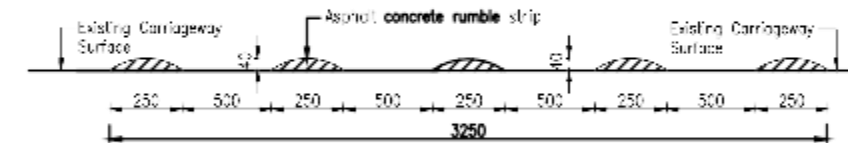
LONGITUDINAL SECTION OF FLAT - TOPPED ZEBRA CROSSING (RC)



FLAT - TOPPED ZEBRA CROSSING PLAN (RC) (TYPE 1)



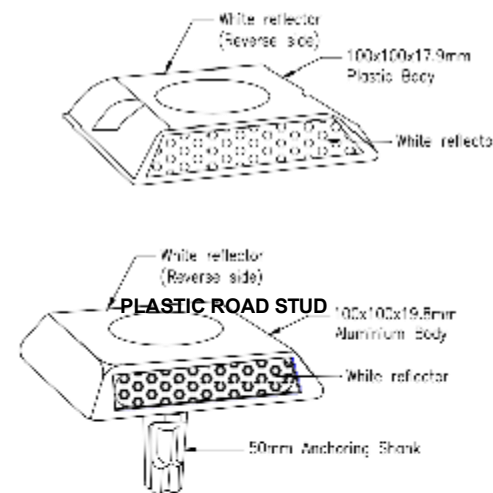
SPEED HUMP CROSS SECTION DETAIL (SH)



RUMBLE STRIP GROUP DETAIL (RS)

Setting out detail of speed hump

- H₁ = 18mm
- H₂ = 18mm
- H₃ = 37mm
- H₄ = 60mm
- H₅ = 83mm
- H₆ = 102mm
- H₇ = 115mm
- H₈ = 120mm



METAL ROAD STUD

CLIENT

SCALES

PRELIMINARY DESIGN

PROPOSED DESIGN OF HADADO YARE ROAD.

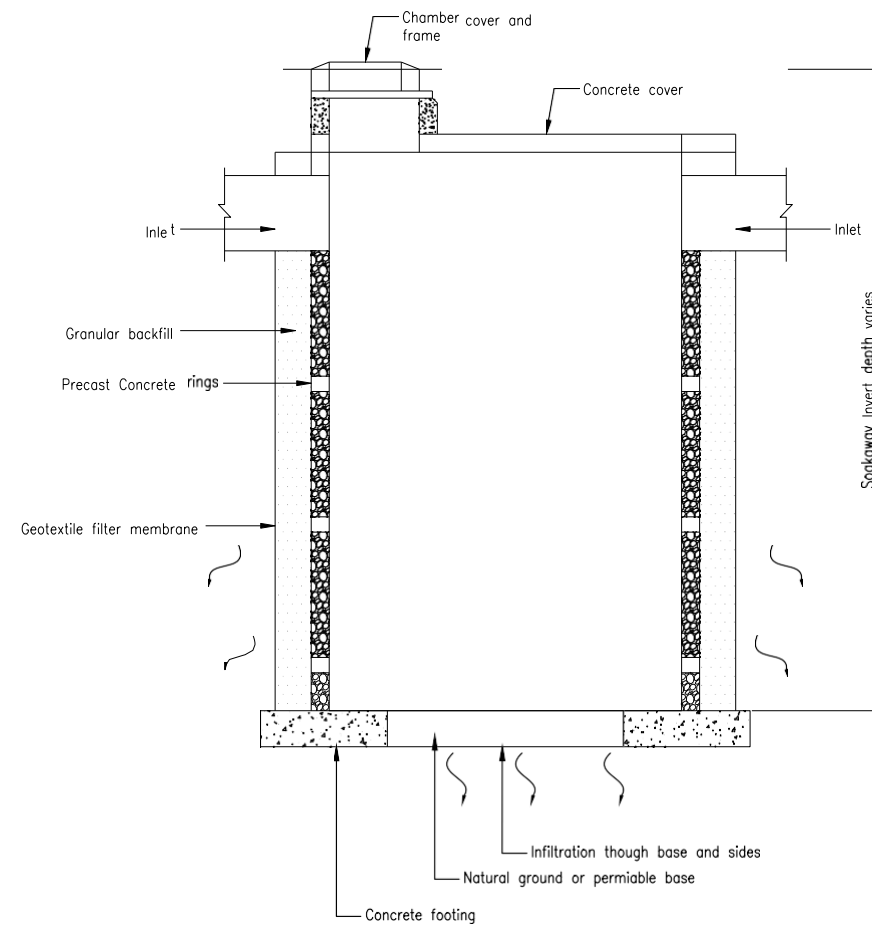
DATE: JUNE 2026

COUNTY GOVERNMENT OF WAJIR

AS SHOWN

EWB

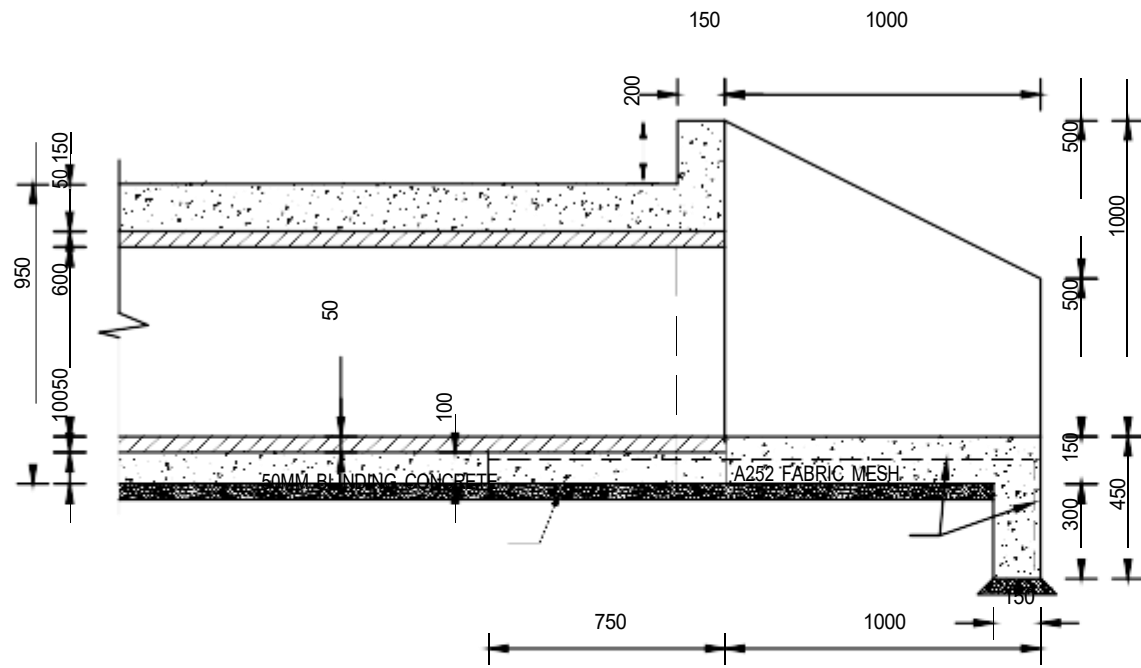
NDARY POSTS,ZEBRA CROSINGS, SHEET CONTENTS: STEEL BOLLARDS,SPEED HUMPS AND SPEED RAMPS.	DRAWING No. HY-RS-05 SHEET No: 01 OF 01



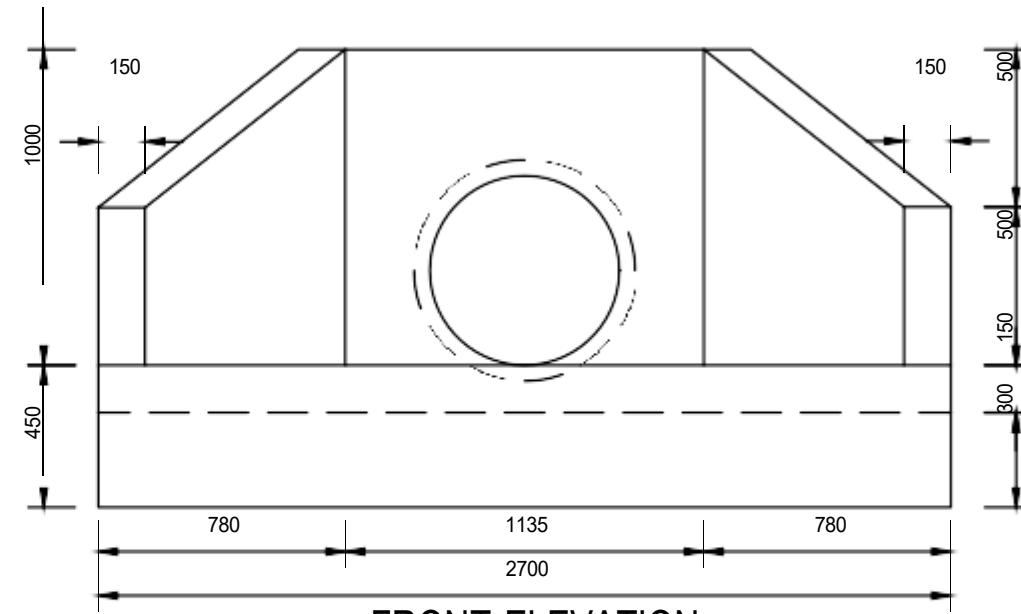
TYPICAL VERTICAL DRAIN DETAIL

REVISIONS			 WAJIR MUNICIPALITY P.O BOX 9-70200 WAJIR	CHECKED BY: JM DESIGNED BY: JM DRAWN BY: EWN	CLIENT	SCALES	PROPOSED DESIGN OF HADADO YARE ROAD.		DATE:	JUNE 2026	
REV.No.	DATE	DESCRIPTION			COUNTY GOVERNMENT OF WAJIR	1:5	SHEET CONTENTS:	TYPICAL VERTICAL DRAIN	DRAWING No.	HY-RS-06	
									SHEET No:	01 OF 01	

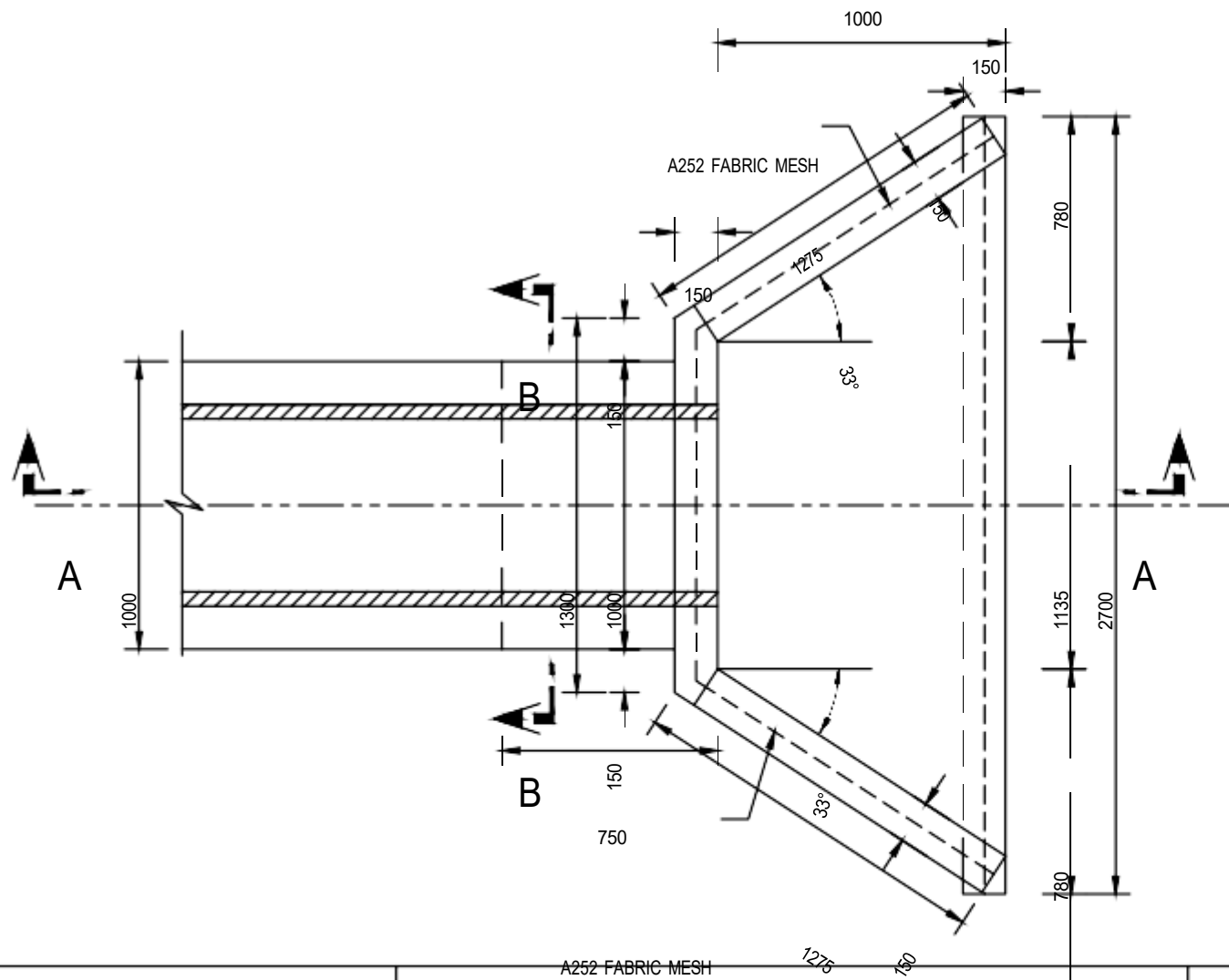
DRAINAGE STRUCTURES



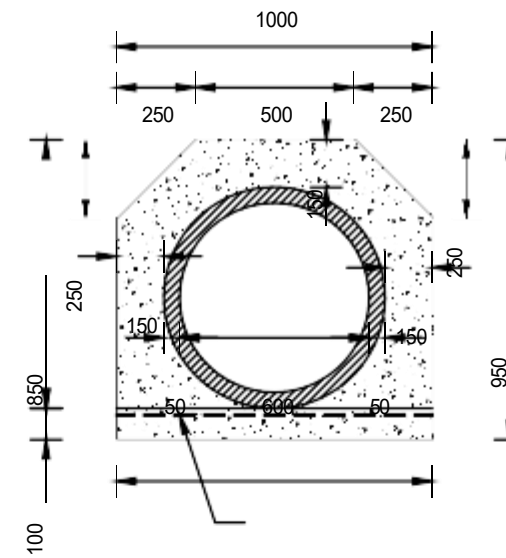
SECTION A-A
SCALE 1 : 20



FRONT ELEVATION
SCALE 1 : 20



LAYOUT PLAN
SCALE 1 : 20



SECTION B-B
SCALE 1 : 20

NOTES

1. ALL FABRIC MESH REINFORCEMENT TO BE PLACED AS SHOWN
2. THE SLOPE OF THE PIPE SHALL BE DIRECTED BY THE ENGINEER'S REPRESENTATIVE
3. ALL DIMENSIONS ARE IN MILLIMETERS
4. CONCRETE FOR HEADWALL, APRON, TOEWALL, BAFFLEWALL TO BE CLASS 25/20
5. CONCRETE FOR BLINDING AND SURROUND TO BE CLASS 15/20

REVISION	DATE	DESCRIPTION

WAJIR MUNICIPALITY
P.O BOX 9-70200
WAJIR

CLIENT

COUNTY GOVERNMENT OF WAJIR

CHECKED BY:
JM
DESIGNED BY:
JM
DRAWN BY:
EWN

SCALES

AS SHOWN

PRELIMINARY DESIGN

PROPOSED DESIGN OF HADADO YARE ROAD.

DATE: JUNE 2026

SHEET CONTENTS: TYPICAL 600MM CULVERT DETAILS

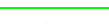
DRAWING No. HY-R2-03

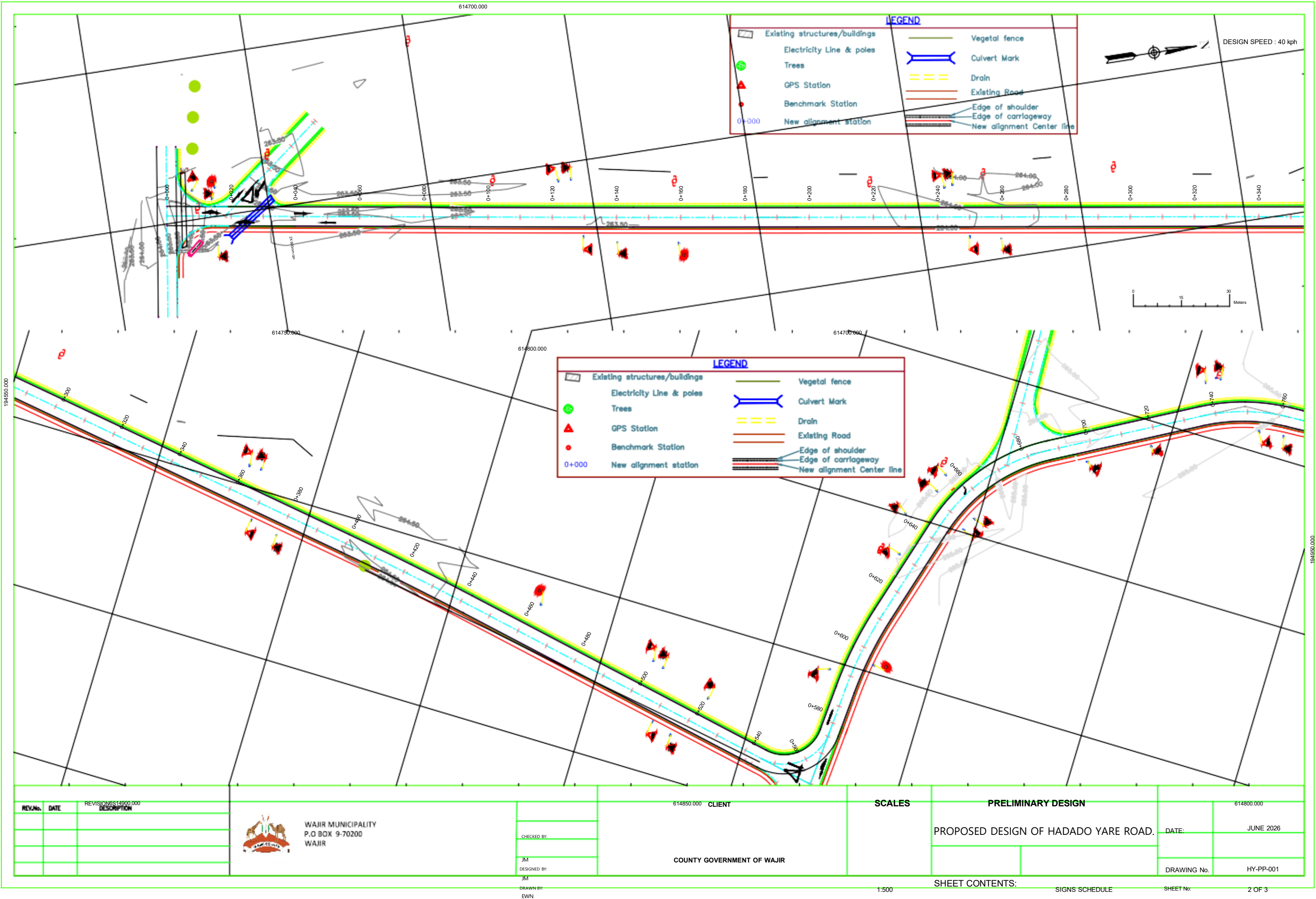
SHEET No: 01 OF 01

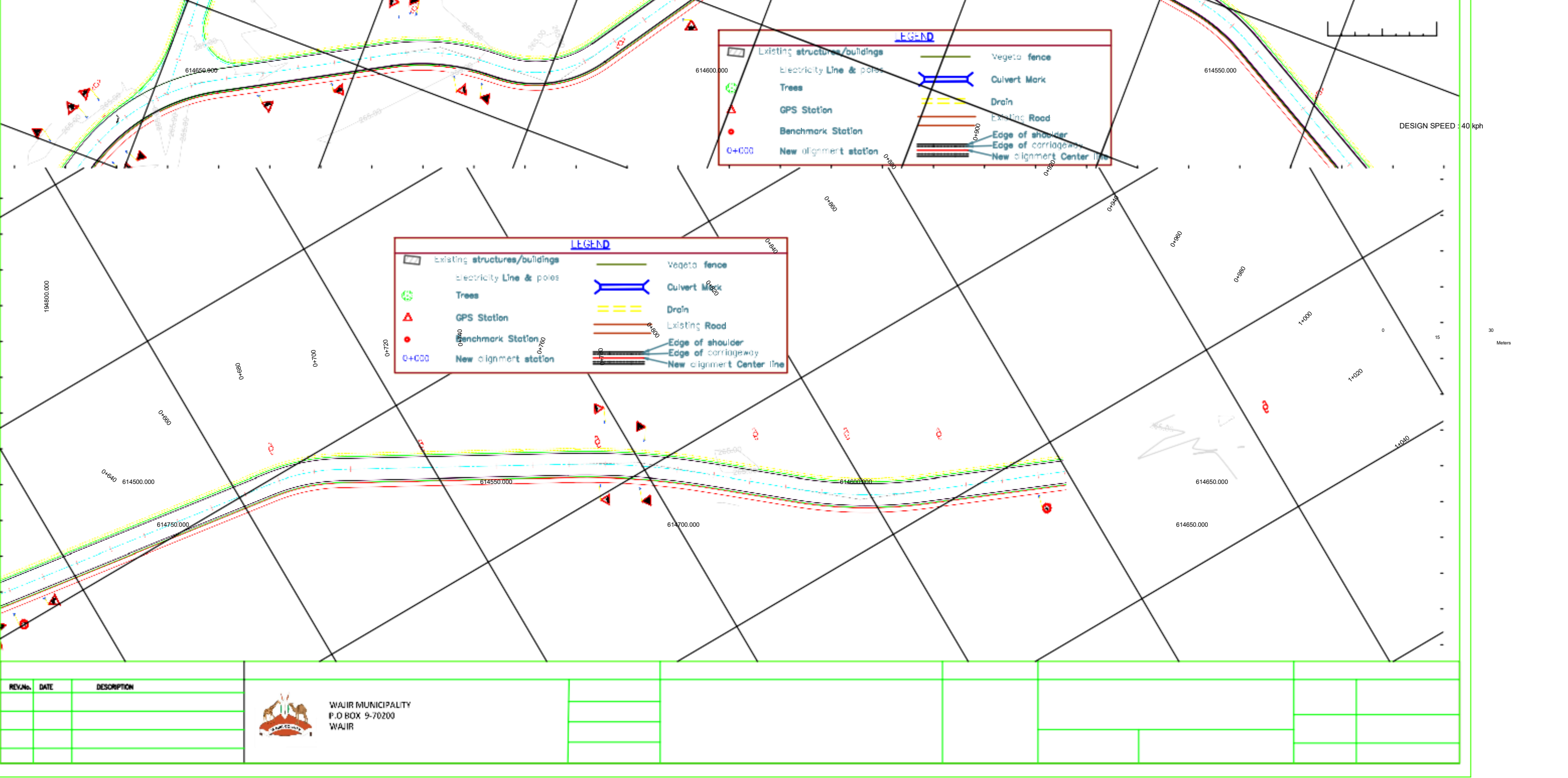
SCHEDULE OF SIGNS

ROAD SIGNS SCHEDULE

No	Chainage	Side	Road Sign	Location	Road Side Classification	No	Chainage	Side	Road Sign	Location	Road Side Classification
1	0+010	LHS	Pedestrian Crossing	Main Road	Warning Sign	27	1+200	RHS	Speed Limit 40KPH	Main Road	Prohibitory Sign
2	0+010	LHS	Junction to the Left	Main Road	Warning Sign	28	1+100	RHS	Bumps	Main Road	Warning Sign
3	0+010	LHS	Speed Limit 40KPH	Main Road	Prohibitory Sign	29	1+100	RHS	Pedestrian Crossing	Main Road	Warning Sign
4	0+120	LHS	Bumps	Main Road	Warning Sign	30	0+920	RHS	Speed Limit 40KPH	Main Road	Prohibitory Sign
5	0+120	LHS	Pedestrian Crossing	Main Road	Warning Sign	31	0+920	RHS	Sharp Bend to the Left	Main Road	Warning Sign
6	0+240	LHS	Bumps	Main Road	Warning Sign	32	0+900	RHS	Pedestrian Crossing	Main Road	Warning Sign
7	0+240	LHS	Pedestrian Crossing	Main Road	Warning Sign	33	0+900	RHS	Bumps	Main Road	Warning Sign
8	0+360	LHS	Bumps	Main Road	Warning Sign	34	0+820	RHS	Sharp Bend to the Right	Main Road	Warning Sign
9	0+360	LHS	Pedestrian Crossing	Main Road	Warning Sign	35	0+760	RHS	Pedestrian Crossing	Main Road	Warning Sign
10	0+500	LHS	Bumps	Main Road	Warning Sign	36	0+760	RHS	Bumps	Main Road	Warning Sign
11	0+500	LHS	Pedestrian Crossing	Main Road	Warning Sign	37	0+720	RHS	Junction to the Left	Main Road	Warning Sign
12	0+520	LHS	Junction to the Left and Right	Main Road	Warning Sign	38	0+720	RHS	Sharp Bend to the Left	Main Road	Warning Sign
13	0+580	LHS	Sharp Bend to the Right	Main Road	Warning Sign	39	0+650	RHS	Pedestrian Crossing	Main Road	Warning Sign
14	0+630	LHS	Bumps	Main Road	Warning Sign	40	0+650	RHS	Bumps	Main Road	Warning Sign
15	0+630	LHS	Pedestrian Crossing	Main Road	Warning Sign	41	0+600	RHS	Speed Limit 40KPH	Main Road	Prohibitory Sign
16	0+660	LHS	Sharp Bend to the Right	Main Road	Warning Sign	42	0+520	RHS	Pedestrian Crossing	Main Road	Warning Sign
17	0+660	LHS	Junction to the Left	Main Road	Warning Sign	43	0+520	RHS	Bumps	Main Road	Warning Sign
18	0+740	LHS	Pedestrian Crossing	Main Road	Warning Sign	44	0+380	RHS	Pedestrian Crossing	Main Road	Warning Sign
19	0+740	LHS	Bumps	Main Road	Warning Sign	45	0+380	RHS	Bumps	Main Road	Warning Sign
20	0+840	LHS	Speed Limit 40KPH	Main Road	Prohibitory Sign	46	0+280	RHS	Pedestrian Crossing	Main Road	Warning Sign
21	0+860	LHS	Junction to the Left	Main Road	Warning Sign	47	0+280	RHS	Bumps	Main Road	Warning Sign
22	0+860	LHS	Sharp Bend to the Right	Main Road	Warning Sign	48	0+160	RHS	Speed Limit 40KPH	Main Road	Prohibitory Sign
23	0+880	LHS	Bumps	Main Road	Warning Sign	49	0+140	RHS	Pedestrian Crossing	Main Road	Warning Sign
24	0+880	LHS	Pedestrian Crossing	Main Road	Warning Sign	50	0+140	RHS	Bumps	Main Road	Warning Sign
25	1+080	LHS	Bumps	Main Road	Warning Sign	51	0+010	RHS	Pedestrian Crossing	Main Road	Warning Sign
26	1+080	LHS	Pedestrian Crossing	Main Road	Warning Sign	52	0+010	RHS	Wajir Town	Main Road	Informatory Sign

REVISIONS				CLIENT	SCALES	PRELIMINARY DESIGN					
REV.No.	DATE	DESCRIPTION	 WAJIR MUNICIPALITY P.O BOX 9-70200 WAJIR		COUNTY GOVERNMENT OF WAJIR	1:500	PROPOSED DESIGN OF HADADO YARE ROAD.		DATE:	JUNE 2026	
									DRAWING No.	HY-PP-003	
								SHEET CONTENTS:	SIGNS SCHEDULE	SHEET No:	1 OF3





REV. No.	DATE	DESCRIPTION



WAJIR MUNICIPALITY
P.O BOX 9-70200
WAJIR

REVISIONS

614650.000

614700.000

CLIENT

SCALES 614750.000

PRELIMINARY DESIGN

614800.000

CHECKED BY:
JM

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PROPOSED DESIGN
OF HADADO YARE
ROAD.

DATE:

JUNE 2026

DRAWING No.

HY-PP-003

DRAWN BY:
EWN

1:500

SHEET CONTENTS:

SIGNS SCHEDULE

SHEET No:

3 OF 3

195500.000

0+940

0+950

0+960

1+000

1+020

1+040

1+060

1+080

1+100

1+120

1+140

1+160

1+180

1+200

1+207

195400.000

A. Bills of Quantities

1. The Bills of Quantities for proposed upgrading of Wajir Girls- Hadado Yarey road within Wajir Municipality to bitumen standards shall be read in conjunction with the Instructions to Tenderers, Conditions of Contract, Specifications and the Drawings.
2. This Bills of Quantities is the basis for proposed upgrading of Wajir Girls- Hadado Yarey road within Wajir Municipality to bitumen standards that are to be provided on a price and rate basis for the works covered under the contract, at the Service Levels defined in the Specifications. The rates given by the Tenderer shall, except insofar as is otherwise provided under the Contract, include all plant, equipment, labour, management and supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
3. Payment shall be made in accordance with the actual performance of the Contractor and compliance with the Service Level criteria given in the Specifications for each road. Failure to meet the Service Levels will result in payment reductions in accordance with Clause 47 of the General Conditions and the Performance Specifications.
4. The unit rates and prices shall be quoted entirely in local currency but payment will be made in the proportions and currencies quoted in the Schedule of Adjustment Data.
5. A unit rate or price shall be entered by the Tenderer against each item in the Bill of Quantities. The cost of items against which the Tenderer has failed to enter a unit rate or price shall be deemed to be covered by other unit rates and prices entered in the Bill of Quantities.
6. General directions and descriptions of work and materials are not repeated or summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.
7. The method of measurement of completed work for payment shall be in accordance with the measurement and payment provisions of the relevant section in the Performance Specifications.
8. Arithmetical errors discovered prior to award of the Contract will be corrected by the Procuring Entity pursuant to the Instructions to Tenderers.

Bills of Quantities

BILL OF QUANTITIES					
PROPOSED UPGRADING OF WAJIR GIRLS- HADADO YAREY ROAD WITHIN WAJIR MUNICIPALITY TO BITUMEN STANDARDS					
MONTH: JUNE 2026.					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
BILL NO. 1: PRELIMINARY AND GENERAL ITEMS					
1.01	(a) Allow a Provisional Sum for provision of Material Testing and other laboratory services	Provisional Sum	1	100,000.00	100,000.00
	(b) E.O. Item 1.01 for Contractor's overheads and	%	100,000		
1.02	(a) Allow a Provisional Sum for provision of Survey Equipment's for use by the Engineer	Provisional Sum	1	200,000.00	200,000.00
	(b) E.O. Item 1.01 for Contractor's overheads and	%	00000		
1.03	Vehicles for the Engineer				
	(a) Provide with drivers, fuel and maintain vehicles with minimum 2.0 liter (Odometer reading 0 - 60,000km) or similar approved for exclusive use by the Engineer (1 No.)	Vehmth	6		
1.04	Extra over Item 1.02 for kilometers travelled above 4000km in a calendar month by vehicles for the Engineer				
	(a) Vehicle with minimum 2.0 litre (1 No.)	km	1000		
1.05	Removal and relocation of services				
	(a) Provisional Sum of Shs. Two Hundred Thousand for removal and relocation of services	Provisional Sum	1	200,000.00	200,000.00
	(b) Extra over Item 1.04 (a) for Contractor's overheads and profit.	%	200,000.00		
1.06	Engineer's Miscellaneous accounts				
	(a) Provisional sum of Shs. 500,000 for Engineers Miscellaneous Account. Amount to be spent in whole or part as approved by the Employer	Provisional Sum	1	300,000.00	300,000.00
	(b) Extra over Item 1.05 (a) for Contractor's overheads and profit.	%	300,000.00		
1.07	Attendance upon the Engineer				
	(a) Provisional sum of Shs. 500,000 for attendance of the Engineer's Site Staff including wages and overtime in accordance to Clause 140 of the Standard Specifications	Provisional Sum	1	300,000.00	300,000.00
	(b) Extra over item 1.07 for Contractor's overheads and profit.	%	300,000.00		
1.08	Project signboards	No.	2		
TOTAL FOR BILL NO.1 CARRIED FORWARD TO SUMMARY					

BILL NO.4: SITE CLEARANCE AND TOP SOIL STRIPPING					
4.01	Site Clearance	m2	1000		
4.02	Removal of top soil	m ³	2400		
4.03	Removal of existing pipe culverts, drifts, structures,				
	a) pipe culverts	m	50		
	a) Other Obstructions	Lumpsum	1		
TOTAL FOR BILL NO.4 CARRIED FORWARD TO SUMMARY					

BILL NO.5: EARTHWORKS					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
5.01	Improved subgrade fill CBR>10 compacted to 100% MDD as per the specifications	m3	8500		
TOTAL FOR BILL NO.5 CARRIED FORWARD TO SUMMARY					
BILL NO.7: EXCAVATION AND FILLING FOR STRUCTURES					
7.01	Excavate in soft material, use excavated material to backfill	m3	800		
7.02	Extra over item 7.01 for excavation in hard material	m3	50		
7.03	Grouted stone pitching	Lumpsum	1		
TOTAL FOR BILL NO.7 CARRIED FORWARD TO SUMMARY					
BILL NO.8: CULVERTS AND DRAINAGE WORKS					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
8.01	Excavate for pipe culverts, inlet, outfall, mitre, cut-off, catchwater drains and subsoil drains in soft material, return and backfill with approved material	m3	200		
8.02	Extra over Items 8.01 for excavation in hard material	m3	50		
	Pipe culverts				
8.03	Concrete Class 20/20 to pipe culvert bed	m3	50		
8.04	Cast insitu concrete class 25/20 pipes - 600 mm dia pipe inclusive of aprons, toe beams, head walls and wing walls	m	300		
8.05	Cast insitu concrete class 25/20 pipes - 450 mm dia pipe service ducts	m	50		
8.06	Concrete Class 15/20 blinding	m3	20		
8.07	BRC A252 Mesh Reinforcement to head walls, aprons, toe walls, inlets and outlets, isle slopes and back slopes	M2	950		
8.08	Concrete scour checks	m3	20		
8.09	Concrete lined drains				
8.1	Construct concrete line drains Class 25/20 including reinforcement and shuttering	m3	400		
8.11	Construct soak away drains as specified by the Engineer	No.	15		
TOTAL FOR BILL NO.8 CARRIED FORWARD TO SUMMARY					

BILL NO.9: PASSAGE OF TRAFFIC					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
9.01	Construct and maintain, including watering deviations throughout the works	km	1.2		
9.02	Provide signs and barriers in accordance with clause 907 of the Standard Specifications	km	1.2		
9.03	Maintain and allow for the passage of traffic through out the works	LS	1		
TOTAL FOR BILL NO.9.CARRIED FORWARD TO SUMMARY					
BILL NO.12: NATURAL MATERIAL FOR SUB-BASE AND BASE					
12.01	Natural gravel material subbase to roads	m3	1850		
12.02	Natural gravel material base	m3	1550		
TOTAL FOR BILL NO.12 CARRIED FORWARD TO SUMMARY					
BILL NO.14: CEMENT AND LIME TREATED MATERIAL					
14.01	Provision, storage, Haulage, Transport and spreading of Portland cement as the Stabilizer for subbase and base at any point of the works in conformity with the instructions of the Engineer	tonne	200		
14.02	E.O Item 14.01 for processing, mixing stabilizer and compaction in natural gravel material for subbase and base in accordance with the specifications and as directed by the Engineer	m3	3400		
14.03	Watering, provision, placing and maintenance of the curing system of treated material in subbase and base	m2	18000		
TOTAL FOR BILL NO.14 CARRIED FORWARD TO SUMMARY					
BILL NO.15: BITUMINOUS SURFACE TREATMENT AND SURFACE DRESSING					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
	Prime Coat				
15.01	Prepare surface of road base, provide, heat and spray MC 30 cut back bitumen as prime coat at application rate 0.8 - 1.2 l/m2	Litre	7500		
	Tack Coat				
15.02	Clean and Prepare surfaces of main carriageway, shoulders, bus bays, accesses and junctions, provide, transport and spray on the same K170 emulsion as tack coat at a rate of spray in the range of 0.8 liters/m2 to 1.0 liters/m2 or as instructed	Litre	7500		
TOTAL FOR BILL NO.15 CARRIED FORWARD TO SUMMARY					

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
BILL NO.16: BITUMINOUS MIXES					
16.01	Provide, lay and compact Type 1 Asphalt Concrete binder course with nominal bitumen on carriageway, accesses, junctions etc. and; all in accordance with the Specifications and as directed by the Engineer	m ³	490		
TOTAL FOR BILL NO.16 CARRIED FORWARD TO SUMMARY					

BILL NO.20: ROAD FURNITURE					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
	Road marking				
20.01	Road marking in thermoplastic material White	m ²	300		
20.02	Road marking in thermoplastic material yellow paint	m ²	180		
20.03	Warning signs, size 750mm	No.	50		
20.04	Priority sign, 750 mm size	No.	5		
20.05	Prohibitory signs, 750 mm size	No.	20		
	Standard informatory signs				
20.06	Standard informatory signs 500 mm x 550 mm size	No.	5		
	Road humps				
20.07	Road humps	m	100		
20.08	Provide and place precast concrete channel blocks 125mm x 100mm to footpaths, inclusive of excavation, laying and jointing, concrete bedding and haunching	m	3900		
20.09	Provide, lay and joint precast concrete kerbs (kerb channels) 100mm x 125mm	m	2100		
20.10	Provide and erect precast concrete bollards	No.	701		
20.11	Medium Duty Precast concrete paving blocks 100 x 200mm to pedestrian walkways	m ²	2000		
TOTAL FOR BILL NO.20 CARRIED FORWARD TO SUMMARY					

BILL NO.25: ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY ACTIVITIES					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
25.01	Stakeholder Engagement				
	(a) Provisional Sum of shs. fifty thousand for implementation of Stakeholders Engagement Plan	Prov. Sum	50000	1.00	50,000.00
	(b) Extra over item 1.27(a) for contractor's overheads and profit	%	50000		
25.02	Provision and implementation of Contractor's Environment and Social Management Plan (CESMP), in accordance with the Contract, that includes the agreed Management Strategies and Implementation Plans including payment	Lump Sum	1		
25.03	Provisional Sum of Shs. five hundred thousand for Additional Environmental, Social, Health and Safety activities				
	(a) Environmental	Prov. Sum	200000	1.00	200,000.00
	(b) Social	Prov. Sum	100000	1.00	100,000.00
	(c) Health and Safety	Prov. Sum	200000	1.00	200,000.00
25.04	Contractor's overheads and profits of item 25.03	%	500000		
TOTAL FOR BILL NO.25 CARRIED FORWARD TO SUMMARY					

BILL NO. 26: STREET LIGHTING					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT
	Supply, install, test and commission the following				
26.01	All-in-one Solar L.E.D street light system comprising of the following:				
26.02	10m steel galvanized street lighting column made from Class "B" steel galvanized pipe complete with a single (1) arm side entry bracket of 1.5m outreach with 1No. All In One (Integrated) Solar Street Light as per Drawings provided complete with all accessories and spaced at 30m pole to pole distance	No	25		
26.03	Supply and install All in one solar L.E.D street light with the following parameters 1) Model No: SSL-A3 All in One Solar Street Light.2) LED: 240w with Bridgelux/CREE/Philipsled chips 3030, 160-170LM/W, 6000K ~6500K (customized 2700k-6500k)3) Solar Panel : 180w High Efficiency Monocrystalline Silicon4) Battery : Inbuilt LIFEPO4 Battery5) Mounting Height : 12M6) Intelligent Light Mode : Time control + Light control + Motion sensor(optional)7) Lifespan: 50,000hrs8) Beam Angel: 150x70°9) Solar Charging Time: 6 hours by bright sunlight10) Back Up : 3 - 7 Cloudy / rainy days11) Lighting Time(Full Power): 12-14hours12) Lighting Time(30% saving mode): 39 hours The brand to be Approved Equivalent by the Electrical Engineer	No	25		
D	Earthing for every individual pole comprising of a 6mm ² earth lead and 1800mm long by 15mm diameter copper earth electrode with a driving tip and clamp in a 150mm by 150mm by 200mm concrete manhole with removable cover. To be covered and not to be seen after completion of surface.	No	25		
E	Civil works for reinforced concrete 600mm x 600mm x1000mm streetlight pole foundations of C30 concrete rates to include excavation, backfilling etc.	No	25		
26.04	Testing and commissioning of all luminaires and earthing tests on all pole.	Lot	25		
TOTAL FOR BILL NO.26 CARRIED FORWARD TO SUMMARY					

GRAND SUMMARY OF BILLS

BILL NO.	DESCRIPTION	BOQ AMOUNT (KES)
1	PRELIMINARY AND GENERAL ITEMS	
04	SITE CLEARANCE	
05	EARTHWORKS	
07	EXCAVATION AND FILLING FOR STRUCTURES	
08	CULVERTS AND DRAINAGE WORKS	
09	PASSAGE OF TRAFFIC	
12	NATURAL MATERIAL FOR BASE AND SUBBASE	
14	CEMENT AND LIME TREATMENT	
15	BITUMINOUS SURFACE TREATMENT AND SURFACE DRESSING	
16	BITUMINOUS MIX BASES, BINDER COURSES & WEARING COURSES	
20	ROAD FURNITURE	
25	ENVIROMENTAL, SOCIAL HEALTH AND SAFETY ACTIVITIES	
26	STREET LIGHTING	
	SUMMARY	
A	SUB-TOTAL OF BILLS	
B	ADD 16% VAT	
C	GRAND TOTAL (A+B)	

TECHNICAL PROPOSAL

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

SCHEDULE A. Projected Cash Flow

SCHEDULE B. Site Organizations

SCHEDULE C. Subcontractors

SCHEDULE D. Contractor's Equipment

SCHEDULE E. Initial Tentative Program of Performance

SCHEDULE F. Key Personnel Proposed

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

SCHEDULE A

Projected Cash Flow

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

Period (Months)	Cost of Construction Works	Net Payments to be received	Net Cash Flow
1-2			
3-4			
5-6			
7-8			
ETC.			

SCHEDULE B

Site Organization

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

1. SITE ORGANIZATION CHART
2. NARRATIVE DESCRIPTION OF SITE ORGANIZATION CHART

SCHEDULE C

SUB-CONTRACTORS / PARTNERS

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

Part of Works / Services:
Approximate value:
Name and address of proposed subcontractor / partner:

Part of Works / Services:
Approximate value:
Name and address of proposed subcontractor / partner:

Part of Works / Services:
Approximate value...
Name and address of proposed subcontractor / partner:

Part of Works / Services:
Approximate value:
Name and address of proposed subcontractor / partner:

SCHEDULE D

Contractor's Equipment Form

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 (Table 9).

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 ☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured	

Omit the following information for equipment owned by the Tenderer.

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

SCHEDULE E

Initial Tentative Program of Performance

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

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

SCHEDULE F

Form PER -1 Key Personnel

Schedule

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

Key Personnel

1.	Title of position: Head Office Staff 1	
	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: Head Office Staff 2	
	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: Road Manager	
	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:	 [insert the number of days/week/months/ that has been scheduled for this position]
	Expected time schedule for this position:	 [insert the expected time schedule for this position (e.g. attach high level Gantt chart)]
4.	Title of position: Senior Foreman 1	
	Name of candidate:	
	Duration of appointment:	 [insert the whole period (start and end dates) for which this position will be engaged]
	Time commitment: for this position:	 [insert the number of days/week/months/ that has been scheduled for this position]
	Expected time schedule for this position:	 [insert the expected time schedule for this position (e.g. attach high level Gantt chart)]
5.	Title of position: Senior Foreman II	
	Name of candidate:	
	Duration of appointment:	 [insert the whole period (start and end dates) for which this position will be engaged]
	Time commitment: for this position:	 [insert the number of days/week/months/ that has been scheduled for this position]
	Expected time schedule for this position:	 [insert the expected time schedule for this position (e.g. attach high level Gantt chart)]

Resume and Declaration - Key Personnel

Name of Tenderer

.....

Position [HEADQUARTER STAFF
[title of position from Form PER-1]

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: COUNTY GOVERNMENT OF WAJIR	
	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 Key Personnel, certify that to the best of my knowledge and belief, the information contained in this Form PER -2 correctly describes myself, my qualifications and my experience.

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

Commitment	Details
Commitment to duration of contract:	<i>Start Date..... End Date.....</i> <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>Start Date..... End Date.....</i> <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:

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

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

Position; HEADQUARTER STAFF II..... [title of position from Form PER-1]	
Personnel information	Name: Date of birth: Address: E-mail: Professional qualifications: Academic qualifications: Language proficiency: [language and levels of speaking, reading and writing skills]
Details	Address of Procuring Entity: COUNTY GOVERNMENT OF WAJIR 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
[main project details]	[role and responsibilities on the project]	[time in role]	[describe the experience relevant to this position]

Declaration

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

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

Commitment	Details
Commitment to duration of contract:	<i>Start Date End Date [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>Start Date..... End Date.....</i> <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:

- d) be taken into consideration during Tender evaluation;
- e) my disqualification from participating in the Tender;
- f) My dismissal from the contract.

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

Position [Site MANAGER [title of position from Form PER-1]		
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: COUNTY GOVERNMENT OF WAJIR	
	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 Key Personnel, certify that to the best of my knowledge and belief, the information

contained in this Form PER -2 correctly describes myself, my qualifications and my experience.

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

Commitment	Details
Commitment to duration of contract:	<i>Start Date..... End Date..... [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>Start Date..... End Date..... [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:

- g) be taken into consideration during Tender evaluation;
- h) my disqualification from participating in the Tender;
- i) My dismissal from the contract.

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

Position [FOREMAN [title of position from Form PER-1]		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: [language and levels of speaking, reading and writing skills]	
Details	Address of Procuring Entity: COUNTY GOVERNMENT OF WAJIR	
	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

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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>Start Date..... End Date..... [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>Start Date..... End Date..... [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:

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

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

Position SENIOR FOREMAN II [title of position from Form PER-1]		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: [language and levels of speaking, reading and writing skills]	
Details	Address of Procuring Entity: COUNTY GOVERNMENT OF WAJIR	
	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
[main project details]	[role and responsibilities on the project]	[time in role]	[describe the experience relevant to this position]

Declaration

I, the undersigned Key Personnel, certify that to the best of my knowledge and belief, the information

contained in this Form PER -2 correctly describes myself, my qualifications and my experience.

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

Commitment	Details
Commitment to duration of contract:	<i>Start Date..... End Date..... [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>Start Date..... End Date..... [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:

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

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

Declaration

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

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

Commitment	Details
Commitment to duration of contract:	<i>Start Date..... End Date.....</i> <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>Start Date..... End Date.....</i> <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:

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

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Tenderer:

Signature: _____

Date: (day month year): _____

TENDERER'S QUALIFICATION FORMS

Tenderer Information Form

Date: _____

ITT No. 13.1 and title: DOCUMENTS COMPRISING THE TENDER

Tenderer's name
In case of Joint Venture (JV), name of each member: NOT APPLICABLE
Tenderer's actual or intended country of registration: KENYA
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 ☐ 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 4.1 ☐ In case of JV, Form of intent to form JV or JV agreement, in accordance with ITT 4.1 ☐ In case of state-owned enterprise or institution, in accordance with ITT 4.7 documents establishing: • 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, a list of Board of Directors, and the beneficial ownership.

Form ELI -1.2

Tenderer's JV Information Form
(to be completed for each member of Tenderer's JV) Date:
NOT APPLICABLE

ITT No. and title: *NOT APPLICABLE*

Tenderer's JV name: <i>NOT APPLICABLE</i>
JV member's name: <i>NOT APPLICABLE</i>
JV member's country of registration: <i>NOT APPLICABLE</i>
JV member's year of constitution: <i>NOT APPLICABLE</i>
JV member's legal address in country of constitution: <i>NOT APPLICABLE</i>
JV member's authorized representative information Name: <i>_NOT APPLICABLE</i> Address: <i>_____NOT APPLICABLE</i> Telephone/Fax numbers: <i>_ NOT APPLICABLE</i> E-mail address: <i>NOT APPLICABLE</i>
<i>1. Attached are copies of original documents of</i> ☐ <i>Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 4.1.</i> ☐ <i>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 4.7.</i> <i>2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.</i>

Form ELI - 1.3

Qualification of Foreign Tenderers

Pursuant to ITT 4.10, a foreign tenderer must complete this form to demonstrate that the tender fulfils this condition (the 40% Rule).

ITEM	Description of Work Item	Describe location of Source	COST in K. shillings	Comments, if any
A	Local Labor			
1				
2				
3				
4				
5				
B	Sub contracts from Local sources			
1				
2				
3				
4				
5				
C	Local materials			
1				
2				
3				
4				
5				
D	Use of Local Plant and Equipment			
1				
2				
3				
4				
5				
E	Add any other items			
1				
2				
3				
4				
5				
6				
7				
	TOTAL COST LOCAL CONTENT		xx	
	PERCENTAGE OF CONTRACT PRICE		xx	

Disclosure of Interest – Interest of the Firm in the Procuring Entity (this form is already attached to the Form of Tender).

Form CON – 1

Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: _____

Date: _____

JV Member's Name: NOT APPLICABLE

ITT No. 37 (7) vi, (a) and title: NON PERFORMANCE

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
☐ Contract non-performance did not occur since 1 st January 2020 specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.			
☐ Contract(s) not performed since 1 st January <i>[insert year]</i> 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)
.....			
.....			
.....	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Procuring Entity: Address of Procuring Entity..... Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
☐ No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.			
☐ 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: WCG Address of Procuring Entity: P.O.BOX 9-70200 WAJIR Matter in dispute: Party who initiated the dispute: Status of dispute:	
..... .		Contract Identification: _____ Name of Procuring Entity: WCG Address of Procuring Entity: P.O.BOX 9-70200 WAJIR Matter in dispute: Party who initiated the dispute: Status of dispute.....	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
☐ No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4. ☐ 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)
..... <i>[insert year]</i>	 <i>[insert percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Procuring Entity..... Address of Procuring Entity: Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute..... <i>[indicate "Procuring Entity" or "Contractor"]</i> Reason(s) for Litigation and award decision • • <i>[indicate main reason(s)]</i>	 <i>[insert amount]</i>

FORM CON – 3: DECLARATION OF KNOWLEDGE OF SITE

This is to certify that

[Name/s]

.....

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

.....

.....

Has familiarized himself/herself with the Site conditions in accordance with the Instructions to bidders and the Tender Notice for purposes of bidding for this road project proposed upgrading of wajir girls- hadado yarey road 1.2km to bitumen standards Having studied the tender Documents, and gained knowledge of local conditions on site likely to influence the works and cost thereof, I certify that I am satisfied with the description of the works and understand the scope of works as specified and as implied in this tender.

.....

.....

(Signed and Stamped by Authorized Bidder's Agent/ Representative)

(Designation)

Form FIN – 3.1:

Financial Situation and Performance

Tenderer's Name: _____ Date: _____

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

1. Financial data

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

2. Sources of Finance

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

No.	Source of Finance	Amount (Kenya Shilling equivalent)
1		
2		
3		
4		

2.1. Detailed Financial Situation Evaluation

No	Description	Auditors Assessment 2020	Auditors Assessment 2021	Auditors Assessment 2022	Evaluation Award Criteria (MET/NOT MET)
1.	Financial Ratios				
a.	Current Ratio= Current Assets Current Liabilities				Current Ratio more than 1 Yes/No
b.	Debt to Equity Ratio = Total Liabilities Total Equity				Equity Capital Ratio less than 1 Yes/No
c.	Working Capital = Current Assets-Current Liabilities				Positive Working Capital = Yes/No
d.	Operating Cash Flow Ratio = Cash Flow from Operations Current Liabilities				Operating Cash-flow more than 1 Yes/No
2.	Working Capital in Ksh.				Working Capital is equal or more than 20% of Bid Sum Yes/No

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

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

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

2.11. Financial ratios Computed by a Certified Public Accountant:

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

2.1.2. Ratios attested by the Company Director: Director's

Name	
ID/Passport Number	
Telephone Number	
Email Address	
Postal Address	
Physical Address	
Signature	
Date	
Personal/Corporate Stamp	

3. Financial documents

The Tenderer and its parties shall provide copies of financial statements the last two (2) 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 statements ^{the} two (2) years required above; and complying with the requirements

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 where Applicable	Kenya Shilling equivalent
<i>[indicate year]</i>	<i>[insert amount and indicate currency]</i>		
2020			
2021			
2022			
Average Annual Construction Turnover *			

* See Section III, Evaluation and Qualification Criteria.

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

Form FIN - 3.4:

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 Form of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

No.	Name of Contract	Procuring Entity's Contact Address, Tel, Fax	Value of Outstanding Work (Kenya Shilling equivalent)	Estimated Completi on Date	Average Monthly Invoicing Over Last Six Months [KSh. /month]]
1					
2					
3					
4					
5					
6					

Form EXP - 4.1

General Construction Experience

Tenderer's Name: _____

Date: _____

JV Member's Name _____

ITT No. and title: _____

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

Form EXP - 4.2(a)

Specific Construction and Contract Management Experience

Tenderer's Name: _____ Date: _____

JV Member's Name _____

ITT No. and title: _____

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount				Kenya Shillings
If member in a JV or sub-contractor, specify participation in total Contract amount				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				

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 and Services items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

Form EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: _____

Sub-contractor's Name¹ (as per ITT 33.2): _____

ITT No. and title: _____

Page _____ of _____ pages

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

1. Key Activity No One: _____

	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount			Kenya Shillings	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				
Procuring Entity's Name:				

¹ If applicable

	Information
Address: Telephone/fax number E-mail:	

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

2. Activity No. Two

3.

FORM OF TENDER SECURITY (TENDER BOND)

[The Surety shall fill in this Tender Bond Form in accordance with the instructions indicated.]

BOND NO. _____

1. BY THIS BOND*[name of tenderer]* as Principal (hereinafter called “the Principal”), and....., authorized to transact business in KENYA, as Surety (hereinafter called “the Surety”), are held and firmly bound unto as Obligee (hereinafter called “the Procuring Entity”) in the sum of *[amount of Bond]*], for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.
2. WHEREAS the Principal has submitted or will submit a written Tender to the Procuring Entity dated the _____ day of _____, for the supply of..... *[name of Contract]* (hereinafter called the “Tender”).
3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:
 - 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 Surety 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. The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 30 days after the date of expiration of the Tender Validity Period set forth in the Principal's Letter of Tender or any extension thereto provided by the Principal.
5. IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this _____ day of _____ 20_____.

Principal: _____ Surety: _____
Corporate Seal (where appropriate)

(Signature)

(Printed name and title)

(Signature)

(Printed name and title)

FORM OF TENDER-SECURING DECLARATION

[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

PART 2 – WORKS REQUIREMENTS

SECTION VI –

SPECIFICATIONS Notes for preparing Specifications

1. Specifications must be drafted to present a clear and precise statement of the required standards of materials, and workmanship for tenderers to respond realistically and competitively to the requirements of the Procuring Entity and ensure responsiveness of tenders. The Specifications should require that all materials, plant, and other supplies to be permanently incorporated in the Works be new, unused, of the most recent or current models, and incorporating all recent improvements in design and materials unless provided otherwise in the Contract. Where the Contractor is responsible for the design of any part of the permanent Works, the extent of his obligations must be stated.
 2. Specifications from previous similar projects are useful and may not be necessary to re-write specifications for every Works Contract.
 3. There are considerable advantages in standardizing General Specifications for repetitive Works in recognized public sectors, such as highways, urban housing, irrigation and water supply. The General Specifications should cover all classes of workmanship, materials and equipment commonly involved in constructions, although not necessarily to be used in a particular works contract. Deletions or addenda should then adapt the General Specifications to the particular Works.
 4. Care must be taken in drafting Specifications to ensure they are not restrictive. In the Specifications of standards for materials, plant and workmanship, existing Kenya Standards should be used as much as possible, otherwise recognized international standards may also be used.
 5. The Procuring Entity should decide whether technical solutions to specified parts of the Works are to be permitted. Alternatives are appropriate in cases where obvious (and potentially less costly) alternatives are possible to the technical solutions indicated in tender documents for certain elements of the Works, taking into consideration the comparative specialized advantage of potential tenderers.
 6. The Procuring Entity should provide a description of the selected parts of the Works with appropriate reference to Drawings, Specifications, Bills of Quantities, and Design or Performance criteria, stating that the alternative solutions shall be at least structurally and functionally equivalent to the basic design parameters and Specifications.
1. Such alternative solutions shall be accompanied by all information necessary for a complete evaluation by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, proposed construction methodology, and other relevant details. Technical alternatives permitted in this manner shall be considered by the Procuring Entity each on its own merits and independently of whether the tenderer has priced the item as described in the Procuring Entity's design included with the tender documents

SECTION VI –A: STANDARD SPECIFICATIONS

Standard Specifications refers to the Standard Specifications for Roads and Bridge Construction, Published by the Ministry of Transport and Communications of the Republic of Kenya, 1986 Edition and shall be applicable in this contract.

SECTION VI –B: SPECIAL SPECIFICATIONS

101 General

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.

102 Location and Extent of Site

The roads to be maintained is within Wajir Municipality, Wajir County. The site of the works shall be within the road reserve and any other places as may be designated in the Construction Contract.

102.1 Extent of Contract

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

- General preliminaries
- Site clearance
- Pothole patching and Sections.
- Overlay with asphalt concrete
- Provision and application of Thermoplastic paints
- Road furniture

103 Drawings

This clause shall be read as under:

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

104 Programme for Execution of the Works

The Contractor shall provide the works programme, required under Clause 14.1 of the Conditions of Contract, within 28 days of receipt of the Engineer's Order to commence work.

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

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

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

105 Order of Execution of the 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.

Generally, the Contractor shall commence the works at the beginning of the road package and progress continuously towards the other end without leaving any isolated section or sections of road uncompleted.

107 Certificate of Completion

Wherever the "Certificate of completion" and "Period of Maintenance" are stated in the specification, these shall be read respectively as the "Taking Over Certificate" and "Defects Liability Period".

The Taking-Over Certificate for these works shall be issued upon application by the Contractor under Clause 48.2 of the Conditions of Contract on substantial completion of the construction works. The Defect Liability Certificate will be issued after the end of the Defects Liability Period.

Release of Retention Money will be on issuance of the said certificates.

108 Method of construction

Add the following to this clause:

The submissions of work programme, Order of Work and the General Description of works shall be consistent in presentation and content when handed over for the Engineer's approval and in accordance with programmes and schedules as stated in Clause 14.1 of Conditions of Contract.

Notwithstanding any contrary provision contained in the last paragraph of Clause 108 of the Standard Specification, the Engineer's normal working hours shall be defined as 8:00 a.m. to 5:00 p.m. on weekdays, including lunch break from 1.00 p.m. to 2.00 p.m. and 8:00 a.m. to 1:00 p.m. on Saturdays, with Sunday being set aside as a day of rest. If the contractor wishes to execute permanent works outside these hours, he shall request for and obtain written permission from the Engineer at least one full working day in advance to enable the Engineer to make necessary provision for the supervision of such work. The contractor shall meet any costs arising thereof.

109 Notice of Operations

Name the existing text as 109.1 and add the following:

109.2 Notification Terms

It shall be the Contractor's responsibility to notify the Engineer when any items of the Works scheduled are completed and ready for approval, and the contractor shall give a notice of one full working day to allow control tests to be performed.

117 Health, Safety and Accidents

Insert Sub-clause (i):

In accordance with the laws of Kenya, the Contractor shall make arrangement for awareness programme for public health education and particularly for HIV/AIDS as detailed under Section 26 of this specification.

119 Use of Explosives

Add the following to Clause 119:

The Contractor shall not use explosives without prior written consent of the Engineer. Where the use of explosives is so provided or ordered or authorised, the Contractor shall comply with the requirements of the following beside the law of the land as applicable:

- (a) The Contractor shall at all times make full liaison with and inform well in advance and obtain such permission as is required from all Government Authorities, public bodies and private parties whatsoever concerned or affected or likely to be concerned or affected by blasting operations.
- (b) The Contractor shall pay all license fees and charges, which may be, required for storage of explosives or in respect of any other matters whatsoever.
- (c) The contractor shall be solely responsible for provision, supply, handling, storage and transportation of all explosive ancillary materials and stores and all other things of every kind whatsoever required for blasting operations and shall not delegate or subcontract these activities without the approval of Engineer.
- (d) Before the beginning of the Defects Liability Period the Contractor shall remove all unused explosives from the site on completion of the Works or which are ordered by the Engineer, and submit to the Engineer written confirmation of compliance with the instruction.
- (e) The Contractor shall submit to the Engineer monthly returns detailing the quantity of explosives brought to the site together with the quantities used during the month and the location and quantity of rock blasted.

120 Protections of Existing Works and Services

Add the following to this Clause:

The cost of determining the location of the existing services together with making good or repairing of any damage caused all to the satisfaction of the Engineer shall be included in the tender rates by the Contractor.

Any damage to, or interference with, existing utilities, caused by the Contractor's operations during the progress of the Works, shall be deemed to be the responsibility of the Contractor who shall undertake to make good at his own expense any damage so caused to the existing underground utilities or other features. The Contractor shall be liable in respect of all claims arising from such damages or interference that may occur.

The Contractor shall be responsible for arranging in liaison with the relevant authorities as soon as the requirements are known for the moving of or alterations to services including power lines, telephone lines, data cables, water mains, sewers and surface water drains which are affected by the works. The arrangements for such moving or alteration shall be subject to the agreement of the Engineer and the relevant authorities.

121 Diversion of services

Add the following to the existing text:

- (a) The Contractor shall acquaint himself with the position of all existing services including sewers, water pipes, underground drains, cable for electricity and telephone lines, telephone and lighting poles before commencing any excavation or other work likely to affect these existing services.
- (b) The Contractor shall pay any charges arising from the moving of such services for which Provisional Sums have been included in the Bill of Quantities. Subject to the agreement of the Engineer and upon production of receipts, the Contractor shall be reimbursed in Interim Certificates the net cost of such moving or alteration plus the percentage inserted in the Bill of Quantities for all costs and profits in making the payments.
- (c) The Contractor shall be entirely responsible for and shall repair at his own cost, any services that may be damaged by his plant, equipment or personnel for not following the laid down procedure of locating and shifting services or damage that may occur subsequent to alteration of such services. The Contractor shall indemnify the Employer against claims arising from damages to existing services or works.

123 Liaison with Government Officials and Police

Add the following to the existing text:

In addition to the requirements of maintaining liaison with Government Officials and Police, the Contractor shall be responsible for acquainting himself with all current and valid ordinances or regulations which may affect the work.

The Contractor's attention is also drawn to his obligations with regard to inspection and examination of the site as stipulated under Clause 11 of the Conditions of Contract.

124 Provision of land

Notwithstanding the provisions of Clause 124 of the Standard Specification, all requirements of land for deviations, quarries, stockpiles, spoil areas and borrow pits when not in the road reserve but required for the construction purposes shall be approved by the Engineer, but the Contractor will make necessary arrangements with the property owners concerned and pay all charges arising thereof on or before completion of the Contract. However, the Employer shall not provide any land for the Quarries, stockpiles, spoil areas and borrow pits and access roads there to.

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 is reasonable and practicable.
No

separate payment shall be made to the Contractor on account of these items and the contractor shall make due allowances for them in his rates elsewhere.

Any encroachment of the road reserve, for example by kiosks, shall be brought to the Engineer's attention by the Contractor at the earliest opportunity.

125 Water Supply

Add the following to this clause:

The Contractor at his own cost shall obtain necessary permissions from both relevant Government authorities and private parties to draw water from natural sources and private sources respectively.

127 Information from Exploratory Boring and Test Pits

Delete the contents of Clause 127 and substitute with the following:

- (a) The Materials Report prepared by the Employer does not form part of the bid documents. However, the report will be made available for the Contractor's verification only and any conclusions in regard to suitability of material, location of borrow pits and material quantities made by the Contractor based on this information, will be his own responsibility.
- (b) The Contractor shall allow in his programme for construction of trial sections and carrying out tests upon them as directed by the Engineer. Trials would normally be required at the start of each pavement layer and if change of method or equipment deems it necessary as directed by the Engineer. The time for completion of the Contract shall not be extended because of the time needed to construct trial sections and evaluate the test on them.

At least fourteen (14) days before the work of laying any pavement layer is commenced the Contractor shall construct a trial at least 100 m in length and to the full construction width and shall be laid to the specified depth for the material. For each trial the contractor shall use the materials mix proportions, mixing laying, compaction plants and construction procedure that he proposes to use for the main work. The main work of laying the pavement layer shall not be commenced until this trial has been tested and approved by the engineer.

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

131 Signboards

Add the following to this clause:

At the commencement of works, the Contractor shall provide and erect three signboards; one on each end of the proposed Project Roads and as instructed by the Engineer. The signboards shall comply with the requirements and detail shown in the Book of Drawings. Any amendments to the details in the Book of Drawings, prior to the signboards being erected, shall be with the approval of the Engineer.

132.1 Engineer's representative Office

The contractor shall for the duration of the Contract, furnish and equip Resident engineer's office located at the Wajir Site Office.

A telephone shall also be provided for the Resident Engineer's office for his exclusive use. All the charges and fees related to the installation and maintenance of the telephone shall be deemed to have been included in the rates for providing and maintaining the Office. The Contractor will be reimbursed, separately, the cost of operating the phone under appropriate bill item in the BoQ.

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

The 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.

132.2 Engineer's Office and Laboratory Furniture

Furniture and equipment for the Engineer's Laboratory shall be as listed in the Special Specifications. It shall also be the Contractor's responsibility to replenish consumables when instructed by the Engineer. The Engineer's office and laboratory furniture will revert to the Employer on completion of the contract.

The following items shall be required in the Engineer's office. On completion of the contract all furniture and equipment specified below which will have been supplied shall revert to the Contractor.

1. Executive Desk	2 No.
2. Desk with lockable drawer	5No.
3. Chairs executive (swivel type)	7No
4. Lockable steel cabinets (with 4 drawers	1No.
5. Bookshelf 2 door with drawers & shelves 2m long	1No.
6. Bookshelf 3 door with drawers & shelves 2m long	1No.
7. Stapling machine (Ofrex) and pins	2No.
8. Paper punch	2No.
9. 3m tape measures	5No.
10. Scientific calculator (Fx 951MS or above)	5No.
11. Fully equipped first aid kit	2No.
12. Waste paper basket	5No.
13. Electric heater fans	2No.
14. Padlock	2No.
15. Wall clocks battery powered	1No.
16. Filling trays	12No.
17. Chairs (standard desk type)	10No.
18. Triplicate book	24No.
19. Diary	8No.
20. Inventory Book	4No.
21. Rulers	4No.
22. Hard cover note books (4quire)	20No.
23. Survey Books (Rise and Fall)	30No.
24. Field note books	24No.
25. Rims of Conqueror printing paper	24No.
26. A4 Envelops 50No. per packet	50 Pkts
27. B5 Envelops 50No. per packet	50 Pkts
28. B6 Envelops 50No. per packet	50 Pkts
29. Payment voucher books	10No.
30. Pens (Bic Ball points) 25 in a Pkt	50 Pkts
31. Cello tape	5No
32. Office glue stick	5No
33. Dictionary	2No.
34. Photocopy / Printing papers (Reams)	60No.
35. Masking tape	6No.
36. Highlighters (Dozens)	3No.
37. Spring files	60No.

The contractor shall be responsible throughout the contract period for the maintenance of the office, its equipment and furniture and providing security all as specified in clauses 132 and 141 of the standard specification.

All payments for the office are subject to retention.

The contractor will be paid 50% of the cost on provision of the office complete with furniture and equipment and the remaining 50% of the cost to be spread evenly within the contract period. The cost of provision of all items under the Engineer's Office shall be deemed to have been included in the rate for provision for the Engineer's Office in the BoQ and no separate payment shall be made on the same.

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 and proof of having supplied, be paid under the same bill item as that of provision of the office. It is therefore assumed that the Contractor includes these items as listed below in his rate for provision of the Engineer's office as no separate payment shall be made.

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

a). Photocopying Machine

1No.

ITEM	MINIMUM SPECIFICATIONS
Print Method	Laser, Coloured
Copy Speed	>= 43 pages per minute
Monthly print volume	Up to 20,000 pages
Paper Tray Capacity	2 x 500 sheets 100 sheets by pass
tray Media Sizes	A3, A4, A5, B4
Print Resolution	600 x 600 dpi
Duplex Printing	Automatic
Copier resize	25 – 400%
Salient features	Sleep mode (Power saver) Help function Journal report
Warranty	1 year

b). Personal Computer (PC) 2No.

Processor	Intel Core i7 Processor Speed: 3.0GHz
System Memory	6GB, DDR2 SDRAM expandable to 8GB.
Primary Storage	1TB (7200rpm) SATA II Hard drive
CD/DVD Drive	16x DVD+/- RW Drive2 Drive with double layer write
capability Display Navigation	17" TFT Monitor with SXGA 1400x1280 pixels resolution display 2 Button USB scroll mouse with mouse pad. Enhanced Quiet-key USB Space-saver
Audio	A525 Speakers for multimedia output
Communication Interface	Gigabit (UTP) network card with RJ45 port. The card must have the wake-on LAN feature enabled. Internal 11a/b/g WI-FI wireless card for wireless support.
I/O Interface	6 USB 2.0 (2 front and 4 Rear) 1 parallel port 1 VGA out Speakers line-out and headphone (front) 3 PCI expansion slots.
Operating System	Latest Windows with license
Pre-loaded Software	Latest Ms Office (Professional) installed with license
Anti-virus	Antivirus software with license
Warranty	1years
Preferred Brand	Dell
UPS	Make: APC Power Rating: 650VA Input Voltage: 220-270V MUST BE SUPPLIED WITH STANDARD POWER PLUG AND BACK TO BACK CABLES FOR CONNECTION TO CPU & MONITOR

UPS specifications

1. Rating	650 VAC (minimum)
2. Input Voltage	220-240V (minimum)
3. Output	220-240V (minimum)
4. Output frequency	50-60HZ
5. Battery module	minimum 25 minutes backup time on 50% rated a. Sealed Lead-acid b. Short recharge time (max. 5 hours for 100%)
6. Protection	Output overload Input output short-circuit

Software

1. XP Office Professional with licence
 2. Antivirus Kaspersky (latest version)
-

c). Laptop 2No.

ITEM	MINIMUM SPECIFICATIONS
Processor	Intel i7, 3 GHz
System Memory	8GB DDR3 SDRAM 667MHz
Primary Storage	1 TB
Optical Drives	DVD+/-RW
Display	15" screen 1024x800 resolution
AC adapter	Compliant 100-240V / 50-60Hz
Wireless LAN	Internal Wi-Fi Card & Bluetooth
Navigation	Keyboard with touchpad dual pointing device & external USB optical mouse
Audio	Std stereo speakers, built-in microphone & headphone jacks
Modem	In-built with SIM slot
LAN Network Interfaces	100 Kbps Ethernet port RJ45
Operating System	Latest Genuine Windows with license
Pre-loaded Applications	Latest MS Office Pro with license Kaspersky Antivirus with license
Carry Case	One
PC Card slots	Card reader
Battery type & life	6 cell Li-Ion battery up to 5 hrs
Salient features	2 Mega pixel Webcam 4 x 2.0 USB slots Security cable lock slot
Warranty	2years
Preferred Brand	HP

d). Laser jet Printer specifications 2No.

ITEM	MINIMUM SPECIFICATIONS
Print Speed	21ppm colour , 24ppm Coloured

Print Technology	Laser
Print quality, black	Up to 1200 X 1200 dpi
Memory	96MB
Processor speed	256MHz
Paper trays std	2
Paper Handling	150 sheet input tray, 250 sheet second paper tray
Duplex Printing (Printing on both sides)	Automatic
Paper sizes	Letter A3, A4, Legal, Executive, Index Cards, Envelops
Compatible Operating Systems	Windows 7, iOS, Linux, Macintosh
Connection interfaces	Hi-speed USB 2.0 Fast Ethernet
10/100/1000 Preferred brands	HP
Accessories supplied with printer	Connecting cables (Network + USB), Tonner, CD (Includes Software and user guides), Power cord
Warranty	1 year

e). Paper Shredder 1No.

Continuous run time	continuous
Cut style	cross-cut
Depth	17.7 in.
Dimensions	33"H x 18"W x 17"D
Features	SafeSense; 100% Jam-Proof System; Silent Shred; Caster; Energy Saving System; Continuous Duty Motor; Electronic Auto Start/Stop
Full-wastebasket indicator	yes
Height	30.9 in.
Input voltage	120 V AC
Manual reverse	yes
Maximum shred speed	16
Model	225Ci
Number of sheets per pass	20

Number of users	3-5
Overload protection	yes

Product line	Powershred
Shred size	0.16" x 1.5"
Shredder use	CDs/DVDs; credit cards; paper clips; staples
Throat width	9.5
Warranty length	2-year limited; limited lifetime
width	17.1 in.

f). Camera Specifications

1 No.

ITEM	MINIMUM SPECIFICATIONS
Pixels	20.1 mega pixel
Optical zoom	20x
Compatible recording media	Memory stick duo / Memory stick PRO duo / SD Memory Card
LCD	>= 2.5" (230K Pixels)
Stamina (Battery Life)	>= 110 minutes
Battery system	Lithium ION Battery
USB	2.0 High Speed
Still image record mode	JPEG
Supplied Accessories	Battery – Lithium ION Battery
Battery Charger	
Multi cable	
Power Cord	
Application Software	
Salient features	Battery remaining indicator
Recording media remaining indicator	
Wrist strap	
Carry case	

The Personal Computers, Laptop, camera and Photocopying Machine shall revert to the Contractor at the end of the Contract. The cost of provision of all items under the Engineer's Office shall be deemed to have been included in the rate for provision for the Engineer's Office in the BoQ and therefore no additional payment shall be made for the same.

132.3 Engineer's Laboratory and Survey Equipment

a) General

The Contractor shall provide install and maintain in a good state of repair for the duration of the Contract, such laboratory, survey and other equipment as listed in the Special Specifications. Such equipment shall be of approved manufacturer and shall be made available to the Engineer

within the following time periods:

- Survey equipment, not more than 30 days after the Engineer's Order to Supply
- Laboratory equipment, not more than 60 days after the Engineer's order to Supply

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

The laboratory and survey equipment shall revert to the Employer on completion of the Contract.

b) survey equipment

1. 2 No. Levelling staff 5m. with levelling bubble Wild GNLE or similar
2. 2No. 50m. steel band measuring tape
3. 2No. 30m. linen measuring tape
4. 1No. 3m. aluminium straight edge
5. 1No. 1m. stainless steel straight edge
6. 1No. 100m. steel band tape
7. 3No. Programmable scientific calculators FX 570 or equivalent
8. 2No. Survey umbrella
9. 1No. Roll of tracing paper
10. 3No. Protractor 360
11. 2No. Triangular scales (Conventional scales)
12. 4No. 3m. ranging rods
13. Marker pens
14. Geodetic GNSS Receivers with downloading software as specified below;

Specification	Minimum Requirements	Detailed Requirements
GNSS Performance	GNSS technology	Smart Track technology: • Advanced measurement engine • Jamming resistant measurements • High precision pulse aperture multipath correlator for pseudo range measurements • Excellent low elevation tracking • Very low noise GNSS carrier phase measurements with <0.5 mm precision • Minimum acquisition time
	Smart Track technology:	Smart Track technology:
	Max. simultaneous tracked satellites	Up to 60 Satellites simultaneously on two frequencies
	Satellite signals tracking	• GPS: L1, L2, L2C • GLONASS: L1, L2 • Galileo, QZSS2 • BeiDou B1, B2 • SBAS: WAAS, EGNOS, GAGAN, MSAS
	Reacquisition time	< 1.2 sec
	Position latency	< 20m/ sec

Measurement Performance & Accuracy	DGPS / RTCM	Typically 25 cm
	Single Baseline (<30 km)	Horizontal: 8 mm + 1 ppm Vertical: 15 mm + 1 ppm
	Network RTK	Horizontal: 8 mm + 0.5 ppm Vertical: 15 mm + 0.5 ppm
	RTK technology	Smart Check technology
	Reliability	Better than 99.99%3
	Time for initialization	< 45 sec
	OTF range	Up to 70 km2
	Supported RTK network solutions	VRS, FKP, iMAX
	Supported RTK network standards	MAC (Master Auxiliary Concept) approved by RTCM SC 104
Hardware	Weight	1.4 kg
	Weight	2.90 kg standard RTK rover including controller, batteries, pole and bracket
	Dimension (diameter x height)	198.5 mm x 197.5 mm x H 99 mm
	Supply voltage	Nominal 12 V DC Range 10.5 – 28 V DC
	Power consumption	Internal power supply Recharge & removable LI-Ion battery,
	Internal power supply, operation time	• 10.00 h static observations • 7.00 h receiving RTK data with internal UHF radio • 5.00 h transmitting RTK data with internal UHF radio • 6.00 h receiving / transmitting RTK data with internal modem
	External power supply	Rechargeable external NiMh battery 9 Ah / 12 V
Memory & Data Recording	Memory medium	Removable microSD Card: 1 GB
	Data capacity	1 GB
	Type of data	Onboard recording of: • GNSS raw data • RINEX data
	Recording rate	Up to 20 Hz
User Interface	Buttons	• ON / OFF button • Function button
	Button functionality	Function button: • Easy switch between Rover / Base mode • Easy “Here” positioning functionality
	Led status indicator	<i>Bluetooth</i> ®, position, RTK Rover status, RTK Base status, data logging, internal power status, external power status
	Additional user interface	Additional web interface functionality provides full status indicator and configuration options
Communications	Communication ports	1 x USB / RS232 Lemo 1 x <i>Bluetooth</i> ® port, <i>Bluetooth</i> ® v2.00+ EDR, class 2
	Radio modem	• Fully integrated, fully sealed receive and transmit radios • SATEL, Pacific Crest and TrimTalk support • 403 – 473 MHz bandwidth • Output power 1W max.

	UHF antenna options	• External UHF antenna connector (Type QN)
	GSM / UMTS phone modem	• Fully integrated, fully sealed 3.75G phone modem • Quad-Band GSM / GPRS: 850 / 900 / 1800 / 1900 MHz • Penta-Band UMTS: 800 / 850 / 900 / 1900 / 2100 MHz • DynDNS service support – Base station supports up to 10 rovers via TCP/IP
	GSM / UMTS antenna	• Integrated GSM / UMTS antenna
	Radio modems	Support of any suitable UHF / VHF radio
	Real-time data formats for data transmission and reception	CMR, CMR+
	Real-time data formats according RTCM standard for data transmission and reception	RTCM 2.2, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2 MSM Full support of RTCM 3 Transformation Message

c) Importation, possession and use of irradiating devices

Where required, the Contractor shall provide a nuclear gauge for the Engineer's laboratory. He shall follow the procedures for the procurement and deployment of the equipment in accordance with the Ministry of Health Regulatory Process for Setting up a Radiation Facility and arrange to obtain the necessary licences and permits, as required by the Radiation Protection Board in compliance with the Radiation Act, Cap 243 of the Laws of Kenya. The Approval for importation must be sought before the device is brought into the country. The storage facility shall be approved by the Radiation Protection Board and the Ministry of Roads Materials and Research Department.

Before handling the equipment, all staff to be deployed on the use of the gauge shall be trained, assessed and approved by the Radiation Protection Board and the Ministry of Roads Materials and Research Department. Exemptions shall be granted only to persons with proof of previous training by the said institutions. They shall also undergo medical examinations at a medical facility approved by the Board before deployment. The Contractor shall arrange for purchase of radiation badges and monitoring radiation levels every month by the Ministry of Health or an Agent approved by the Radiation Protection Board.

The cost of the medical examinations and monitoring radiation for the Engineer's laboratory staff shall be paid by the Contractor and reimbursed under the BOQ upon production of the receipts. However, the Contractor shall include the cost of obtaining the licences, permits and annual renewal thereof, construction of the storage facility and the transportation cage in his rate for provision of the equipment and no additional payment shall be made in the Contract.

The gauge shall revert to the Contractor on completion of the Contract

132.9 Wireless Communication for the Engineer

(a) Radio communication equipment

The Contractor shall, if so instructed by the Engineer, provide, install, maintain and license as

necessary a radio Communication network for the duration of the Contract and for the exclusive use of the Engineer. The Communication network shall be complete and shall consist of one fixed base radio station complete with all accessories and complete trans-receiver stations for each of the Engineer's staff cars, mobile office and laboratories. The equipment provided shall have a range adequate for mobile units and extreme ends of the site to communicate with each other and/or with the Central control. The model and make of the radio communication system shall be approved by the Engineer.

The Contractor shall be responsible for obtaining all necessary permits and licenses needed for the operation of the radio call services. The Contractor shall maintain the equipment in good working condition, including charging of batteries for the mobile units.

Failure by the contractor to provide or maintain the equipment shall make him responsible for 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 the works.

Ownership of the radio equipment shall be the Employer's on completion of the Contract.

Payment for complying with this requirement is included in the Bill of Quantities.

(b) Mobile phones

The Contractor shall, if so instructed by the Engineer, provide, connect and maintain mobile phones for the exclusive use by the Engineer and for the duration of the Contract. The Contractor shall provide airtime for these mobile phones as directed by the Engineer. The minimum specifications for the phone are shown below:

NETWORK	Technology	GSM / HSPA / LTE
BODY	<u>Dimensions</u>	150.9 x 72.6 x 7.7 mm (5.94 x 2.86 x 0.30 in)
	<u>Weight</u>	157 g (5.54 oz)
	<u>Build</u>	Corning Gorilla Glass 4 back panel
	<u>SIM</u>	Single SIM (Nano-SIM) or Dual SIM (Nano-SIM, dual stand-by)
		- Samsung Pay (Visa, MasterCard certified) - IP68 certified - dust proof and water resistant over 1.5 meter and 30 minutes
DISPLAY	<u>Type</u>	Super AMOLED capacitive touchscreen, 16M colors
	<u>Size</u>	5.5 inches (~76.1% screen-to-body ratio)
	<u>Resolution</u>	1440 x 2560 pixels (~534 ppi pixel density)
	<u>Multitouch</u>	Yes
	<u>Protection</u>	Corning Gorilla Glass 4
PLATFORM		- Always-on display - TouchWiz UI - Curved edge screen
	<u>OS</u>	Android OS, v6.0 (Marshmallow)
	<u>Chipset</u>	Qualcomm MSM8996 Snapdragon 820 Exynos 8890 Octa
	<u>CPU</u>	Quad-core (2x2.15 GHz Kryo & 2x1.6 GHz Kryo) Octa-core (4x2.3 GHz Mongoose & 4x1.6 GHz Cortex-A53)
	<u>GPU</u>	Adreno 530 Mali-T880 MP12

MEMORY	<u>Card slot</u>	microSD, up to 256 GB (dedicated slot) - single-SIM model microSD, up to 256 GB (uses SIM 2 slot) - dual-SIM model
	<u>Internal</u>	32/64 GB, 4 GB RAM
CAMERA	<u>Primary</u>	12 MP, f/1.7, 26mm, phase detection autofocus, OIS, LED flash, check quality
	<u>Features</u>	1/2.5" sensor size, 1.4 µm pixel size, geo-tagging, simultaneous 4K video and 9MP image recording, touch focus, face/smile detection, Auto HDR, panorama
	<u>Video</u>	2160p@30fps, 1080p@60fps, 720p@240fps, HDR, dual-video rec., check quality
	<u>Secondary</u>	5 MP, 1/4.1" sensor size, 1.34 µm pixel size, f/1.7, 22mm, dual video call, Auto HDR
SOUND	<u>Alert types</u>	Vibration; MP3, WAV ringtones
	<u>Loudspeaker</u>	Yes
	<u>3.5mm jack</u>	Yes
		- 24-bit/192kHz audio - Active noise cancellation with dedicated mic
COMMS	<u>WLAN</u>	Wi-Fi 802.11 a/b/g/n/ac, dual-band, Wi-Fi Direct, hotspot
	<u>Bluetooth</u>	v4.2, A2DP, LE, aptX
	<u>GPS</u>	Yes, with A-GPS, GLONASS, BDS
	<u>NFC</u>	Yes
	<u>Radio</u>	No
	<u>USB</u>	microUSB v2.0, USB Host
FEATURES	<u>Sensors</u>	Fingerprint, accelerometer, gyro, proximity, compass, barometer, heart rate, SpO2
	<u>Messaging</u>	SMS(threaded view), MMS, Email, Push Mail, IM
	<u>Browser</u>	HTML5
	<u>Java</u>	No
		- Fast battery charging: 60% in 30 min (Quick Charge 2.0)
		- Qi/PMA wireless charging (market dependent)
		- ANT+ support - S-Voice natural language commands and dictation - OneDrive (115 GB cloud storage) - MP4/DivX/XviD/WMV/H.264 player - MP3/WAV/WMA/eAAC+/FLAC player - Photo/video editor - Document editor
BATTERY		Non-removable Li-Ion 3600 mAh battery
	<u>Talk time</u>	Up to 27 h (3G)
	<u>Music play</u>	Up to 74 h
MISC	<u>Colors</u>	Black, White, Gold, Silver, Pink Gold
	<u>SAR US</u>	1.17 W/kg (head) 1.59 W/kg
	(body) <u>SAR EU</u>	0.26 W/kg (head) 0.51 W/kg
	(body) <u>Price group</u>	9/10
TESTS	<u>Performance</u>	Basemark OS II: 2107 / Basemark OS II 2.0: 2050 Basemark X: 28480
	<u>Display</u>	Contrast ratio: Infinite (nominal), 4.439 (sunlight)
	<u>Camera</u>	Photo / Video
	<u>Loudspeaker</u>	Voice 70dB / Noise 69dB / Ring 71dB
	<u>Audio quality</u>	Noise -92.5dB / Crosstalk -92.2dB
	<u>Battery life</u>	Endurance rating 98h

137 Attendance upon the Engineer and His staff

Further to the provisions of Clause 137 of the Standard Specification, the Engineer may instruct the Contractor to provide the staff for attendance to the Resident Engineer in accordance with the following Sub-Clauses:

137.1 Staff employed and paid by the Contractor for attendance upon the Engineer

The Engineer may instruct employment of staff listed below by the Contractor for attendance upon the Resident Engineer. The Contractor shall provide housing as described under Clause 132 of this Specification and pay the salaries, allowances and benefits as determined by the Engineer and claim reimbursement under the BOQ. These shall be subject to the statutory deductions, namely PAYE, NSSF and NHIF which the Contractor shall remit to the relevant authorities every month with copy of each remittance being submitted to the Engineer for his records. The minimum monthly gross salary in Kenya Shillings for the respective staff shall be as shown below:

(a) Surveyor	60,000.00
(b) Inspector of Works	45,000.00
(c) Laboratory Technologist	45,000.00
(d) Survey Assistant / Leveler	30,000.00
(e) Secretary	30,000.00
(f) Chainmen	30,000.00
(g) General Attendants	20,000.00

The Engineer shall interview, select and recommend for employment all the positions listed above. Upon employment, the Contractor shall provide each with an Employment Contract in accordance with the Employment Act, 2007 or the latest amendment of the Act, stating therein the conditions of employment. At the end of the Contract Period or termination of services, whichever comes earlier, each employee shall be issued with a Certificate of Service as provided for in the foregoing Act. Use of documents drafted by the Engineer shall not relieve the Contractor of his duties and obligations under this Clause.

138 Provision of vehicles

In addition to provisions of the Clause 138 of the Standard Specification, the Contractor shall when instructed, provide brand new vehicles and maintain in good working condition for the exclusive use of the Engineer and his staff throughout the Contract period. The Engineer shall have the sole right of selecting the type and brand of the vehicles, and confirm the number of each type and brand to be provided. The Engineer shall also have the right to propose modifications and additions to the vehicles as he may deem necessary for security, beauty or other usage needs. The Contractor shall insure the vehicles comprehensively for any licensed drivers and shall provide competent drivers during normal working hours and whenever required by the Engineer. The cost of provision of the vehicle shall be inclusive of the first 4,000 kilometres travelled in any month.

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

Double Cabin and single cabin pick up Vehicles should be four Wheel Drive (4WD), with power

assisted steering, Double wishbone independent suspension at front axle and rigid axle with leaf springs at rear and diesel propelled engine minimum capacity 2,800 cc. The vehicles should be fitted with other accessories below:

- i) Spare tyre and wheel jack;
- ii) FM radio and CD player;
- iii) Power Windows;
- iv) Full Air-conditioning;
- v) Immobilizer and antitheft security system;
- vi) Driver and passenger SRS Airbags;
- vii) Canvas cover over the carrying deck at the back.

All vehicles to be supplied will be brand new or odometer reading 0 – 1,000km, right hand drive, air-conditioner and power steering as described below.

- (a) One (1) Type 2: Minimum 2.8-litre turbo charged diesel 4-wheel drive, or similar approved twin-cab pick-up.

Ownership of the vehicles supplied to the Engineer shall revert to the Contractor upon completion of construction.

139 Miscellaneous Accounts

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

140 Payment of Overtime for Engineer's Junior Staff

In addition to the support staff provided by the contractor, the following shall also constitute part of the Engineer's junior staff:

(a) Surveyor
(b) Inspector of Works
(c) Laboratory Technologist
(d) Survey Assistant / Leveler
(e) Secretary
(f) Chainmen
(g) General Attendants

If the Contractor wishes to execute the works on regular basis outside the Engineer's normal working hours as given in Clause 108, over a prolonged period, the Engineer may if he deems it necessary, employ additional supervisory staff for which the required salaries shall be in full by the contractor through the Engineer's office. In addition, the Contractor shall provide the required accommodation for such staff at his own cost. The Contractor shall not be reimbursed any of this cost.

141 Measurement and Payment

Item: Mobile Telephones

The provision of mobile phones units for the Engineer shall be measured and paid for by the number. The rate entered in the Bill of Quantities shall include for the costs of providing the mobile units complete with charger unit, a "hands free" headset, connection to the network and all service charges applicable.

Add the Following clauses:

142 Liquidated Damages

Liquidated Damages at the rate indicated in the Appendix to Form of Bid shall apply in the event of the work not being completed within the time for completion plus any extension of time which may be determined by the Engineer. The limit of liquidated damages shall be as indicated in the Appendix to Form of Bid.

143 Protection of the Environment

Further to the requirements of Sub-clause 19.1 of the Conditions of Contract, the Contractor shall be responsible for the following measures to protect the environment.

- (a) Compliance with national and local statutes and regulations relating to protection of the environment. The Contractor will be responsible for familiarizing himself with all existing national and local legislation in this regard.
 - (b) All construction activities shall be carried out using the best possible means to reduce environmental pollution such as noise, dust and smoke. All vehicles and plant shall be regularly serviced in accordance with the manufacturer's recommendations to ensure that they operate efficiently and without excessive noxious emissions. The Engineer will have the authority to instruct the Contractor to temporarily cease operations and/or remove from the site vehicles or plant which do not comply with this requirements, until such time that he is satisfied that the best practicable means to reduce environmental pollution to a minimum are being used.
 - (c) The Contractor shall at all times maintain all sites under his control in a clean and tidy condition and shall provide appropriate and adequate facilities for the temporary storage of all waste prior to disposal.
 - (d) The Contractor shall be responsible for the safe transportation and disposal of all waste generated as a result of his activities in such a manner as will not give rise to environmental pollution in any form or hazard to human or animal health. In the event of any third party being employed to dispose of waste, the Contractor shall be considered to have discharged his responsibilities under this Clause from the time at which waste leaves sites under his control, providing that he has satisfied himself that the proposed transportation and disposal arrangements are such as will not give rise to pollution or health hazard.
 - (e) The Contractor shall be responsible for the provision of adequate sanitary facilities for his workforce, and that of his subcontractors at all construction and ancillary sites. The Contractor shall not allow the discharge of any untreated sanitary waste to ground water or any water of ground surface watercourse.
 - (f) All concrete and asphalt plants shall be operated and maintained in accordance with the original manufacturers specifications and manuals, and in such a manner as to minimize emissions of hydro-carbons and particulate if in the opinion of the Engineer the operation of such plant is causing or is likely to cause nuisance or health problems to the site staff or the
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general public. The Contractor shall carry out such work as is necessary to reduce emissions to an acceptable level within a time-scale agreed with the Engineer.

- (g) The Contractor shall regularly spray with water all exposed dirt surfaces to reduce dust levels.
- (h) The Contractor shall take all responsible measures, at all sites under his control to prevent spillage and leakage of material likely to cause pollution of water resources. Such measures shall include but not be limited to the provisions of bunds around fuel, oil and bitumen storage facilities and provision of oil and grease traps for servicing and fuelling areas. Prior to construction of such facilities the Contractor shall submit details of pollution prevention measures to the Engineer for his approval.
- (i) The Contractor shall be responsible for ensuring that exposed surfaces are re-vegetated as construction progresses all to the satisfaction of the Engineer.
- (j) The removal of trees shall be kept to the minimum necessary to accommodate the permanent works. Prior to the removal of any trees the contractor shall inform the Engineer of the intended operation and obtain the permission of the Engineer for the removal of the trees. If any tree is removed without permission the Contractor shall replace it with an approved tree at no additional cost to the Employer.
- (k) The Contractor shall ensure that fires, except for controlled fires for burning rubbish, do not start within the Site or in the environs thereto as a result of the works or from the actions of his employees. The burning of waste, such as vehicle tyres causing noxious emissions is prohibited. The contractor shall have available at all times trained fire-fighting personnel provided with adequate fire-fighting equipment to deal with all fires. The contractor shall additionally at all times provide sufficient fire protection and fighting equipment locally to parts of the works which constitutes particular fire hazards.

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

144 Off Road Environmental Measures

In addition to the provisions of Clause 142 above and all other requirements of the Conditions of Contract, Standard and Special Specifications, the Employer and the National Environmental Management Authority (NEMA) may order certain environmental measures to be carried out which are off the road and not specifically covered under these provisions. The Contractor shall carry out such works with equipment, labour and plant provided under the Contract or shall make such arrangements for specialized works to be carried out by a specialized subcontractor.

The Contractor shall be paid for all direct expenses under a provisional Sum in the Bill of Quantities and a percentage (%) for his handling costs and profits.

145 Staff Training

The Contractor shall allow for training of engineers, technicians and other support staff as may be instructed by the Engineer.

The payment of the allowances of such staff shall be made as instructed by the Engineer under the relevant item of the Bills of Quantities.

200 MATERIALS AND TESTING OF MATERIALS

205 Soils and Gravels

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 virgin materials, and
- (ii) After seven days curing plus seven days soaking in the case of cement improved materials.

211 Bituminous Binders

(a) Requirements

- (ii) Straight run bitumen

The ash content of penetration grade bitumen shall not exceed 0.5% by weight.

300 SETTING OUT AND TOLERANCES

301 Setting Out

(a) General

If traverse points to be used for setting out are close to the existing carriageway and interfere with the construction works, the Contractor shall relocate them to a location where they will not be disturbed. The coordinates and heights of all transverse points so relocated shall be listed and provided to the Engineer for checking and/or approval. The Contractor shall also reference with monuments the new road centrelines every 200 m long straight sections and at all salient points along curves, consisting of a pin in a concrete beacon, before commencement of any works.

The roads reserve boundary posts shall have 12 mm diameter steel pins, 200 mm long embedded in concrete with 25 mm exposed and sticking from the top surface. This pin shall be coordinated and heightened and details of the same shall be provided to the Engineer for approval.

(b) Detailed setting out

Reference pegs shall be 50 mm x 50 mm in cross section, 600 mm long driven 400 mm firmly into the ground and painted white above ground level. The offset from the centreline shall be indicated by a small nail, 20-25 mm long, with its head driven flush with the top of the peg. Chainages, chainage offsets and reference elevation shall be clearly marked on the sides of the peg to the satisfaction of the Engineer.

400 SITE CLEARANCE AND TOP SOIL STRIPPING

401 Site Clearance

Add the following as the last paragraph of Sub-clause (a).

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

The Contractor shall take care not to uproot or damage trees which are within the road reserve but outside the construction width. After the contractor has staked out the extent of the road, the Engineer with assistance of the Contractor shall mark out the trees to be removed. After removal the trunk and branches of these trees shall be cut into pieces not more than 2.0 m in length, transported and neatly stored at the nearest Ministry of Roads camp at a position to be indicated by the Engineer. Payment for this work shall be as detailed in the Bill of Quantities. The rate inserted by the Contractor for this work shall include the cost of complying with all the requirements of this clause.

500 EARTHWORKS

502 General

Renumber the existing text as 502.1 and add the following Sub-clause 502.2 to this clause:

502.2 Definitions for Earthworks

Formation level is defined as the lower (bottom) level of sub-base. Sub-grade is the material within 300 mm or such other thickness as may be shown on the drawings, below the formation level. Earthworks are defined as the works below the sub-grade level.

504 Preparation Prior to Forming Embankments

Renumber the existing text as 504.1 and add Sub-clauses 504.2 and 504.3 as follows;

Benching

Where shown on the drawings or instructed by the Engineer, the Contractor shall, where fill is required, excavate benches where the ground to receive the fill has a slope greater than 1 (vertical): 5 (horizontal).

Where benching is required, the existing ground, after removal of top soil in accordance with the requirements of Section 4 of the Specification, shall be benched by cutting steps such that the horizontal width between the cut face of the bench and the instructed final embankment slope is not less than 1.5 m. Each slope shall be graded to a slope of 1 in 40 from the centreline of the road so as to avoid the pounding of water. The minimum width of 1.5 m shall generally be required for each bench and the Contractor shall allow working in narrow widths.

All earthworks in widening shall be compacted to 100% MDD (AASHTO T99).

The volume of material cut from benches and its re-utilization shall not be measured for payment but is deemed to be included in the Contractor's rates for earthworks.

Ground Compaction

After top soil stripping in accordance with Section 4 of the Specification and benching in accordance with Clause 504 of the Specification, the existing ground, including benches, under embankments shall be compacted to a dry density of at least 95% MDD (AASHTO T99) to a depth of 150 mm below ground level unless otherwise directed by the Engineer. Compaction of benches other than the first bench will not be separately measured and is deemed to be included in the Contractor's rates for earthworks.

505 Construction of Embankments

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

- Material containing more than 5% by weight of organic matter, such as topsoil, humus, material from swamps, mud, log stumps and perishable material
- Material with a swell of more than 3%
- Clay with a liquid limit exceeding 50%
- Material having moisture content greater than 105% of optimum moisture content (standard compaction) in its naturally occurring state.

Material for sub-grade shall meet the following requirements:

- CBR of not less than 15% measured after 4 day soak on a laboratory mix compacted to a dry density of 100% MDD(T99)
 - Swell less than 1% on the laboratory mix sample
-

- Maximum dry Density (MDD) not less than 1500 kg/m².

Add the following:

In case the Contractor has in his possession heavy compaction equipment, he may opt to construct the sub-grade in a single layer of 300 mm thickness, following compaction trials and upon the Engineer's approval.

Rename the existing text of the Standard Specification as 507.1 and add the following to this clause:

507.2 Rockfill in Carriageway, Embankment and Behind Structures

(a) Scope of Application

With the approval of the Engineer, the rock fill Material can be used only in the following circumstances:

- (i) Where the height of embankment is more than 3 m, including formation level, the lowest 1.0 m thickness can be constructed using rockfill.
- (ii) For all heights, the sloped portion beyond shoulder can be constructed using with provision that, under all circumstances, a minimum of 500 mm thick earthen cushion shall be available between formation level and top level of rockfill.
- (iii) Behind the structures irrespective of the height of embankment up to the bottom of sub-grade.

(b) Material

The maximum size of stones shall not exceed 300 mm in any direction. The voids between rocks shall be filled by smaller rock fragments.

(c) Spreading and Compaction

The method of compaction as specified under Clause 507.1 of the Standard Specification and/or as directed by the Engineer, should ensure that no boulders are loosely packed and can move or rock after compaction. The top layer as well as the sides of the retaining normal earth fill on one side shall be fully blinded with filter media comprising crushed aggregate and sand. The grading and layering of filter media shall be such as to form effective filter layer through which particles of inner soil fill of embankment are not able to migrate into the rock fill layer in the process of settlement/consolidation or due to movement of water. The layer work shall combine with the layers of the adjacent rockfill so as to facilitate simultaneous compaction.

(d) Rates

The rates are applicable to completed construction as measured by taking levels before and after compaction up to the top of blinding/filter media 300 mm thick and are inclusive of all materials, void filling materials, blinding materials and filter media.

The preload material shall be removed from any stage of the construction when, in the opinion of the Engineer, based on settlement monitoring records, the required primary consolidation of the soft silts has been achieved.

Based on consolidation properties of soil, expected preload time shall be estimated for each stage. However, this time can be influenced, not only by settlement, but also by the rains. The Contractor will not be entitled to extra payment should these times be varied due to the site conditions or the rains.

(e) Settlement Monitoring

Continuous monitoring of settlement will be necessary to check the efficiency of the system. The instruments for monitoring settlement and stability shall include settlement platforms, Piezometers to determine if pore pressures are exceeding limits that might endanger stability, and Inclinometers to determine if lateral movement occurs.

Settlement monitoring devices shall be installed at the Contractor's cost to monitor the settlement behaviour of ground under fill, to establish the effectiveness of the drainage system. The Contractor shall carry out the settlement monitoring works, including the installation of all the required equipment, in accordance with Standard Specification.

508 **Compaction of Earthworks**

Fill above ground level adjacent to pipe culverts shall be compacted in layers not exceeding 150 mm in thickness to a field density of 100% MDD (AASHTO T99) up to the level of the top of the pipes or top of surround. The compaction shall extend for a width equal to the internal diameter of the pipe on either side of the pipe (s) or surround (s).

Adjacent to the structures, all fill above ground level up to the underside of the sub-grade shall be compacted in layers not exceeding 150 mm in thickness to a field density of 100% MDD (AASHTO T99). In case of fill around box culverts, this shall be carried out for the full width of the fill and for a length bounded by the vertical plane passing through the ends of wing walls.

Where the formation in cut areas is formed of hard material, the Contractor shall remove the hard material to a depth of 200 mm or such other depth as may be directed by the Engineer. The void so formed shall be backfilled with sub-grade quality material and compacted to the same standard and tolerances as for sub-grade in fill.

Improved sub-grade, where required as part of the embankment construction shall be compacted and finished to the same standards and tolerances as those required for normal sub-grade.

509 **Mass Haul Diagram**

No mass haul diagram has been provided with the Contract documents. The Contractor shall locate suitable materials for constructing earthworks along the alignment and elsewhere.

511 **Borrow Pits**

Delete the first paragraph and substitute with the following;

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.

514 **Top Soiling and Grassing**

Consider the existing text to be Sub-clause 514.1

The embankments and cut faces referred to in Clause 514.1 of the Standard Specification are synonymous with fill slopes and cut slopes defined in Clause 110 (c) of the same specification.

The guiding dams referred to in Clause 514.1 of the Standard Specification are synonymous with the guiding dams referred to in Clause 817 of the same specification.

Add the following Sub-clause 514.2

Hydro-seeding

Where it is specified that hydro-seeding should be carried out on topsoil, the thickness of the topsoil shall be 100 mm unless, where suitable soil is present, the Engineer orders the topsoil to be omitted or applied in reduced thickness.

The Engineer and the Contractor shall agree the types and mixtures of seeds to be used on before the Contractor orders any seed he may wish to use. The variety of resulting grass or plants should

not be attractive to livestock or grass eating animals.

The Contractor shall be solely responsible for establishing an acceptable grass cover and any approval by the Engineer of seed or seed mixtures intended for use by the Contractor shall not relieve him of this responsibility. All areas to be hydro-seeded or hand seeded shall be scarified forming horizontal drills running parallel to the contours. The drills are to be spaced at intervals of 150 to 250 mm apart. Seeding to Mulch shall be added to the hydro-seeding mix at an approved rate.

Hydro-seeding shall be carried out with an approved hydro-seeding machine at a rate of application of not less than 20 gm/m² for fill and cut slopes and 10 gm/m² for other areas. When the use of anti-erosion compounds is required and such compound is to be applied simultaneously with the hydro-seeding, it shall be mixed with the hydro-seeding mixture before application.

Application of Chemical Fertilizers

For all areas to be grassed the Contractor shall have the top 150 mm of the prepared surface analyzed to determine the quantity and type of fertilizer that may be required for establishing proper growth conditions for the grass. The locations of soil samples taken shall be indicated on plans by the Contractor. The Contractor shall furnish the Engineer with the soil analysis and subsequent fertilizer recommendations. Only after approval by the Engineer of the nature and quantity of fertilizer may the application proceed.

Soil improvement chemicals and fertilizers shall be made available for application of chemical fertilizer. As such no separate reimbursement to the Contractor shall be made. The Contractor shall be deemed to have included his costs in the rates for top soiling and grassing.

515 Side drains

Whenever excavation works inside drains constitutes a separate operation from the bulk earthworks such excavations shall be classified as catch water drains under Section 8 of the Specification.

517 Measurement and payment

(a) Fill in soft material

Add the following at the end of this item:

Quantities for embankment widening shall be measured using the final compacted volume of filled material over the existing embankment after removal of top soil. No separate payment shall be made to the Contractor for any additional earthworks resulting from his construction methods or for working space for his construction plant and equipment or for complying with the requirements of Clause 504.2 of this specification with respect to benching where necessary. The Contractor shall take this into consideration when preparing his rates.

(c) Spoil in soft material

Add the following at the end of this Item:

The rate for spoil in soft material shall also allow for removal and disposal of material in waterlogged areas. No separate payment shall be made for overhaul.

Add the following:

(n) Item: Providing an approved seed mixture for hydro-seeding

Unit: Kilogramme (kg)

The Unit of measurement shall be the kilogramme of seed of the specified or approved seed mixture provided. The rate shall include the full compensation for procuring and furnishing

certified seeds and compliance with Clause 514.2 of this specification.

(o) Item: Hydro-seeding

Unit: Hectare (ha)

The unit of measurement for hydro-seeding shall be the area, measured in hectares of grass established by hydro-seeding which has an acceptable cover. The rate shall include full rate for furnishing cellulose pulp, mixing it with seed, water and with any anti-erosion compound, if required, applying the mixture, watering weeding, reseeding bare patches, and for any other work which may be necessary for establishing an acceptable cover and maintaining the grass.

Add the following to this section. The details apply to both the activities for the quarries and road works.

600 QUARRIES, BORROW PITS, STOCKPILE AND SPOIL AREAS

601 General

The Employer will not make available to the Contractor any land for quarries, borrow pits, stockpile and spoil areas, except for those in the road reserves and specifically approved by the Engineer.

The Contractor will be entirely responsible for locating and providing suitable sources of materials complying with the specifications and for procurement, winning, haulage to site of these materials, rehabilitating the borrow pits, quarries, stockpile and spoil areas, and all costs involved therein. Similarly, the Contractor will be responsible for provision of areas for stock piling materials and disposal of spoil dumps or stockpiling within the road reserve. The Contractor may utilize them subject to the approval of the Engineer.

No additional payment will be made to the Contractor to cover costs arising from the requirement of this clause. The Contractor shall include the costs of complying with this clause in the rates and prices inserted elsewhere in the Bill Of Quantities.

602 Definitions

Add the following to Clause 602:

(d) Materials Report

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

700 EXCAVATION AND FILLING FOR STRUCTURES

703 Excavation of foundations for structures

Make amendments to this clause as follows

Read the second paragraph as "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%".

Add the following to this clause:

703.1 Preparation of Foundation and Approval

(a) Preparation of Foundation

The bottom of foundations shall be levelled both longitudinally and transversely or stepped as directed by the Engineer. Where the material met with is other than rock, the same shall be compacted to at least 95% MDD. Where rock and soil are met with in part widths, the area in the soil portion shall be sub-excavated to a depth of 100 mm and backfilled with Class 15/20 concrete. All rock faces shall be freed of soft and loose material, cleared and cut to a firm surface, level, stepped or serrated as directed by the Engineer. All seams shall be cleared out and filled with cement mortar, to the satisfaction of the Engineer.

(b) Approval of Foundation

After excavation in each location is completed, the Contractor shall notify the Engineer, and no foundation concrete shall be placed until the Engineer has approved the depth of the excavation and the character of the foundation material.

703a Erosion Protection Works at Upstream and Downstream of Culverts/Bridges

703a.1 Scope

The work shall consist of provision of erosion protection works in the form of bed flooring and curtain or cut-off walls at the upstream and downstream ends of the new as well as the existing box/pipe culverts. The work shall be carried out to such designs and at such locations as indicated on the Drawings or as directed by the Engineer.

The erosion protection works shall consist of dry rubble stone bed flooring and random rubble masonry curtain (cut-off) wall at the upstream and downstream ends of box/pipe culverts.

703a.2 Materials

The material for bed flooring shall be dry rubble stone, each stone weighing not less than 40 kg.

The curtain wall shall be constructed of random rubble masonry in cement mortar of 1:3.

703a.3 Construction Operations

(a) Curtain Wall

The trench for the curtain wall shall be excavated as per Clause 703 of the Standard Specification at such locations and to such depths shown on the Drawings or as directed by the Engineer. After preparing the foundation bed, the curtain wall shall be constructed to the thickness shown on the Drawings and to levels up to top of the bed flooring.

(b) Floor Paving

The bed for the flooring shall be prepared by excavation in accordance with Clause 703 of the

Standard Specification or filling in accordance with Clause 707 of the same specification, levelled and compacted to at least 98% MDD. The top of bed shall be prepared to such levels that after construction of the bed flooring, it is in line with the invert of the culvert barrel and sloping away. The bed flooring shall end before the curtain wall.

707 Backfilling of Excavations and Filling for structures

Make amendments to this clause as follows

Delete "95% where ever it appears and insert "100%".

708 Protection of Structures

Add the following to Clause 708.

Unless specific provisions for any structure in respect of cofferdams has been made in the Bill of Quantities, no payment will be made for the erection, maintenance and removal of cofferdams and the Contractor's rates shall be deemed to be all inclusive.

709 Excavations for River Training and New Watercourses

Add the following to Clause 709:

For culvert widening the Contractor shall inspect the structures to be widened and allow for any river training works he deems necessary in his rates for excavation.

710 Stone Pitching

Add the following to Clause 710:

Stone pitching to drains, inlets and outlets of culverts to embankments and around structures shall consist of sound un-weathered rock approved by the Engineer.

All stone for pitching shall be capable of withstanding a crushing stress of 20 N/mm² when soaked. The source of stone shall be free from overburden, mudstone, cracks, sand holes, veins, laminations or other imperfections as may be identified by the Engineer during the approval process.

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

In areas where stone pitching has been damaged, the Contractor shall identify such areas and notify the Engineer for his agreement of the extent of the Works required and his approval and instructions to proceed with the Works. Stone pitching repair and reconstruction shall be carried out in accordance with Clause 710 of the Standard Specification. The Works shall involve removal of the damaged stone pitching and reconstruction of the said areas in accordance with Clause 710 of the Standard Specification by the use of the sound salvaged material together with any necessary additional material where all such materials shall comply with Section 7 of the Standard Specification

800 CULVERT AND DRAINAGE WORKS

804 Excavation for Culverts and Drainage Works

In the Standard Specification make the following amendments on this clause:

In paragraph 6, line 3, in paragraph 7, line 5 and in paragraph 11, line 6, delete reference to “95%” and insert “100%”.

805 Excavation in Hard Material

In the Standard Specification, sub-clause 805 (a) and (b) delete reference to “95%” and insert “100%”.

809 Bedding and Laying of Pipe Culverts

In the Standard Specification, sub-clause 809 (a), delete reference to “95%” and insert “100%”.

Add the following to Clause 809:

(d) Laying, Bedding and Surround for Culverts Cast In-situ

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

- (i) All concrete used for surround and the top 50 mm or 80 mm of bedding for culverts shall be Class 30/20 while the rest of the concrete shall be class 20/20.
- (ii) The inner concrete barrel surface immediately in contact with the inflated balloon form during placing shall achieve Class F3 finish.

(iii) Cement to be used shall be cement 42.5

810 Jointing Concrete Pipes

In addition to the requirement of Clause 810 of the Standard Specification, all precast concrete pipes shall be ogee jointed pipes laid with a 1:2 (cement: sand) mortar and provided with fillets on the outside and as described in the Standard Specification.

812 Backfill

In the Standard Specification make the following amendments to this clause:

- (a) Wherever the expression “dry density of 95% (AASHTO T99)” occurs, this expression shall be deleted and replaced with “dry density of 100% (AASHTO T99)”.
- (b) Delete paragraph 6: “For pipes culverts...depth of 150 mm”, entirely.

816 Minor Drainage Structures

Add the following to this clause:

(a) Concrete Lined Drains

The exposed surfaces of concrete lined drains shall be a class UF2 finish. Concrete lined drains shall be constructed to the same standard as the minor drainage structures.

(b) Cast in situ chutes on side slopes

Where pre cast chutes are provided, refer to Section 1 of this the specifications.

817 Mitre Drains, Cut-off Drains, Catch Water/Drains, Outfall Drains and Earth Dams

Rename the existing text as 817.1 and add the following sub-clauses:

817.2 Cleaning Existing Drains

Where instructed by the Engineer, the Contractor shall clear blocked side drains and/or outfall drains to a free flowing condition. The work shall consist of but not be limited to:

- Stripping and removal of extraneous material including vegetation and roots to spoil
- Carting away and spreading any spoil to the satisfaction of the Engineer, and
- Reshaping the drains to a free flowing profile.

817.3 Cleaning of Hydraulic Structures

Where instructed by the Engineer, the Contractor shall clean the existing hydraulic structures by removing all undesirable material in the structures to ensure they are clean and free flowing. The Contractor shall dispose of all the silt and other undesirable material to spoil. After the cleaning out of structures, the Contractor shall be responsible for maintaining the hydraulic structures in a clean condition for the duration of the Contract.

817.4 Removal of Existing Pipes, Inlet and Outlet Structures

The Contractor shall remove existing concrete pipes where instructed by the Engineer including bedding, surround, inlet and outlet structures. Concrete shall be disposed of as directed by the Engineer. Masonry structures where in a good condition shall be preserved to reuse as may be directed by the Engineer. Additional material shall be added to the void left after removal of these pipes and structures and shall be carefully compacted to 100% MDD (T99). The void shall then be preserved for placement of any new pipes or construction of new structures.

The existing inlet and outlets structures, where in good condition, and reusable as beds to pipe extensions, shall not be removed. Any such structures removed without the Engineer's approval shall be restored to the original condition at the Contractor's expense.

817.5 Extension of Existing Pipes

Where shown on the drawings or instructed by the Engineer, the Contractor shall extend the existing concrete pipes. Part of the existing pipe surround shall be broken and concrete collar constructed as shown on the drawings. The extension shall be backfilled to the same standards as for new pipes.

817.6 Chute drain for High Embankment Sections

(a) Scope

This work shall consist of construction of chute drain on the slope of the road embankment including erosion protection works at the locations and to dimensions shown on the Drawings or as directed by Engineer. The schedule of works shall be so arranged that the drains are completed in proper sequence with roadway to ensure that no damage is caused due to lack of drainage.

(b) Materials

The drains shall be of half round pipe of 600 mm dia. formed by joining pre-cast semicircular RCC sections at site as shown in the drawings. The RCC work shall conform to the relevant clauses of these specifications.

The toe wall below ground level shall be of brick masonry in cement mortar 1:4 or plain cement concrete of class 15/20, as shown on the Drawings.

Dumped riprap for erosion protection at ground level shall be hard, unweathered and durable rubble stone of size 150 mm to 250 mm.

(c) Construction Operations

Excavation for fixing drain sections at the locations where the chute drains are to be installed, a semi-circular cut on the side slope of the embankment along the line of the chute drain shall be made in such a way that the RCC drain sections could be fixed snugly with their edges flush with the adjoining embankment slope. The sloping bed of the drain shall be to a regular line and suitably compacted to provide a firm bed.

817.7 Stone Masonry and Concrete Paving

(a) Description

The work shall consist of construction of lined ditches, stone paved shoulders, hard strips, chutes, toe walls, retaining walls, slab culvert walls, head walls, wing walls, aprons and slope protection works using natural stones for stone related masonry and precast concrete blocks for concrete block masonry set in cement mortar.

(b) Materials

(i) Stones

Stones used shall be hard and durable without weak seams or cracks and of rectangular shape. The Los Angeles Abrasion Value shall not exceed 50. The apparent specific gravity shall not be less than 2.2 and water absorption when tested in accordance with AASHTO T85 shall not exceed 5 percent.

(ii) Concrete Blocks

Concrete blocks for concrete block masonry shall be precast from Class 20/20 concrete while those used for paving shall be in Class 25/20 concrete. The blocks shall, in general, have the length, width and height in the proportion of 3:1.5:1 or as ordered by the Engineer. The blocks shall be moist cured for at least 7 days, and kept under cover for another 21 days in the casting bed before being lifted for use in the works. The blocks when tested flat after 28 days of casting shall have a compressive strength not less than 125 percent of the cylindrical compressive strength specified for the class of concrete used.

(iii) Mortar

The mortar shall be made of a mixture of cement and sand in the proportion of one cement to three sand. Cement shall be Portland cement conforming to AASHTO M85, Type I or II. The sand shall be crushed stone or natural sand or a combination thereof conforming to AASHTO M45. Water added shall be just adequate for making a workable mix and shall be subject to the approval of the Engineer.

(c) Construction Requirements

(i) Stone Masonry

The stone masonry shall be used for walls of different types above the ground level. The stones shall be of regular shape with length of any stone not exceeding 3 times its height, with the breadth on the bed not less than 150 mm nor greater than three quarters of the thickness of the wall. Unless otherwise directed, the stone shall have thickness not less than 150 mm.

All stone possessing bedding planes shall be laid with its natural bed as nearly as possible at right angles to the direction of the load, and in case of arch rings, the natural bed shall be radial.

Each course shall present a uniform horizontal line of more or less equal height. Vertical joints shall be broken by the adjoining courses. All joints shall be sufficiently thick to prevent stone to stone contact and shall be completely filled with mortar. On the exposed face no part of the masonry shall deviate from the general line of the wall by more than 20 mm.

Walls of stone masonry shall be provided with weep holes as shown on the Drawings or directed by the Engineer. In continuous long structures, expansion joints shall be formed as shown on the Drawings subject to a minimum spacing of 10 m.

All face joints shall be finished almost flush with the surface of the work without covering the stones. The top surface of all walls shall be provided with 20 mm thick cement mortar coping with a crossfall for shedding rainwater.

Newly laid masonry shall be protected against the harmful effects of weather and cured for a minimum period of 4 days. All visible surfaces of the masonry shall be clean and free from mortar stains and other blemishes.

Backfill behind the stone masonry walls shall be placed only after the masonry work has been in place for at least 14 days or as directed by the Engineer.

(ii) Grouted Stone Riprap

This type of masonry that is constructed in a single layer over a bed of mortar shall be used for shoulder paving, hard strips, aprons, drainage chutes, lined ditches and slope protection. The stone shall be of regular shape and uniform thickness. Prior to laying of the stone, the base shall be brought to regular shape and levels, watered and well compacted. Where this type of masonry is to be used for paving shoulders or for carriageway widening of the existing roads, the base shall be slightly loosened, watered and compacted to 95% MDD prior to application of the riprap. The stone shall be placed over a bed of mortar about 20 mm thick. After placement of the stones by hand, all the joints shall be completely filled with cement mortar. The finished work shall present a uniform surface with no point deviating from the general line by more than 10 mm in the case of shoulder paving, and hard strips, and not more than 25 mm in other cases. The finished work shall be protected against the adverse effects of weather and cured for at least 4 days.

(iii) Dry Stone Riprap

This work shall consist of placing 150 mm to 300 mm size rubble stone on the front side of cut-off walls of culverts and Irish Crossings as erosion protection measure. The dimensions of the riprap construction shall be as shown on the drawings or as directed by the Engineer. The stone used shall be of hard and durable type as are used for

stone/boulder masonry. The stone shall be so placed that major hollow spaces are avoided.

(d) Measurement and Payment

(i) Stone Masonry

The quantity to be paid will be measured by volume in m³ of stone masonry complete in place and accepted. In computing the volume for payment, the dimensions used will be limited to those shown on the Drawings or ordered in writing by the Engineer.

No deductions will be made for weep holes, drainpipe or other openings of less than 0.2 m* in the area. The cement mortar coping on top of the wall shall be included in the measurement for stone masonry.

If the masonry is for heightening or lengthening an existing wall, the work of removing the plaster, if any, on the old wall including roughening of the surface to effect good bonding shall be considered incidental to the work and shall not be paid for separately.

The quantities of excavation below ground level and backfilling will be measured as structural excavation.

(ii) Grouted Stone and Dry Stone Riprap

Grouted Stone Riprap shall be measured by m* of completed and accepted work placed to the specific thickness. Measurement shall be limited to the dimensions shown on the Drawings or as otherwise authorised by the Engineer. No measurement shall be made of unauthorised areas or for extra thickness. Toe walls and cut-off walls below ground level shall be measured in m³ and paid for as Boulder Masonry.

Where the rip-rap is used for shoulder paving or for widening carriageway of existing road, the bed preparation shall be measured as sub-grade preparation in accordance with Clause 508 of the Standard Specification. In all the other cases, slope and bed preparation shall not be measured for payment but will be considered subsidiary to the pay item.

Dry Stone Riprap shall be measured as placed in position in m³. Any excavation for making space for placing the riprap shall be measured as common excavation in accordance to Clauses 504 and 505 of the Standard Specification.

(iii) Payment

The amount of completed and accepted work as measured will be paid for at the bid unit prices per m³ for "Stone Masonry", "Dry Stone Riprap" and "Grouted stone riprap", used for shoulder paving, hard strips, ditch lining, aprons, drainage chutes and slope paving. These prices shall be in full compensation for furnishing and placing all materials, and for all labour, equipment, tools and incidentals necessary for completion of the work complying with the specifications.

Add the following to Clause 819 of the Standard Specification:

819.1 Repair of Drainage Spouts

The repair of drainage spouts shall be made by cleaning of the existing drainage pipes of all muck and replacing the broken pipes or by providing new drainage spouts in cases where the same have not been provided.

(a) Materials

- (i) Ordinary Portland cement KS 1825
- (ii) Aggregates conforming to BS 5328
- (iii) GI Pipes
- (iv) Paint.

(b) Equipment

- (i) Welding equipment
- (ii) Painting brushes
- (iii) Miscellaneous construction equipment

(c) Procedure

The existing drainage spouts shall be cleaned of all muck. The new GI drainage spouts shall then be replaced for the damaged spouts as per the detailed drawings.

In case where drainage spouts have not been provided, the RCC kerb shall be cast after fixing new pipes as per the detailed drawings. The casting of concrete and fixing of pipes shall be made as per the standard practice.

The GI drainage spouts shall be painted with black anticorrosive paint of approved brand and manufacture to give an even shade.

The existing reinforcement shall be realigned and additional reinforcement shall be provided as per the drawings or as directed by the Engineer.

Concrete shall be mixed and laid as per the standard practice and as per the drawings. For bonding old concrete with the new concrete, the old concrete surface shall be painted with epoxy bonding agent or polymer cement slurry before the concreting is cast.

820 Measurement and Payments for Additional Items

- (a) Item: Concrete for top 50 mm or 80 mm bedding and surround for culverts cast in situ.**

Unit: m³

The rate for concrete for each size of culverts instructed shall include for the cubic metre of the top 50 mm or 80 mm of concrete for bedding and surrounds, as instructed, calculated from the dimensions on the drawings or as directed by the Engineer.

The rate for concrete for bedding and surrounds for culverts cast in situ shall include for the cost of providing and placing the concrete and complying with Clauses 809, 810, 814, 819 and 1713 of the Standard Specification.

No extra payment shall be made for provision of inflatable forms and other requirements for casting culverts in-situ and the Contractor shall be deemed to have provided for these in his rates.

- (b) Item: Cleaning and grading the existing outfall and metre drains**

Unit: m³

Cleaning the existing drains shall be measured by the volume instructed. The volume shall be the product of the cross sectional area of the material to be removed from the drain and

the length instructed.

(c) Item: Removal of material from existing side drains

Unit: m³

Cleaning of the existing drains shall be measured by the volume instructed. The volume shall be the product of the cross sectional area of the drain to be cleaned and the length instructed. Payment will not be made under this item where the material can be removed in conjunction with bulk earthworks.

(d) Item: Removal of the existing pipes

Unit: m³

Removal of the existing pipes shall be measured by the length of culvert removed. It shall include for breaking out where necessary and carting of the removed culvert and surrounds to spoil or stockpile as shall be directed by the Engineer. It shall also include all the costs of complying with the requirements of Clause 817.3.

(v) Item: Demolition of inlet and outlet structures

Unit: m³ of concrete or masonry

Demolition of inlet and outlet structures shall be measured by the volume of concrete or of masonry structures demolished. There will be no distinction between reinforced and unreinforced concrete structures. The rate shall include for disposal of concrete and reuse of masonry as directed by the Engineer. Stone pitching shall not be measured separately and where it is to be removed shall be treated as normal site clearance.

(w) Item: Cleaning the existing hydraulic structures

Unit: m³

Cleaning of the existing hydraulic structures shall be measured by the volume of material removed. The rate shall include for the cost of removing all undesirable material, transporting and disposing off as well as the additional costs of gaining access to the structures as specified and maintaining the structures in a clean condition.

(x) Item: Concrete collar

Unit m³

Reinforced concrete collars shall be measured by the volume of concrete placed as shown on the drawings or instructed by the Engineer.

Where the existing culvert which is to be extended has a concrete surround, the rate shall also include for removal of this surround for the length of the collar to be placed around the existing culvert.

In all cases the rate shall also include for excavation below the culvert and the preparation and compaction of the in situ material to form a bed for the collar.

821 Cement Mortared Stone Masonry Walls

Masonry walling shall be constructed with sound clean stone with a minimum width of 200 mm. The stone shall have a fair finish. The stone shall be individually placed to break joint and to provide a minimum of voids. The stone shall be wetted and jointed in a 3:1 (sand: cement) mortar. Exposed stone on the wall faces shall be cleaned of mortar by washing or wire brushing. The mortar shall be flush pointed to the approval of the engineer.

Weep holes shall be provided as instructed and shall be cleaned of mortar and any other clogging material that may have entered during construction.

The walling shall be protected from the weather and kept moist for a minimum of seven (7) days after completion.

822 Subsoil Filter Drains

The Contractor shall lay subsoil filter drains where shown on the drawings or instructed by the Engineer. The drain shall extend to the underside of the sub-grade or sub-base and shall consist of a perforated pipe wrapped in geotextile fabric as specified in the Standard Specifications and shown on the drawings. The pipe and fabric shall be laid on and backfilled with granular filter materials. The granular material shall comply with the requirements given in the table below.

BS Sieve Size (mm)	Percentage by mass Passing Sieve	
	Minimum	Maximum
37.5	100	100
20	85	100
10	50	100
5	35	90
1.18	15	50
0.600	5	35
0.150	0	5

823 Gully Pots and Chambers

Where shown on the drawings or instructed by the Engineer, the existing roadside gulleys and gully pots shall be adjusted before laying final wearing course such that there are no depressions around man holes, gulleys or chambers. The beds, frames and haunches shall be adjusted with concrete Class 20/20 true to line and level and to the satisfaction of Engineer.

824 Pedestrian Crossings

Where shown on the drawings or instructed by the Engineer, the Contractor shall construct pedestrian crossings across open drains. The crossing will be 2 m wide, with culverts located as directed by the Engineer. The pedestrian crossing shall be finished to the same standards as the adjacent footpath. Where there is no footpath, the crossing shall be finished with approach path comprising 150 mm gravel base with surface dressing similar to the adjacent shoulder as directed by the Engineer.

825 Measurement and Payment for Further Additional Items**(a) Item: Preparation of bed for concrete lined open drains**

Unit: m*

The unit of measurements shall be the square metre of excavation trimmed to receive concrete lining. The rate shall include for all the excavation below the finished line of the drain, providing and laying of gravel bed, and compacting and shaping to the line and level required to receive the concrete lining.

(b) Item: Cast in situ concrete chutes

Unit: m³

Cast in situ shall be read as "Pre-cast". Pre Cast concrete chutes shall be measured by the volume of concrete cast. The rate shall include for preparation of sides, laying, fixing and for complying with the requirements of Sections 8 and 17 of the Standard Specification.

826 Concrete and Cement Strength

Concrete class shall be as specified. Cement to be used in all construction works shall be 42.5 KN.

900 **PASSAGE OF TRAFFIC**

903 **Maintenance of Existing Road**

Amend as follows:

The Engineer shall hand over the existing road to the contractor, in sections, at the commencement of the Contract for construction purpose. However, the Contractor shall be responsible for all repairs and maintenance of the entire road package for the duration of the Contract. The existing road is bituminous and the Contractor shall maintain it with asphalt materials or other materials similar to those of the existing pavement layers. The Contractor shall regularly inspect the road and carry out such repairs and maintenance to the satisfaction of the Engineer. If at any time the Engineer draws the Contractor's attention to a road section which requires maintenance the Contractor shall promptly repair the section. The Contractor shall be legally responsible for any accident or damage attributable to his failure to maintain the road.

Add the following to this clause:

903.1 **Maintenance of Right of Way**

Throughout the period of the Contract the Contractor shall at all times maintain public vehicular access to the right of way, within the right of way and from the right of way to all public and private land, as it was immediately prior to his commencement of the Works.

The Contractor may, on submission of written request to the Engineer, including a drawing, programme and specification, be given approval to operate:

- (a) A road diversion suitable for the road traffic and suitable width or
- (b) Traffic on a one way system using manual coordinated direction control or automatic traffic lights having a secure source of power.

Applications for approval shall show every detail of the proposals including road construction cross section including pavement, surfacing, profile and drainage, road signing, communication between the ends of the controlled section lighting and the proposed period of operation.

One way systems shall be provided with adequate sign posting and the Contractor shall limit delays to any traffic to the minimum and with the approval of the Engineer. The travelling public shall be notified by signs, of exceptional delay well in advance of the site of delay, as required by the Engineer.

Payment for temporary diversions, traffic provisions and maintenance of roadways shall be as provided in the Contract and as instructed by the Engineer.

904 **Construction of Deviations**

Add the following paragraph between the second and the third paragraphs of Item (a):

The Contractor shall programme his works in such a way that traffic shall not be required to pass over more than 1.5 km at any one time unless otherwise approved by the Engineer.

906 **Passage of Traffic through the Works**

Add the following to this Clause.

The Contractor shall 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 for any expenditure on traffic control. Should the Contractor propose any other method of passage of traffic including construction of traffic deviations and use of the existing roads the Contractor shall investigate the alternatives, construct and maintain them to the satisfaction of the Engineer. The Employer shall not be liable

for investigations or costs arising from the alternatives methods of traffic control proposed by the Contractor. Deviations or other measures for traffic control where proposed by the Contractor shall meet the requirements of the specifications and drawings and be approved by the Engineer.

The Contractor shall ensure that the workforce and site supervisory staff at all times wear high visibility garments when work is carried out on or adjacent to a section of the road open to traffic. The Contractor shall ensure that the supervisor or person in charge of the work force is readily recognized from the rest of the workforce. In addition, the Contractor shall provide a full time traffic safety officer to coordinate aspects of road safety for the whole site.

The Contractor shall be deemed to have included all costs related to employing the traffic safety officer and for all the duties performed by him in his rate for passage of traffic.

912 Measurement and payment

(a) Item: Construction of Deviation

Amend as follows:

The rate for construction of deviation shall include provision, placing, forming and compaction of gravel sub-base, stone base and bituminous wearing courses.

(b) Item: Provide and Maintain Road Signages

Unit: Lump Sum

Payment of the lump sum shall be through equal monthly instalments over the period of the Contract on a pro rata basis subject to the approval of Engineer.

(b) Item: Maintain existing Roads and deviations

Unit: Lump Sum

Payment of the lump sum shall be paid per kilo metre length the period of the Contract, excluding the Defects Liability Period provided that the total sum of instalments paid shall not exceed the lump sum; and

- (i) If any month the Engineer is not fully satisfied that the Contractor has fully complied with all the provisions of this sub-section, the Employer shall withhold the whole of the instalments due to the Contractor and the Engineer shall, in addition, deduct from any monies due to the Contractor a sum of Kshs 150,000 per day for the period of non compliance from the date of the Engineer's notice for that month.
- (ii) Where notified by the Engineer the contractor shall complete maintenance on a section or sections of the road so notified within 14 days. Provided further that, if the Contractor fails to complete maintenance on any section within 14 days of the Engineer's notification thereof, the Engineer shall deduct Kshs. 200,000 for delay per day.

(c) Item: Reinstatement of Deviations

In the first paragraph of Clause 912 (h), delete the words "by the lump sum stated in the Special Specification" and replace with 'as described under Item 9.04 of the Bill of Quantities'.

1100 SHOULDERS AND FOOTPATHS

Add the following to this section:

1107 Footpaths and market area

Where shown on the drawings or directed by the Engineer, footpaths shall be constructed. The Footpaths shall be constructed using the precast concrete paving blocks as the finish or asphalt or gravel wearing course. The line of the footpaths shall be as shown on the drawings or as directed by the Engineer.

1107.1 Pre-cast Concrete Paving Blocks

Precast concrete blocks shall be hydraulically pressed, complying with BS 7263: Part 1. Blocks shall be laid in accordance with BS 7263: Part 2 to the required cross fall.

1107.2 Flexible Surfacing for Footpaths and other Paved Areas

Flexible surfacing for footpaths and paved areas shall be laid in compliance with section 16 of the Standard Specification.

Surfacing shall be laid true to level and cross fall as shown on the drawing or instructed by the Engineer. Payments for flexible surfacing on footpaths will be measured and paid in accordance with the provisions of section 16 of Standard Specification.

1108 Measurement and Pavement

(a) Item: Precast Concrete Paving Blocks

Unit: m²

Precast concrete blocks shall be paid by the area measured on plan. The rate shall include for supplying, laying the bedding, jointing, compacting, laying at kerbs and radii and all the Contractor's obligations with respect to this clause.

1200 NATURAL MATERIAL SUBBASE AND BASE

1201 GENERAL

Natural materials for base and subbase shall conform to the specifications given in Section 12 of the Standard Specifications for Road and Bridge Construction for cement and lime improved base and subbase.

1202 MEASUREMENT AND PAYMENT

Natural material for subbase and base shall be measured by the cubic metre placed and compacted upon the road calculated as the product of the compacted sectional area laid and the length.

Measurement and payment of natural materials for subbase shall be in conformity with Method A of the Standard Specification with the following amendment

Delete "Free haul of 1.5km" whenever it is referred to under this Clause. No separate payment shall be made for overhaul in this contract.

1203 HANDPACKING

a) Sources of Material

The Contractor may obtain suitable material from existing commercial quarries. Before being delivered to the site of the Works, the material will be tested for compliance with the requirements stipulated in the following sub clauses.

b) General Requirements

Where the use of hand packed stone is specified, the rock from which the stones and screenings are produced shall comply with the following.

A.C.V. – Max. 40%

L.A.A. – Max. 30%

S.S.S. – Max. 12%

c) Stones

The stones shall be free from an excess of flat or elongated particles, soft and less durable rock, clays, loam, topsoil and other deleterious matter. The stones shall be of such grading and size that they pack firmly when laid by hand. The larger stones shall have a maximum dimension slightly greater than the thickness for the required compacted layer and be of a shape acceptable to the Engineer. The smaller stones shall have a reasonably uniform grading and be of a nominal size suitable, in the opinion of the Engineer, for filling the surface voids of the as placed larger stones in place. The nominal size of the smaller stones will be of the order of 50mm.

d) Screening

The screenings shall consist of tough durable crushed rock, free from an access of flat, elongated, soft or disintegrated pieces and harmful material, such as loam, clay, organic matter, or other deleterious substances and shall be to the Engineer's approval.

The grading of the screenings shall form a smooth curve and shall be within and approximately parallel to the following limits: -

B.S. Sieve Size	Percentage by Weight Passing B.S. Sieves

10mm	100
5mm	85-100
0.425m	30-50
m	10-30
0.150mm	0-20
0.075mm	

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

- i) It shall consist mainly of sand sizes and have a reasonable smooth grading.
- ii) The fraction passing 0.075mm sieve shall be less than the weight passing 5mm sieve.
- iii) P.I. shall not be greater than 5.

e) Construction

On the prepared area, individual stones shall be positioned by hand with the greatest dimension vertical, and the largest and flattest end downwards. The greater number of stones shall be slightly higher than the thickness of the layer when laid. After placement of the stones in the specified manner, the material shall be initially compacted, preferably with a grid roller and a vibratory roller, which shall continue until the layer is thoroughly keyed, and until the compacted layer contains not more than 10% air voids. The irregularities that may show up during compaction shall be corrected by loosening the surface and removing or adding material as may be required and recompacting. Where necessary quarry fines of the same material shall be spread and broomed into the interstices and rolling shall continue until no more fines will go in to give a homogenous compacted layer of sub base.

f) Measurement and Payment

The stone will be paid for as the volume in cubic metres of material measured in place upon the road. The volume of material shall be calculated as the product of the compacted thickness specified or ordered by the Engineer and the net area required to be laid. The rate shall be the full inclusive price for providing, laying, packing and compacting the material and shall include for complying with Clauses 1311a), b). The rate shall also include for all haulage.

1204 MATERIAL REQUIREMENTS

The Contractor shall allow for winning, hauling to site, laying, watering and compacting to 100% MDD (AASHTO T.180). The material shall also comply with the following requirements:-

P.I. - Max 15

CBR @ 100% MDD (modified AASHTO T180) at 4 days soak: Min 30

P.M. - Max 250

1300 GRADED CRUSHED STONE SUBBBASE

1303 Material requirements

The material for graded crushed stone Sub-base shall comply with requirements for Sub-base stone Class B 0/40. After compaction and compliance with the requirements of Clause 1403 of this specification below, the Sub-base/Base graded crushed stone material shall have a maximum of 8% of particles smaller than 0.075 mm and the resultant layer shall comply with all requirements of Section 13 of the Standard Specification.

The crushing ratio for all graded crushed stone pavement materials shall be minimum 100%.

1306 Laying and Compacting Graded Crushed Stone Sub-base

Graded crushed stone shall be laid by a paving machine.

Add the following to this section:

1311 In Situ Reprocessing of Graded Crushed Stone

In pavement reconstruction sections with an existing graded crushed stone base, the existing graded crushed stone shall be used in pavement and shoulder construction. The bituminous layer shall be removed to spoil or for recycling as instructed by the Engineer, leaving in place the existing graded crushed stone base in situ. After removal of surfacing, the graded crushed stone shall be jointly inspected by the Engineer and Contractor and any contaminated material re-used in earthworks, deviations or disposed off in manner approved by the Engineer. Where the contaminated layer extends into a lower pavement layer, the Existing sub-base or sub-grade layer shall be reworked and re-compacted before reprocessing the graded crushed stone layer. Before addition of any stone material the existing surface shall be lightly compacted to remove undulations and levels taken. The Contractor shall confirm the grading of the stone material and shall add imported material, mixed in such a manner that the reprocessed material shall comply with the requirements of Clause 1303 of the Standard Specification. The material shall be scarified, mixed, watered, spread and compacted as sub-base or base in the carriageway and/or shoulders as shown on the drawings or directed by the Engineer.

1400 CEMENT TREATED MATERIALS

1403 Cement Treatment

Cement for improvement shall be Ordinary Portland Cement complying with Clause 207 of the Standard Specification. The cement content of the improved graded crushed stone material will be in the range of 1% to 2% by weight. The actual cement content requirement will be determined on site as directed by the Engineer after laboratory and site trials.

14A LEAN CONCRETE

14A/04 Mix Requirements

(i) Proportions

The ratio of cement to aggregate shall be 3% by weight (including any absorbed moisture but excluding free water in the aggregate).

14A/05 Method of Construction

(i) Curing

Add the following to this Clause:

The lean concrete shall be protected from injuries action by sun, rain, flowing water, frost, or mechanical injury. At completion of finishing and at the time the concrete surface has hardened enough to prevent the surface being marred by the curing material it shall be cured by one or more of the following methods:

Moist Curing: Wet the concrete surface with a fine spray of water and cover with water proof paper, polythene-coated burlap, or polythene sheeting. Thoroughly saturate polythene-coated burlap with water before placing. Select size of sheets that are at least 300 mm longer than necessary to cover the entire width and edges of base. Place sheets with light coloured side up. Overlap adjacent sheets not less than 300 mm with the lapped edges securely weighed down or the sheets lapped 150 mm and cemented or tampered to form a continuous cover and closed joint. Place the weight on the cover down to prevent displacement or billowing from winds. Fold coverings down over the exposed edges and secure with a continuous bank of earth or other approved means. Use covers in good condition when placed and immediately repair tears and holes they occur during the 7-day curing period.

Liquid Membrane-forming Compound Curing: Apply compound immediately after surface loses its water sheen and has a dull appearance. The curing membrane method should conform to AASHTO M 148. Mechanically agitate curing compound during use. Apply at maximum rate of 5.0 square meters per litre of compound. If compound lacks uniform continuous coherent films or exhibits checks, cracks, peels, or pinholes, apply an additional coat of compound to areas where films is defective. Have readily available impervious sheet curing for use to protect freshly placed concrete in the event that conditions occur to prevent correct application of compound at the proper time. Re-spray surfaces with curing compound after rainfall. Apply at the same rate required above.

The concrete surfaces shall be protected from foot and vehicular traffic and other sources of abrasion for a minimum of 72 hours. The curing method adopted shall be maintained for the entire curing period.

14A/08 Measurements and payment

(a) Item: Curing lean concrete

Unit: m*

The unit of measurement shall be the area of surface cured satisfactorily. The rate shall allow for complying with Section 14A of the Standard Specification.

1500 BITUMINOUS SURFACE TREATMENTS AND SURFACE DRESSING

1502B Materials for Prime Coat and Tack Coat

- (i) The binder for prime coat shall be MC 70 cutback bitumen. This shall be applied over granular surface to receive any bituminous layer.
- (ii) The binder for tack coat shall be K1-60 bitumen emulsion. This shall be applied over bituminous surface to receive further bituminous layer. A tack coat shall also be applied on prime coat, which has lost its adhesive properties due to contamination, long exposure or weathering before receiving bituminous layer. Such an application shall be made without additional expenditure by the Employer, unless it is required due to reasons outside the Contractor's control.

1504B Spraying of Prime Coat and Tack Coat

- (i) The rate of application of prime coat shall be from 0.8 to 1.2 litres/m². The exact quantity to be applied may be varied within these limits to suit field conditions and will be determined from trials by the Contractor and approved by the Engineer.
- (ii) The rate of application of the tack coat on bituminous surface shall be 0.8 to 1.0 litres/m². The exact quantity to be applied may be varied within these limits to suit field conditions and will be determined from trials by the Contractor and approved by the Engineer.

1502C Materials for Surface Dressing

(a) Binder

The binder shall be 60/70 penetration bitumen.

(b) Chippings

- (i) Hardness, soundness, shape and cleanliness

Stone for surface dressing on the carriageway and shoulders shall be class 1. Should it be necessary and in the Engineer's opinion to clean chippings before laying, the Contractor will wash the chippings to the satisfaction of the Engineer and no extra payment will be made for this operation.

1503C Rate of Application of Binder and Chippings

Rates of spray of bituminous binder and spread rates for chippings shall be as stated in the relevant items in the Bill of Quantities or as instructed by the Engineer. The exact rate to be applied may be varied to suit field conditions and will be proposed by the Contractor for the agreement of the Engineer.

Should any change occur in the nature of source of chippings or binder, the Contractor shall advise the Engineer accordingly who will then decide if new field trials are necessary and if any revisions are required to the spray and spread rates.

Payments for binder and chippings will be based on instructed rates.

1505C Pre-coated chippings

Where shown on the drawings or instructed by the Engineer, chippings used for surface dressing shall be pre-coated. The bituminous binder used for pre-coating shall be A3 anionic bitumen emulsion.

The chippings shall be completely coated with the binder at a nominal rate of 0.4% - 0.8% by dry weight of chippings. The actual rate of application should be as instructed by the Engineer following the Contractor's field trials.

The mixing plant shall comply with the requirements of Clause 1603A, Parts (a) and (b), of the Standard Specification.

The binder shall be heated so that it can be distributed uniformly and care shall be taken not to over heat it. The temperature shall at no time exceed 35°C.

The chippings shall be washed (if necessary) dried and heated so that they are mixed at a temperature of between 20°C and 35°C The binder shall be introduced in the mixer in the amount specified and the materials mixed until a complete and uniform coating of the chippings is obtained.

Should any change occur in the nature of source of chipping or binder the Contractor shall advise the Engineer accordingly who will then decide if new field trials are necessary and if any revisions are required to the spray and spread rates.

1508C Application of Surface Dressing

At the joint between the shoulder and carriageway, each layer of surface dressing on the carriageway shall be extended 100 mm into the shoulder. In like manner each layer of surface dressing on the shoulder shall also be extended 100 mm into the carriageway. The Contractor shall allow in his rates for this overlap. No additional payment will be made for either the binder or the chippings when complying with this requirement.

1509C Aftercare and Control of Traffic

Surface dressing shall not be trafficked for at least seven (7) days. Where the surface dressing is to be applied to new asphalt concrete, a minimum period of 72 days must elapse before commencing the surface dressing.

1511C Measurement and Payment

(c) Item: Pre-coated chippings

Unit: m³ of each nominal size of each class

Pre-coated 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 instructed to be covered and the reciprocal of the instructed rate of application in m³ per M² or the actual rate of application in m³ per m² whichever calculation gives the lower volume.

The rate for chipping shall include for the cost of providing and hauling the chippings and bitumen pre-coating the chippings with bitumen at the instructed rates, spreading and rolling the chippings at the instructed application rate, all hauls as necessary and complying with parts A and C of Section 15.

1600 BITUMINOUS MIX BASES, BINDER COURSES AND WEARING COURSES

1600A GENERAL

1603A Construction Plant

(a) Compaction Plant

To achieve specified densities it is expected that vibrating rollers will be required to achieve satisfactory results. It is essential that thorough pre-construction trials be carried out to ensure that the vibrating rollers are set up at the optimum amplitude and frequency for the material being laid that they do not break down aggregate particles and that the optimum compaction temperatures are established to allow compaction without creating ripple effects or other distortions of the surfacing.

1606A Site trials

Delete the second paragraph and insert the following:

The trials shall be carried out to:

- (a) Test materials designed in the laboratory so that a workable mix, which satisfies the specified requirements can be selected.
- (b) Enable the Contractor to demonstrate the suitability of his mixing and compaction equipment to provide and compact the material to the specified density and to confirm that the other specified requirements of the completed asphalt pavement layer can be achieved.

Renumber paragraph 5 from “(v)-(vi)” to read “(v)-(viii)”.

1607A Mixing of Aggregates and Bitumen

Delete the second and third paragraphs and then add the following:

The aggregates minus the filler prepared as specified above shall be accurately weighed and conveyed into the mixer in proportionate amounts of each aggregate size required to meet the job-mix formula. The required amount of bitumen for each batch shall be introduced into the mixer in batch mixing. The bitumen shall be added after the aggregates have been introduced into the mixer and mixed for 5 to 10 seconds. The filler shall be added after the bitumen and mixing shall continue after addition of the filler for at least the time recommended by the plant manufacturer or as much extra time as is necessary to obtain a homogenous mixture but for no longer.

The Aggregates and bitumen shall each be heated to enter the mixing chamber at temperatures selected within the range 150 °C to 170 °C. The temperature of the stone at entry to the mixing chamber shall not be more than 15 °C higher than that of the bitumen; the temperature of the bitumen shall be such that on entry to the mixer its Kinematic viscosity is in the range of 150-300 centistokes. The temperature of the aggregate and bitumen at entry into the mixing chamber shall be chosen within the above limits and having regard to the prevailing air temperature and haulage distance to ensure that the temperature of the mix is not less than 135°C when it is laid and not less than 120°C when rolling is commenced. If excessive displacement occurs under the roller the minimum rolling temperature may be reduced at the sole discretion of the Engineer.

The volume of the aggregates and bitumen shall not be so great as to extend above the tips of the mixer blades when the blades are in vertical position. All overheated and carbonized mixtures which form or show indication of moisture will be rejected. When moisture is detected in the finished mixture, all aggregates in the bins shall be removed and returned to the stockpiles.

1608A Transporting the Mixture

Delete the entire clause and replace it with the following

The mix shall be transported from the mixing plant to the spreader in truck having tight, clean smooth beds, which have been treated to prevent adhesion of the mixture to the truck bodies. Gasoline, Kerosene, diesel fuel or other solvent shall not be used for this purpose. Loads shall be covered by waterproof canvas or metal sheets during wet weather. Vehicles shall be insulated when the air temperature and/or length of haul make this necessary to maintain the temperature between specified limits. Any loads wetted excessively by rain will be rejected. Hauling over freshly laid material will not be permitted.

1609A Laying the Mixture

Add the following paragraphs:

Mixtures that have a temperature of less than 135°C when dumped into the paver will be rejected. The paver shall be adjusted and the speed regulated so that the surface of the course will be smooth and the course of such depth shall be such that, when compacted, it will conform to the cross-section shown on the drawings. Lanes shall be parallel to the road centreline.

All joints shall present the same texture, density and smoothness as other areas of the surfacing. The joints between old and new lanes or sections shall be carefully formed in such a manner as to ensure a continuous bond between the old and new pavement. All contact surfaces at cold joints, and joints with structures including manholes and pits shall be coated with a thin and uniform coat of MC 70 or other medium curing bitumen.

1610A Compaction

Add the following paragraphs:

Tests for conformity with the smoothness and levels specified shall be made by the Contractor immediately after initial compaction and any deviations in excess of the specified tolerances shall be corrected by loosening the hot surface with rakes and removing or adding materials as necessary before continuing the rolling. The speed of the rollers shall not exceed 5 km/h and shall at all times be slow enough to avoid displacement of the hot mixture. Any displacement of the mixture, occurring as results of reversing the direction of the rollers, or from any other cause, shall be corrected at once by loosening the surface with rakes and re-rolling. Rolling of the surfacing shall be continued until all roller marks are eliminated and the required density is obtained.

The rollers shall not be permitted to stand on surfacing which has not been fully compacted. Precautions shall be taken to prevent the dropping of oil, grease, gasoline or other foreign matter on any layer.

The Contractor shall provide competent workmen who are capable of performing all work incidentals to the correction of all surfacing irregularities.

After final rolling, no vehicular traffic of any kind shall be permitted for at least 24 hours.

1611A Finishing Joints and Edges

Add the following to this clause:

Construction joints in the various pavement layers shall be staggered by at least the following distances

- (a) Joints in Binder Course relative to joints in Wearing Course: 500 mm
- (b) Joints in Dense Bitumen Macadam base relative to joints in Wearing Course: 400 mm

The contractor shall produce a plan showing all pavement construction joints for approval by the Engineer before pavement construction commences.

Transverse joints in Dense Bitumen Macadam Base Binder and Wearing Course shall be staggered by at least 500 mm. The roller shall pass over the unprotected end of the freshly laid mixture only when laying of the surfacing is to be discontinued for such length of time as to permit the mixture to become cold. Otherwise 500 mm at the end of the lane shall be left uncompacted.

Cold transverse joints shall be cut back to expose an even, vertical surface for the full compacted thickness of the course and painted with medium curing cutback bitumen as specified above. The fresh mixture shall be raked uniformly against the joint and carefully compacted to ensure a good bond with the cold material.

The Contractor shall adjust any kerbs, gulley pots and chambers in accordance with final finished road level before laying the final Wearing Course.

1614A Tolerances

Add the following at the end of the second paragraph:

Passing sieves between 1.0 mm and 0.075 mm sizes, +3% by total weight of dry aggregate including mineral filler

Passing 0.075 mm sieve, +2% by total weight of dry aggregate including mineral filler

1600B ASPHALT CONCRETE FOR SURFACING

1602B Materials for Asphalt Concrete

- (a) Penetration grade bitumen

Delete sub-section (a) and replace with the following:

Bitumen shall be penetration grade, and shall meet the requirements of Table 4.3 in ORN 19 as summarized below:

Table 4.3 (ORN 19) Minimum requirements for penetration grade bitumen

Test, based on Original Bitumen	Test Method (ASTM)	Penetration Grade		
Penetration at 25°C	D5	40/50	60/70	80/100
Softening point (°C)	D36	49-59	46-56	42-51
Flash point (°C) (Min)	D92	232	232	219
Solubility in trichloroethylene (%) (min)	2042	99	99	99
TFOT heating for 5h at 163°C:				
(a) Loss by mass (% (Max)	D1754	0.5	0.5	0.8
(b) Penetration (% of original),(Min)	D5	58	54	50
(c) Ductility at 25°C, (Min)	D113	-	50	75

The bitumen for asphalt concrete works shall 60/70 grade.

(c) Mineral Filler

- (i) Under this sub-clause in the Standard Specification, rename Table 16B-1 as 16B-1 (a)
- (ii) Add the following

The coarse aggregate shall entirely be crushed rock from a source known to give high values of stability (>9 kN) in the Marshall Test. Crushed river gravel shall not be used. Aggregate shall be Class “a” meeting the requirements given in Table 16B-1(b) below.

Table 16B-1(b) Requirements for coarse aggregate (retained on 6.3-mm sieve)

Property	Test	Property
Cleanliness	Sand equivalent for <4.75 mm fraction (Material passing 0.425 sieve) Plasticity index* Linear shrinkage	>40 <4 <2
Particle shape	Flakiness index (FI) ³	<25
Strength	Aggregate Crushing value (ACV) ⁴ Aggregate impact value (AIV) ⁴ 10% FACT (dry) KN ⁴ Los Angeles Abrasion (LAA) ⁵	<25 <25 >160 <30
Abrasion	Aggregate Abrasion Value ⁴	<12
Soundness ⁷	Sodium Sulphate Soundness (SSS): Coarse aggregate Fine aggregate Magnesium Sulphate Soundness (MSS): Coarse aggregate Fine aggregate	<10 <16 <15 <20

Property	Test	Property
Polishing	Polished Stone Value	>60
Water absorption	Water Absorption ⁶	<2
Bitumen affinity	Immersion Mechanical test: index of retained Marshall stability ⁸ Static immersion test ⁹ Retained indirect Tensile strength ¹⁰	>75 >95% coating retained >79% (at 75% VIM)

Key

1. AASHTO 1176
2. British standard 1377, part 2
3. British standard 812, part 105
4. British standard 812, parts 110 to 114
5. ASTM C131 and C535
6. British standard 812, part 2
7. AASHTO T104
8. D whiteoak (1990) (shell bitumen handbook)
9. AASHTO T182
10. AASHTO &283

The aggregates for bituminous mixes shall be stored in single sizes in separate bins or in areas covered with tightly laid wood planks, sheet metal, hard compact gravel, concrete or other hard and clean surfaces. The surfaces shall be self-draining, and in such a manner that will preclude the inclusion of foreign material. Aggregates of different grades and sizes and from different sources shall be stored in separate piles and if these piles are close together they shall be separated by bulkheads.

1603B Grading Requirements

The grading mixture of a coarse and fine aggregate shall be within and approximately parallel to the grading envelopes as given in table 16B-1(a) for 0/20 binder coarse. In addition, the material shall comply with the requirements below.

The Contractor shall investigate a number of gradings so that a worktable mix, which also retains a minimum of 3% voids in mix (VIM) at refusal density, is identified. As guidance towards identifying a suitable grading, recommendations are provided in Tables 16B-1(c) and (d)

Table 16B-1(c): Superpave aggregate grading control point

Nominal Maximum Size (mm), (Note 1 below)	Sieve size (mm)	Control point (%passing)	
37.5	0.075	0	6
	2.36	15	41
	25.0		90
	37.5	90	100
	50	100	-
25.0	0.075	1	7
	2.36	19	45
	19.0		90
	25.0	90	100
	37.5	100	-
19.0	0.075	2	8
	2.36	23	49
	12.5	-	90
	19.0	90	100
	25.0	100	-
12.5	0.075	2	10
	2.36	28	58
	9.5	-	90
	12.5	90	100
	19.0	100	-

Table 16B-1(d): Superpave boundaries of aggregate restricted zone

Sieve size within restricted zone	Minimum and maximum boundaries of Sieve size for nominal maximum aggregate size (minimum /maximum % passing)			
	37.5	25.0	19.0	12.5
4.75	34.7-34.7	39.5-39.5	-	-
2.35	23.3-27.3	26.8-30.8	34.6-34.6	39.1-39.1
1.18	15.5-21.5	18.1-24.1	22.3-29.3	25.6-31.6
0.6	11.7-15.7	13.6-17.6	16.7-20.7	19.1-23.1
0.3	10.0-10.0	11.4-11.4	13.7-13.7	15.5-15.5

Note (1): The definition of Nominal Maximum Size of aggregate is one sieve larger than the first sieve to retain more than ten per cent of the aggregate. It is also recommended that where possible that largest particle size should not be more than 25 mm so that the requirements of the marshal test can be complied with.

Mixes identified for compaction trials shall be manufactured to the laboratory design bitumen content and two other bitumen contents of + 0.5 % and 1.0% additional bitumen. Cores will be cut to determine the density of compacted material. The core will then be re-heated to 145±5°C in the appropriate mould and compacted to refusal in the vibrating hammer test. The cores cut from the compaction trial must have a destiny equivalent to 95% refusal density.

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

1604B Requirements for Asphalt Concrete

The nominal binder content shall be 5.0% - 6% in addition to the requirements given in Table 16B-2 Of the Standard Specification. The maximum Marshall stability of the mix for 2x75 blows shall be 9 kN and, at compaction to refusal, it shall have 3% voids in mix (VIM).

In order to determine the suitability of a coarse aggregate source, a Marshall Test programme shall be carried out. It will be advantageous to use a crushed rock which is known from past

experience to give good results in the test procedure. A grading conforming to the type I binder course detailed in Table 16B-1(a), 0/20, of the Standard Specification should be tested (but with 100% passing the 25 mm sieve) and it shall meet the requirements of Table 16B-2 of this specification.

Having established the suitability of the aggregate source several gradings shall be tested in the laboratory, including that used for the Marshall Test, to establish relationships between bitumen content and VIM at refusal density. For each mix, samples will be made up to a range of bitumen contents and compacted to refusal using a gyratory compactor and a vibratory hammer in accordance with BS 598 (Part 104:1989) with the following revision.

“It should first be confirmed that compaction on one face of the sample gives the same refusal density as when the compaction cycle is applied to both faces of the same sample. The procedure which gives the highest results shall be used”

From the bitumen content – VIM relationship, bitumen content which corresponds to VIM of 3% shall be identified. Compaction trial shall be undertaken to confirm the workability of the mix. At least two or more gradings will be required for compaction trials. The compaction trials will identify a workable mix which can be to a bitumen content which gives 3% voids mix (VIM) at refusal density.

1605B Mixing and laying asphalt concrete

The temperature of the bitumen and aggregates when mixed shall be $110 \pm 3^\circ\text{C}$ above the softening point (Ring and Ball) of the bitumen.

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

The minimum thickness of individual layers shall be as follows:

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

1606B Compaction

Rolling shall be continued until the voids measured in the completed layer are in accordance with the requirement for a minimum compacted density of 98% of Marshall Test Maximum Density or a minimum mean value of 95% of refusal density (with no value less than 93%) as appropriate.

1608B Sealing bituminous surface

After the Wearing Course has been trafficked and bitumen has hardened, the Wearing Course shall be sealed with 10/14 mm pre-coated chippings in accordance with Clause 1505C. The period of hardening will depend on the traffic level and should be such that the chippings will not become embedded in the wearing surface. The Contractor will propose and the Engineer will approve a section to be ready for sealing.

1700 CONCRETE WORKS

1703 Materials for Concrete

This work shall consist of placing selected approved material of 250 mm 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 and 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 300 mm.

(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 250 mm over the compacted bed where the bottom slab will rest. Coarse sand shall 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.

Add the following for fine aggregate

It shall also meet the following requirements.

Test	Test Method	Requirement
Fineness Modulus	AASHTO M6	2.0-3.5
Sodium Sulphate Soundness loss on 5 cycles	AASHTO T104	10% Max.
Friable particles content	AASHTO T112	1% Max.
Test for organic impurities	AASHTO T21	Lighter than standard
Sand equivalent	AASHTO T17	75% Min.
Fraction passing 75 micron sieve	AASHTO T27	5% by weight max. (10% max. for crusher dust)

Add the following for course aggregate

The coarse aggregate shall conform to the following quality requirements:

Test	Test Method	Requirement
Sodium Sulphate Soundness loss on 5 cycles	AASHTO 104	12% max.
Los Angeles Abrasion	AASHTO T96	40% Max.
Content of Friable Particles	AASHTO T112	1% by weight Max.
Soft Fragments and Shale	AASHTO M80	Max. 5% by weight
Flaky Pieces	BS 812	20% Max.
Elongated pieces	BS 812	20% Max.
Combined quantity of chlorides calculated as sodium chloride and sulphates as sodium sulphate	ASTM D1411	1000 ppm, Max.

Add the following to Clause 1703(g):

The water for mixing and curing concrete shall not contain solids and impurities more than the following permissible limits:

Impurities	Permissible Limits
Organic, mg/l	200
Inorganic, mg/l	3000
Sulphates (as SO ₄), mg/l	500
Chlorides (as Cl), for plain cement concrete work and 1000 mg/l for reinforced concrete work mg/l	2000

The pH value of work shall generally be between 6 and 8.

Add the following to Clause 1703:

(iii) Limits for Total Chemical Impurities in concrete

For reinforced concrete work the total chemical impurities collected from aggregates, cement, admixtures and water shall not exceed the following limits:

Impurities	Permissible limits of undesirable chemicals in concrete in percentage by weight of cement
Chlorides (as Cl ion), (%)	0.06
Sulphates (as SO ₃), (%)	4.0

1703a Levelling of Concrete for Bottom Slab Including Formwork Cost

This work shall consist of placing and levelling lean or blinding 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 in 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	:	15
N/mm ² Maximum size of coarse aggregate	:	20
mm		

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

(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 and which has been executed in accordance with the drawings and the Specifications.

Payment for this work shall include furnishing and placing all materials, labour, equipment and tools, and other incidentals to specifications and as directed by the Engineer.

1703b Reinforcement Bars for 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 and in conformity with the requirements shown on the Drawings.

(a) Material

Reinforcement bars shall be deformed and shall meet the requirements of British Standard BS 4461, unless otherwise called for on the drawings or approved by the Engineer.

No reinforcement bar shall be delivered without a certificate guaranteeing the yield stress. The reinforcement 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 reinforcement bars, the Contractor shall test the reinforcement bars, at his own expense, by the means as directed by the Engineer.

(b) Construction Method

(i) Bar Bending Schedule

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

(ii) Cutting and bending

Qualified men 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 bars. 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 drawing.

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 be injurious to the materials.

(c) Placing

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

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

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

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

(d) Splicing and Joint

When it is necessary to splice reinforcement 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 0.9 mm.

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

(e) Joint

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

Oxyacetylene welding joint of reinforcing steel shall be carried out only if authorized by the Engineer in writing.

(f) Measurement and Payment

Bending and installation of reinforcement bars of piers and abutments shall be measured in terms of tonnes. 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 authorized shall be used. These weights are given in the table below.

Bar Type and the Nominal Diameter in Millimetres	Weight of Bar in Kilograms per 12 m length of bar
Y10	7.40
Y12	10.66
Y16	18.95
Y20	29.60
Y25	46.30
Y32	75.80

1703c Formwork for Vertical 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 formwork shall be removed on completion of the walls and slabs.

(a) Materials

Formwork 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 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

Formwork 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 formwork has been set in correct location it shall be inspected and approved by the Engineer before the concrete is cast.

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

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 50 mm 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 cast, the formwork 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 formwork to drain away the water and rubbish.

(ii) Scaffolding

All scaffolding required to support the formwork 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 details.

(iii) Removal of formwork

The time at which the formwork is removed shall be the Contractor's responsibility and the formwork shall not be removed until the concrete strength has reached the strength to the approval of the Engineer

(c) Measurement and Payment

No measurement shall be allowed for formwork of temporary construction joints.

Payment for the formwork shall be incidental to the pay items of particular grade of concrete for furnishing, erecting, jointing all the formwork for the concrete including furnishings and applying release agent, and construction of the required scaffolding to support the formwork 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.

1703d Concrete Works to Vertical Walls and Slabs

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 walls and slabs.

(a) Concrete Materials

(i) Cement:

Cement shall be of Portland type (Strength 42.5) and shall conform to the requirements of BS 12 or equivalent.

The Contractor shall select only one type or brand of cement. Changing of the 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 his responsibility to furnish concrete of the specified compressive strength requirements.

Conveyance of cement by jute bags shall not be permitted. Storage in the Contractor's silo or storehouse shall not exceed more than two (2) months and age of cement after manufacture at mill shall not exceed more than four (4) months. The Contractor shall submit to the Engineer for his approval the result of quality certificate 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.

(b) Aggregates

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

Grading of aggregates shall conform to the requirements in the tables below.

(i) Grading of Fine Aggregate

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

(ii) Grading of Coarse Aggregates

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

Other requirements for aggregates are as detailed below.

(iii) Fine Aggregates

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

(iv) Coarse Aggregate

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

(v) Water

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

(vi) Admixture

Only admixture, which have been tested and approved in the site laboratory through trial mixing for design proportion shall be used.
Before selection of admixture, the Contractor shall submit to the Engineer the specific information or guarantees prepared by the admixture supplier. The

Contractor shall not exclude the admixture from concrete proportions.

Chemical admixtures where permitted shall conform to the requirements of AASHTO M194. Unless otherwise specified, only Type A (Water reducing), Type B (Retarding), Type D (Water reducing and retarding), Type F (Water reducing, high range) or Type G (Water reducing, high range and retarding) shall be used.

Admixtures containing Chloride ion (Cl) in excess of one percent by weight of the admixture shall not be used in reinforced concrete.

A Certificate of Compliance signed by the manufacturer of the admixture shall be furnished to the Engineer for each shipment of the material used in the works.

(c) Concrete class 25/20

Concrete Class 25/20 shall be used for culvert walls 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/mm ²
Maximum size of coarse aggregates:	20 mm
Maximum water/cement ratio of 45% with slump of 80 mm	

(d) Proportioning Concrete

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

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

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

(e) Concrete Work

(i) Batching

Batching shall be conducted by weight with accuracy of:

Cement	:	0.5 %
Aggregate	:	0.5 %
Water and Admixture	:	1 %

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

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

(ii) Mixing and delivery

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

(iii) Concrete in hot weather

No concrete shall be placed when the ambient air temperature is expected to exceed thirty three degrees Celsius (33°C) during casting operations.

(iv) Concreting at night

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

(v) Placing

In preparation of the placing of concrete, the interior space of formwork shall be cleaned and approved by the Engineer prior to casting concrete. All temporary members except tie bars to support formwork shall be removed entirely from the formwork 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 cast in the formwork.

(f) Measurement and Payment

Measurement 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 furnishings all materials of the concrete mixing, delivering, placing and curing the concrete, equipment and tools, labour and other incidentals necessary for the completion of the work in accordance with the Drawings and these specifications and as directed by the Engineer.

1704 Concrete Works of the Beams and Deck Slabs

1704.1 Description

This work shall consist of furnishing, mixing, delivering and placing of the concrete for the construction of the in situ beams and deck slab, including form F3 type finish, in accordance with Standard Specifications and in conformity with the requirements shown on the Drawings.

Concrete Class 30/20 shall be used for beams and slabs.

1704.2 Concrete materials

(a) Cement

Cement shall be of Ordinary Portland (Strength 42.5) type and shall conform to the requirements of BS or equivalent.

The Contractor shall select only one type or brand of cement or others. Changing of the type 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 the cement by the Engineer shall not relieve the Contractor of the responsibility of furnishing concrete of the specified compressive strength requirements.

Conveyance of cement by chute bags shall not be permitted. Storage in the Contractor's silo or store house shall not exceed more than two (2) months, and the age of cement after submitting to the Engineer the result of quality certificate prepared by the manufacturer for his approval.

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

(b) Aggregates

Fine and coarse aggregates must be clean, hard, strong and durable, and free from absorbed chemicals, clay coating, or materials in amounts that could affect hydration, bonding, strength and durability of concrete. The aggregates should conform to BS 882.

Grading of aggregates shall conform to BS 812.

Other requirements for aggregates are as given

below.

(i) Fine Aggregates

Fitness Modules	AASHTO M-6	2.3 to 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	AASHTO T96	Max. 405 loss
Soft Fragment and Shale	AASHTO M80	Max. 5% by weight
Thin and elongated pieces	AASHTO M80	Max. 15%

(c) 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, and vegetable matter and salt as determined by the Engineer.

(d) 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.

1704.2.1 Concrete class 30/20

Concrete Class 30/20 shall be used for in situ beams and deck slabs. The requirements of concrete Class 30/20 are as detailed below unless otherwise the Engineer will designate any alteration.

Design compressive strength, 28 days: 30 N/mm^2

Maximum size of coarse aggregates: 20 mm

Minimum cement content: 300 kg/m^3 ,
and Maximum water/cement ratio of 45% with slump of 80 mm

1704.2.2 Proportioning Concrete

The Contractor shall consult with the Engineer as to the 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 requirements 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.

1704.2.3 Concreting Work

(a) Batching

Batching shall be conducted by weight with accuracy

of Cement: $\frac{1}{2}$ %
Aggregate: $\frac{1}{2}$ %
Water and Admixture: 1%

Equipment should be capable of measuring quantities within these tolerances for the smallest 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.

(b) Mixing and Delivery

Slump of mixed concrete shall be checked and approved against designated slump in these specifications. The time elapsing from when the water is added to the mix until the concrete is deposited in place at the site of the work shall not exceed thirty (30) minutes in case that the concrete is hauled in non agitative type trucks or carriers, or more than sixty (60) minutes in case that it is hauled in truck mixers or other carriers with agitators.

(c) Concrete in Hot Weather

No concrete shall be placed when the ambient air temperature is expected to exceed thirty three degrees Celsius (33°C) during casting operations.

(d) 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, and such night work is subjected to approval by the Engineer.

(e) Placing

In preparation of the casting of concrete, the interior space of formwork shall be cleaned and approved by the Engineer prior to casting concrete. All temporary members except tie bars to support formwork shall be removed entirely from the formwork and not buried in 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 concrete batch immediately after it is cast in the formwork.

1704.3 Concrete class 35/20

Concrete Class 35/20 shall be used for in situ beams and deck slabs. The requirements of concrete Class 35/20 are as detailed below unless otherwise the Engineer will designate any alteration.

Design compressive strength, 28 days: 35N/mm²
Maximum size of coarse aggregates: 20 mm
Minimum cement content: 300 kg/m³,
and

Maximum water/cement ratio of 45% with slump of 80 mm

1704.4 Measurement and Payment

Measurement for the Concrete Works for beams and deck 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 of beams and deck slabs shall be full compensation for furnishing all materials of the concrete mixing, delivering, placing and curing the concrete, equipment and tools, labour and other incidentals including form F3 type, necessary for the completion of the work in accordance with the Drawings and these specifications and as directed by the Engineer.

1705 Mixing Concrete

Add the following to Clause 1705 of the Standard Specification.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or other approved containers. The time elapsing from the time water is added to the mix until the concrete is deposited in place at the site of the work shall not exceed 30 minutes when the concrete is hauled in non-agitating trucks, or more than 90 minutes when hauled in truck mixers or truck agitators.

Where concrete is supplied from a central plant, there shall be sufficient transporting equipment to ensure continuous delivery at the rate required. The rate of delivery shall be such as to provide for the proper handling, casting, and finishing of the concrete. The method of delivery and handling the concrete shall be in a way which will facilitate casting with a minimum of re-handling and without damage to the structure or the concrete. The methods of delivery and handling for each site shall be approved by the Engineer. The Engineer may suspend the mixing and casting of concrete at any site for which he considers the Contractor's delivery equipment inadequate until such a time as the Contractor provides additional approved delivery equipment.

Concrete shall be allowed to be placed only when the Engineer or his representative is present at the site and has previously checked and approved in writing the positioning, fixing and condition of the reinforcement, and the alignment and suitability of the formwork.

Concrete shall be placed so as to avoid segregation of the materials and displacement of the reinforcement. When casting involves dropping the concrete by more than 1.5 metres, it shall be conveyed through sheet metal troughs, chutes or other approved pipes. The chutes, troughs and pipes shall be kept clean and free from coating of hardened concrete by thoroughly washing with water after each operation.

Rename Clause 1740 as 1740.1 and add the following to this clause:

1740.2 Interlocking Concrete Paving Block

(a) Quality

The block for the paving works shall be as shown on the drawings and as directed by Engineer. The blocks shall be 60 mm thick of quality concrete class of such that yields the strength of 50 N/mm², having specified the size and type with grey or red or combination of them.

Grading of sand for bedding			Grading of sand for the joint filling	
Sieve Size (mm)	Percentage Passing		Sieve Size (mm)	Percentage Passing
9.52	100		2.36	100
4.75	95 – 100		1.18	90 – 100

Grading of sand for bedding			Grading of sand for the joint filling	
Sieve Size (mm)	Percentage Passing		Sieve Size (mm)	Percentage Passing
2.36	90 – 100		0.6	60 – 90
1.18	50 – 95		0.3	30 – 60
0.6	25 – 60		0.15	10 – 30
0.3	10 – 30		0.075	0 – 10
0.15	0 – 15			
0.075	0 – 10			

(b) Foundation of Paving Blocks

Over the prepared and consolidated sub-grade a layer of Sub-base using crushed aggregate shall be laid to falls and slopes to a compacted thickness of 100 mm and compacted with C-10 tonne roller. Over the prepared sub-base, a layer of 3 mm and down fine sand shall be laid and compacted to 25 mm in thickness and to required falls and slope to the satisfaction of the Engineer.

(c) Paving Blocks Laying

The blocks shall be laid on top of the prepared base in required pattern as directed by the Engineer. On completion of the laying work, approved fine screened sand shall be spread over the paving and the joints filled with fine sand compacted as directed by the Engineer. Extra sand on the surface shall be removed by brushing. When required, the edge blocks shall be cut clean and sharp with approved tools and as per the manufacturer's instructions. The cut edges shall be rubbed smooth before laying. Compaction with a power vibrating plate (Wacker model VPH 70) shall be used suitably as recommended by the approved proprietary manufacturer. Any blocks damaged during laying shall be replaced. The entire work of the installation and materials shall meet the approval of the Engineer.

1741 Measurement and Payment

Delete Clause 1741(c).

Add the following to Clauses 1741 (d), (e) and (f):

Read Clause 1741(l) as follows:

The precast unit of measurement shall be m³ of particular grade of

concrete. Add the following to this section:

1742 Plant and Equipment for Aggregates and Concrete

1742.1 Aggregate Processing Plant

Aggregate processing plant to be provided by the Contractor shall conform to the following:

(a) Type of Plant

Except where aggregates are supplied from commercial sources, a modern and dependable aggregate plant capable of producing satisfactory concrete aggregates in sufficient quantities and

the rate necessary to meet the requirements of the construction schedule shall be provided at a location acceptable to the Engineer. Complete facilities shall be provided for proper crushing, washing, classifying, storing, reclaiming and delivering the aggregates to the mixing plant.

(b) Samples and Test

The aggregate plant shall be operated for a sufficient time in advance of the dates set for first placement of concrete to permit the development of procedures which result in high capacity production of aggregates proven by tests to meet all the requirements of this specification.

(c) Fines in Sand

The facilitation for fine aggregate production shall be so designed and operated as to retain the necessary quantity of finer fractions. An excess of fines will not be permitted. If natural sand is from marine source, the sand shall be cleaned of clayey material and washed with potable water before use. All crushing, washing, screening, classifying, blending, batching, or other properties of fine aggregate necessary to meet these specifications shall be performed so as to produce acceptable gradation complying with this specification.

(d) Drainage of Sand

Aggregates shall not be removed directly from the washing or classifying operations to the aggregate bins in the concrete mixing plant, but shall be stored as required, to permit drainage of excess water and in such a manner as to avoid contamination by foreign materials. Sand shall remain free-draining storage for at least 48 hours prior to use.

(e) Segregation

The stockpiles for aggregates shall be formed so as to prevent segregation, and as approved by the Engineer. The deposition and removal thereof shall be conducted in a manner to maintain the uniformity of grading. The side slopes of stockpiled aggregates shall be kept flatter than the angle of repose to prevent accumulation of coarser material at the bottom of the slope.

(f) Volume of Storage

Sufficient live storage of all size fractions of processed aggregates shall be maintained at all times, to permit continuous placing of concrete at the rates so as to meet the scheduled requirements. If aggregates are stockpiled on the ground, the bottom portion of the stockpile within 300 mm of ground shall not be used. The Contractor may also plan to store sufficient quantity of coarse and fine aggregate so that concreting during the rains can proceed without hindrance as the collection of the same during the rains may be difficult.

(g) Approval of Aggregate Plant Layout

Plans and written specifications for the aggregate processing plant including description and capacity data on the processing equipment, and flow charts of the whole processing operation which shall show rates of flow of material at the various crushing and separation points in the processing, as well as the volumes of the stockpiles and the number and types of equipment to be used in transporting the aggregates from aggregate plant to the mixing plant, shall be submitted to the Engineer in advance of plant erection for his approval.

1742.2 Concrete Plant

A modern dependable batch type mixing plant capable of producing concrete of specified quality and at the rate of output required to meet the specified requirements, and a balanced complement of transporting, handling and placing equipment shall be provided at locations and in a manner approved by the Engineer. The concrete mixing plant shall be completely installed for a sufficient length of time prior to scheduled date for placement of first concrete, to enable the Engineer to make the necessary physical tests, prior to use of the plant for the production of concrete.

(a) Standby Arrangement

As a standby arrangement to the batching and mixing plant, the stationary mixer/mixers of capacity 700 litres of mixed concrete and other appropriate equipment shall be provided.

(b) Type of Plant

The type of plant to be furnished shall be fully automatic. The term “automatic” is used to define a plant in which:

- (i) Batch weights are set manually on a mix selector
- (ii) Mixes are charged automatically by mix selector
- (iii) Materials are batched automatically

Ice flaking machine of sufficient capacity shall be installed as a part of batching plant.

(c) Batchers

Individual weigh batchers shall be provided for all works, requiring the use of more than two separate size groups of coarse aggregates. Cumulative weight batchers may be used for work requiring the use of not more than two separate size groups of coarse aggregates provided that the cement is weighed and batched separately from the aggregates. The batchers shall be arranged to permit the convenient addition or removal of material. Batching equipment shall be so constructed and arranged that the sequence and time of discharge can be controlled to produce a re-blending and mixing of the aggregates and, wherever possible, mixing of the cement with the aggregates as the materials pass through the charging hopper in to the mixer. This control shall be effected by the controls of the batcher discharge gates. Batchers controls shall be so interlocked that a new batching cycle cannot be started until all batchers are completely empty.

(i) Weighing Units

Every delivering point of aggregates and cement into the mixer, charging hopper shall have a weighing unit and each weighing unit shall include a visible, springless direct reading dial which shall indicate the scale load at all stages of the weighing operation from zero to full capacity.

The scale dials and the weighing equipment shall be in full view of the operator, so that he may conveniently observe the operation of the batcher gates and the discharge of the materials. Provision shall be made for adjustment and change in weights of materials being charged in the hopper.

(ii) Measuring Water

Water shall be measured by weight except in situations for which written approval is given by the Engineer to measure by volume. The mechanism for measuring and delivering water to the mixers shall not permit leakage when the valves are closed.

The filling and discharge shall be measured by weight. The filling shall be capable of ready adjustment to permit varying the quantity of the admixtures to be batched. The equipment shall be kept in a clean and fully operating condition.

(iii) Tolerance in Batching

Weighing devices shall be capable of measuring the various ingredients of the following accuracy.

<u>Materials</u>	<u>Percent (by weight)</u>
Cement	1
Water	1
Aggregate smaller than 40mm size	2
Admixture	1 (or volume)

(iv) Records & Charts

An accurate record shall be maintained at the batching plant by the Contractor for the following:

- (a) The weight of the cement, water and admixture
- (b) The weight of the aggregate for each size shall be recorded separately.
- (c) Temperature of the concrete immediately after mixing
- (d) Mixing time of each batch when all the materials are loaded into the mixer
- (e) Time when the concrete is delivered from the mixer
- (f) Ambient temperature

(v) Recorders

A recorder shall be provided for each set of units measuring each of the materials delivered to the mixer. The recorder shall produce a continuous visible record, on a single ruled chart, of the weight of the cement, water and each size of aggregates, of the mixing time of each batch after all materials are in the mixer, of the temperature of the concrete and of the time of day at intervals of not more than fifteen (15) minutes. The recorder shall be completely housed and shall be capable of being locked and shall be placed in a position convenient for observation by the plant operator and the Engineer. Each chart shall be so ruled and printed that it may be readily and permanently identified, so that the quantities and time may be read directly without scaling or calculation. A portion of the recorder chart equivalent to at least thirty (30) minutes of plant operation shall be visible after recording. This portion of the chart shall be supported over its entire width on a smooth, firm backing so that notes can be made without puncturing the paper. The recorders and scale dials shall be housed in a room, box or compartment visible at all times and sufficiently tight to exclude objectionable dust coming from the plant operation.

2000 ROAD FURNITURE

2001 Road Reserve Boundary Posts

The Contractor shall establish a reference point on top of each boundary post.

2004 Permanent Road Signs

Rename the existing text with the heading "2004.1 Posts and Road Signs"

2004.1 Posts and Road Signs

Posts for road signs shall be vandal-proofed by the drilling of 3 mm diameter holes at 100 m centres on alternative sides.

Add the following to this clause:

2004.2 Colour and configuration

The colour, size and location of all traffic signs for the project road shall be as specified on the drawings and in the absence of any details or any missing details, the signs shall be provided as directed by the Engineer.

The sign shall be reflectorised as shown on the drawings or as directed by the Engineer. The signs shall be of retro-reflective type and made of prismatic reflected sheeting fixed over aluminium sheeting as per these specifications.

The cautionary and mandatory signs shall be fabricated through the process of screen-printing. With regard to informatory signs with inscriptions, the message shall be of cut out letters made in the transparent overlay film pasted over the base sheeting with pressure sensitive adhesive or as the base sheeting with pressure sensitive adhesive or as instructed by the manufacturers or as directed by the Engineer.

2004.3 Material

The various materials and fabrication of the traffic signs shall conform to the following requirements:

(a) Concrete

Concrete shall be of the grade shown on the Contract drawings or otherwise as directed by the Engineer.

(b) Reinforcing Steel

Reinforcing steel shall conform to the requirement of the relevant codes as directed by Engineer unless otherwise shown on drawing.

(c) Bolts, nuts, washers

High strength bolts, precision bolts and nuts shall conform to the relevant specifications. The bolts and nuts shall be galvanised (zinc coated, 0.55 kg/m² minimum single spot) and galvanising shall conform to the relevant specifications.

(d) Plates and supports

Plates and support sections for the signposts shall conform to the relevant specifications. The plates and supports shall be galvanised (zinc coated, 0.55 Kg/m². minimum single spot.) and galvanising shall conform to the relevant specifications.

(e) Aluminium

Aluminium sheets used for sign boards shall be of smooth, hard and corrosion resistant aluminium alloy conforming to the relevant specification. The back of the sheet shall be painted with two coats of Epoxy paint.

The thickness of the sheet shall be 3 mm for all types of signs.

2004.4 Structural Details

The structural details for supports shall be as per the Contract drawings and/or as directed by the Engineer.

2004.5 Retro-reflective Sheeting

(a) General Requirements

The retro-reflective sheeting used on the sign shall consist of the white or coloured sheeting having a smooth outer surface, which has the property of retro-reflective over its entire surface. It shall be unused and shall show no evidence of cracking, scaling, pitting, blistering, edge lifting or curling and shall have negligible shrinkage or expansion. A certificate of having tested the sheeting for these properties in an unprotected outdoor exposure facing the sun for two years and its having passed these tests shall be obtained from a reputed laboratory of the manufacturer of the sheeting, for each lot separately.

The reflective sheeting shall be of prismatic lens type OF ASTM - Type-IX.

(b) Lens Type

The retro-reflective sheeting shall be of Prismatic lens type, consisting of cube corner lenses and pressure sensitive adhesive and should be applied to the sign substrate at room temperature of 18 °C, transparent, waterproof plastic having smooth surface. The coefficient of retro-reflective as determined in accordance with ASTM Standard E- 810 shall give the minimum values as indicated in table given below.

Minimum Coefficient of Retro-reflection for Retro-reflective sheeting Prismatic Lens Type (candelas/lux/m²)

Obtuse Angle (°)	Entrance Angle (°)	White	Yellow	Green	Red	Blue
0.1	-4	660	500	66	130	30
0.1	+30	370	280	37	74	17
0.2	-4	380	285	38	76	17
0.2	+30	215	162	22	43	10
0.5	-4	240	180	24	48	11
0.5	+30	135	100	14	27	6
1.0	-4	60	60	8	16	3.6
1.0	+30	45	34	4.5	9	2

When totally wet, the sheeting shall not show less than 90% of the values of retro-reflectance indicated in table above. At the end of 7 years, the sheeting shall retain at least 75% of its original retro-reflectance.

2004.6 Messages and Borders

The messages (legends, letters and numerals) and borders of Cautionary/Regulatory sign boards shall be screen printed. Screen printing shall be processed and finished with materials in a manner specified by the sheeting manufacturer and shall be bonded with the sheeting in the manner specified by the manufacturer.

The messages (legends, letters and numerals) and borders of information signs shall be of cut letters made in transparent overlay film pasted over the base sheeting with pressure sensitive adhesive or as instructed by the manufacturers or as directed by the Engineer.

For screen printed transparent coloured areas on white sheeting, the co-efficient of retro-reflection shall not be less than the values of corresponding colour in the table above.

Cut-out messages and borders, wherever used, shall be made in transparent film applied on base sheeting with pressure sensitive adhesive with the coefficient of retro-reflection which shall not be less than the values of corresponding colour in the table above. For the background colour of the sign the coefficient of retro-reflection shall not be less than that specified in the table above for the respective colours.

2004.7 Colour

The colour shall be as specified and shall conform to the requirements of the table below. Conformance to colour requirements shall be determined spectrophotometrically in accordance with ASTM E 1164, with instruments utilizing either 45/0, or 0/45 illumination/viewing conditions and tolerances as described in ASTM E 1164 for retro-reflective materials.

Conformance to Colour Requirements

								Reflectance		
								Limit (y)		
Colour	x	y	x	y	x	y	x	y	Min	Max.
White	.30	.3	.35	.35	.33	.37	.28	.32	40.0	
Yellow	.48	.42	.54	.45	.46	.53	.42	.48	24.0	45.0
Red	.69	.31	.59	.31	.56	.34	.65	.34	3	15
Blue	.07	.17	.15	.22	.21	.16	.13	.03	1.0	10.0
Green	.03	.39	.16	.36	.28	.44	.20	.79	3.0	9.0

The four pairs of chromaticity coordinates determine the acceptable colour in terms of CIE 1931 standard colorimetric system measured with standard illumination source D65. These colours are equivalent to those listed in ASTM D4956 using source C.

The colour shall be durable and uniform in acceptable hue when viewed in daylight or under normal headlights at night.

2004.8 Adhesives

The sheeting/film shall have a pressure sensitive adhesive of the aggressive tack type requiring no heat, solvent or other preparation for adhesion to a smooth clean surface. The adhesive shall be protected by an easily removable liner (removable by peeling without soaking in water or other solvent) and shall be suitable for the type material of the base plate such that it shall not be possible to remove the sheeting from the sign base in one piece by use of sharp instrument. The adhesive shall form a durable bond to smooth, corrosion and weather resistant surface of the base plate. In case of pressure sensitive adhesive sheeting, the sheeting shall be applied in accordance with the manufacturer's specifications.

2004.9 Fabrication

The surface to be reflectorised shall be effectively prepared to receive the retro-reflective sheeting. The aluminium shall be de-greased either by acid or hot alkaline etching and all scale/dust removed to obtain a smooth plain surface before the application of retro-reflective sheeting. If the surface is rough, approved surface primer may be used. After cleaning, the metal shall not be handled, except by suitable device or clean canvas gloves, between all cleaning and preparation operation and application of reflective sheeting/primer. There shall be no opportunity for the metal to come in contact with any contaminants prior to the application of retro-reflective sheeting.

Complete sheets of the material shall be used on the signs except where it is unavoidable. At splices, sheeting with pressure sensitive adhesives shall be overlapped not less than 5 mm. Where screen printing with transparent colours is proposed, only butt jointing shall be used. The material shall cover the sign surface evenly and shall be free from twists, cracks and folds. The transparent overlay film in which cut-out messages have been made shall be bonded with sheeting in the manner specified by the manufacturer.

2004.10 Warranty and Durability

The Contractor shall obtain from the manufacturer a seven year warranty for satisfactory field performance including stipulated retro-reflectance of the retro-reflective sheeting of Prismatic lens type and that of transparent film and submit the same to the Engineer. In addition, a seven year warranty for field satisfactory performance of the finished signs with retro-reflective sheeting of Prismatic lens type, inclusive of the screen printed or cut out letters/legends, transparent film and their bonding to the retro-reflective sheeting shall be obtained from the contractor/Supplier and submitted to the Engineer. The Contractor/Supplier shall also furnish a certification that the signs and materials supplied against the assigned work meets all the stipulated requirements and carry the stipulated warranty.

Warranties shall be given in original and shall have legal jurisdiction in Kenya. Warranties given by power of attorney holders will not be acceptable.

Processed and applied in accordance with recommended procedures, the reflective material shall be weather resistant and, following cleaning, shall show no appreciable discoloration, cracking, blistering or dimensional change and shall not have less than 50 % of the specified minimum reflective intensity values, given in the table under Clause 2004.4 (b) above, when subjected to accelerated weathering for 1000 hours, using type E or EH weatherometer (AASHTO Designation M-268).

2004.11 Installation

Sign posts, their foundation and sign mountings shall be so constructed as to hold these in a proper and permanent position. Sign supports shall be of galvanised structural steel and shall be firmly fixed to the ground by means of properly designed foundation or as shown on the Contract Drawings. The work of the foundation shall conform to the relevant clauses of the Standard Specification.

All components of the signs and supports, excluding the back side of aluminium sheet and the reflective portion, shall be thoroughly scaled, cleaned and galvanised (zinc coated, 0.55 Kg/m². minimum single spot.) and shall conform to the relevant specifications.

The signs shall be fixed to the posts by welding and/or bolts and washers as shown on the drawing. After the nuts have been tightened, the tails of the bolts shall be furred over with a hammer to prevent removal.

2004.12 Foundation for Support

The foundation for the supports of the sign boards with single support shall be by making excavation in all type of strata to the sizes and level as shown on the relevant drawings and fixed with class 20/20 cement concrete during installation.

The foundation for the supports of the sign boards with two or more supports shall be made by boring holes in all types of strata to the sizes levels as shown on the relevant drawings and fixed with class 20/20 cement concrete during installation. All concrete works shall be carried out as per the relevant specifications.

2004.13 Measurement for Payment

The measurement of standard cautionary and mandatory sign boards shall be in numbers of sign boards supplied and fixed and this shall constitute full payment for the supply of all materials for the sign board and its supports and foundations, fabrication and installation in the ground or embankment as per the specifications. Informatory sign boards with board area exceeding 1.0 m². shall be measured by area of the reflectorised sheet in square meters.

2004.14 Rate

The Contract unit rate shall be payment in full for the cost of making the road sign including supports and foundations, including all materials, installing it at the site and incidentals to complete the work in accordance with the specifications. In case of overhead sign boards supported on overhead gantry the rate shall not include the support gantry, its foundation and erection which shall be paid separately.

2005 Road Marking

Road marking paints shall be hot applied thermoplastic materials as specified under Clause 219 of the Standard Specification.

2006 Guardrails

Add the following to this clause:

2006.1 Removing, Renovating and Re-erecting Guardrails

Where the existing guardrails have to be removed, or removed and re-erected, or removed, renovated and re-erected, the three processes of removal, renovation and re-erection shall be carried out as follows:

(a) Removing the Guardrails

All guardrails and end units shall be loosened. Posts shall be carefully dug out and the holes shall be filled and compacted in 150 mm layers. Items used for fixing, including bolts, nuts, washers, shall be placed in bags, after which all materials shall be transported to a store approved by the Engineer and all stored in-groups by type.

Where material is intended for re-use, it shall first be unpacked for inspection by the Engineer. The Engineer will decide which material that shall be disposed off if, on inspection it is found unsuitable for re-use.

(b) Renovating the Guardrails

Guardrails and end pieces suitable for re-use shall be taken to the workshop for cleaning and painting. Rust and the existing paint shall be completely removed and minor indentations hammered out. The guardrails shall receive surface treatment in accordance with Clause 2006 of the Standard Specification.

Timber posts suitable for re-use shall be cleaned and treated with an approved timber preservative. Bolts nuts and washers to be re-used shall be cleaned and all dust removed, and shall then be oiled.

(c) Re-erection

The guardrails shall be erected in positions as shown and all the removed materials suitable for re-use and as much supplementary new materials as may be necessary shall be used. Re-erection shall be as specified for new guardrails.

2006.2 Pedestrian Railing

Pedestrian safety barriers shall comply with the requirement of BS 3049. The steel tubing and wire mesh shall be primed with zinc chromate or equal suitable for galvanizing, undercoat and finished with not less than two coats of permanent outdoor enamel of white paint.

2007 Kerbs

Name the existing text with the head as "2007.1 Installation".

Add the following to this clause:

2007.2 Existing Kerbs

Where shown on the drawing or directed by the Engineer, the Contractor shall remove the existing road kerbs and channel, including bed and haunches. Care shall be taken to minimize over break into the existing pavement. The Contractor shall reinstate any over break with a lean concrete or such other materials as may be approved by the Engineer.

2007.3 Repair of Damaged Railing and Kerbs

The repair of damaged railing shall be done by replacement of damaged pipes and posts. The damaged kerbs shall be repaired by cement mortar.

(a) Materials as per Relevant Codes

Ordinary Portland cement
Coarse aggregate and fine aggregate
Tor steel
Water suitable for concreting
MS steel sections and pipes
Zinc rich epoxy primer like Nitrozinc primer or any approved equivalent and epoxy coal tar.

(b) Equipment

- (i) Welding equipment
- (ii) Painting/white washing brushes
- (iii) Other miscellaneous equipment

(c) Procedure

The damaged portion of steel/RCC rating shall be removed up to the unaffected portion of the railing and the parent remaining parts which have to be connected with new components shall be thoroughly cleaned.

In case of RCC railing, the casting of new units shall be carried out by adopting standard practice of construction using all necessary care. The newly constructed RCC components shall be cured as per standard practice of curing by water. The dried up and cured concrete

shall be white/colour-washed with proper care to match with the existing colours.

In case of MS pipe railing, the new components or repaired components shall be fixed with necessary care keeping in consideration the alignment and level. The railing components shall then be painted with zinc rich epoxy based primer and finishing with two coats tar epoxy or paint to match the existing colour including cleaning and surface preparations as directed by the Engineer.

The damaged kerbs shall be repaired with cement mortar and the cement mortar shall be cured as per the standard practice. The kerbs shall then be painted black and yellow in alternative bands with reflecting paint of specification and quality approved by the Engineer to give an even shade on work as per the Standard Specification.

2010 Trees

Add the following to Clause 2010 of the Standard Specification:

2010.1 Plantation of Trees and Hedges

(a) Scope

The work shall consist of:

- Planting of tree saplings in median or other designated locations, and
- Planting of hedges within median area.

(b) Materials

(i) Dump Manure

Dump manure shall be of well decayed (at least six months) organic or vegetable matter, obtained in the dry state from the municipal dump or other similar sources approved by the Engineer. The manure shall be free from earth, stone, brickbats or other extraneous matter.

(ii) Farmyard Manure

Farmyard Manure shall be well decayed (should be at least 6 months covered in dump), free from grits and any other unwanted materials.

(iii) Good Earth

The soil shall be agricultural soil of sandy-loam texture, free from grit, marl, shingle, stone, brickbats, building rubbish and any other foreign matter. The earth shall be free from clods or lumps of sizes bigger than 75 mm in any direction. It shall have PH value ranging between 6 and 8.5.

(iv) Oil Cake (Neem/Castor/Groundnut)

The cake shall be free from dust, grit and any other foreign matter.

(v) Sapling of Trees

The sapling of trees shall be of medium height, leafy type and draught resistant variety native to the area and be of good quality of minimum of 2 m height or calliper diameter of 25 mm as directed by the Engineer.

(vi) Sapling of Hedges

The saplings shall be of draught resistant variety normally grown for hedges in the area, approved by the Engineer.

(c) Construction Operations

(i) Tree Planting and Refilling Earth after Mixing with Oil Cake, Manure and Watering

Holes of circular shape of 900 mm diameter and 1000 mm in depth in ordinary soil shall be excavated and the excavated soil, broken to clods of sizes not exceeding 75 mm in any direction, shall be stacked outside the hole. Stones, brickbats, unsuitable earth and other rubbish, all roots, weeds and other undesirable growth encountered during excavation shall be separated out and unserviceable material removed from the site as directed by the Engineer.

Useful material, if any, shall be stacked properly and separately. Good earth in quantities required to replace such discarded stuff shall be brought and stacked at site by the Contractor, with a depth not more than 500 mm from ground level. The pit shall be treated for termite by raking the soil up to 50 mm and treated with 5% Aldrin or Chloradang dust in soil.

The tree hole shall be manured with powdered neem/castor oil cake along with farm yard manure/dump manure screened through 16 mm sieve and these shall be uniformly mixed with the excavated top soil after the manure has been broken down to powder (size of particles not to exceed 6 mm in any direction) in equal proportion. A 2 m high sapling of trees shall be placed at the centre of the hole and then the mixture shall be filled into the hole up to the level of adjoining ground and then profusely watered to enable the soil to subside. The refilled soil shall then be dressed evenly with its surface about 50 mm to 75 mm below the adjoining ground level or as directed by the Engineer.

The planting shall be completed soon after completion of the median.

(ii) Circular Mild Steel Tree Guard with Bars

The tree guard shall be 900 mm in diameter. The tree guards shall be formed of:

- 3 № 25 mm x 25 mm x 3 mm angle iron verticals 1.95 m long excluding splayed outward at lower end up to an extent of 50 mm
- 3 № 25 mm x 5 mm MS flat rings fixed as per the design
- 5 № 1.55 m long 6 mm diameter bars. Each ring shall be in two parts in the ratio of 1:2 and their ends shall be turned in radically for a length of 40 mm at which they are bolted together with 8 mm diameter and 30 mm long MS bolts and nuts.

The vertical iron shall be welded to rings along the circumference with electric plant. 15 № bars shall be welded to rings at equal spacing along the circumferences of ring. The lower end of the angle iron verticals shall be splayed outwards up to an extent of 50 mm. The lower end of the flat of lower ring shall be at the height of 1.95 m. The middle ring shall be in the centre of top and lower ring. The bars shall be welded to the rings as directed by the Engineer. The entire tree guard shall be given two coats of paint of approved brand and of required shade over a priming coat of ready mixed primer of approved brand. The design of the tree guard shall be approved by the Engineer.

(iii) Planting of Hedges

The hedges saplings shall be planted in two rows, one each along each edge of the median. Bed for the saplings shall be prepared with necessary manuring, and the live saplings shall be planted in lines parallel to the median edge to the directions of the Engineer. Spacing between saplings in a row shall be such that a thick hedge can be grown, and this shall generally be not farther away than 300 mm.

The planting shall be completed soon after completion of the medians.

(iv) Grassing of Median Area

The area of the median between the hedges shall be seeded and mulched to develop grass cover as directed by Engineer.

(d) Maintenance

The saplings of trees and hedges planted shall be watered and maintained by the Contractor till issuance of the final certificate at the end of the Defects Liability Period. This shall also include watering, weeding out of undesirable plants and replacement of dead plant, manuring and trimming of the hedges.

Add the following clauses to this section:

2012 Service Ducts beneath Roads

Where instructed by the Engineer, the Contractor shall construct service ducts beneath the carriageway and shoulders/footpaths. The ducts shall consist of 100 mm to 300 mm diameter ogee precast concrete pipes surrounded by a minimum of 100 mm thickness of Class 15/20 concrete. The minimum clearance between the road formation and the top of the concrete surround shall be 100 mm.

The ducts shall be provided with draw cords fabricated from strong man-made fibre such as nylon and each duct shall be sealed at each end with a tight fitting plastic plug. In the existing pavement, the duct shall be at least 250 mm below the road surface measured from the top of the concrete pipes and all back filling shall be in Class 15/20 concrete. The concrete pipes shall conform to the requirements of Clause 215 of the Standard Specification.

2013 Duct Markers

Duct markers shall be installed by the Contractor at each end of the services ducts provided under Clause 2012 above. The duct marker shall be located immediately beyond the outer edge of the shoulder or footpath and as close to the line of the duct as physical constraints permit. Where several ducts are laid side by side, only one duct marker post will be necessary. The duct marker posts shall be constructed as shown on the drawings and shall be clearly and durably marked on the side facing away from the road. The marker shall be inscribed 'X DUCTS' where X is the number of ducts stated in the group marked by the marker posts.

2014 Road Bump and Rumble Strips

Where shown on the Drawings or instructed by the Engineer, the Contractor shall provide, place trim to line and level bumps and/or rumble strips on the carriage way, connecting roads or shoulders. Where instructed, the road bumps shall extend the full width of carriageway and shoulders. The bumps shall be constructed in asphalt concrete to the dimensions shown on the Drawings and to the same standard as the wearing course on the main carriageway.

2015 Bollards

Where shown on the Drawings or instructed by the Engineer, the Contractor shall construct permanent bollards. The bollards shall be gauge 16 steel pipe Bollards of diameter minimum 150mm

and 1.0 m above the ground, embedded to a depth of 0.5m at place. The bollards shall be filled using a minimum class (15/20) concrete and as shown on the Drawings.

2016 Retro-Reflective Road Studs

All retro-reflective road studs shall comply with BS 873: Part 4. The Contractor shall submit details of the reflective road studs he proposes to use in the works to the Engineer for approval. The Contractor shall submit also a Certificate of approval from an approving authority. The reflective road studs shall be installed in the locations shown on the drawings or instructed by the Engineer.

2017 Measurement and Payment

(a) Item: Remove existing guardrail Unit:

m

Removal of guardrail shall be measured by the metre as the length of guardrail instructed to be removed, measured between terminal points of the sections removed. The rate shall include for loading, transporting to any point on the site, off-loading and stacking the material and disposing off material unsuitable for re-use.

(b) Item: Renovate and re-erect guardrails Unit:

m

The unit of measurement shall be the length of single guardrail, whether straight or bent, or end pieces renovated as specified. The rate shall include for all works as specified and storage as required. The rate shall also include for erecting the guardrails in accordance with Clause 2006 and any new poles, nuts, bolts and accessories that may be required.

(c) Item: Pedestrian railing Unit:

m

Pedestrian railing shall be paid by the length instructed by the Engineer. The rate shall include for supplying and erection in accordance with the drawings. It shall also include for any bending of end pieces as may be required, disposal of excess materials and tidying up the site after completion of installation.

(d) Item: Service ducts Unit:

m

Service ducts shall be measured by the metre as the length of duct installed as per the Engineer's instructions. The rate shall include for providing all materials, excavation, and installation of concrete pipes with concrete surround, backfilling to formation level, compaction, draw-cords and plugs, all in accordance with Clause 2012 above.

(e) Item: Duct markers Unit:

No

Duct markers posts shall be measured by the number installed. The rate shall include for provision and installation of posts, all excavation and backfill, compaction to the satisfaction of the Engineer and removal of surplus materials.

(f) Item: Bollards Unit:

Nº

Bollards shall be measured by the number installed. The rate shall include for provision and installation of bollards, all excavation and backfill, compaction to the satisfaction of the Engineer and removal of surplus material.

(g) Item: Reflective road studs Unit:

Nº

Retro-reflective road studs shall be measured by the number installed. The rate shall include for provision and installation of studs to the manufacturer's recommendations and satisfaction of the Engineer.

(h) Item: Road Bumps Unit:

m³ of each type

2200 DAY WORKS

2201 Scope

This specification covers instructions that may be issued by the Engineer as additional or substituted work to be executed on a day work basis by the Contractor or by his sub-contractors.

2202 Standards

All codes and standards mean the latest. Where not specified otherwise the installation shall generally follow the Kenyan Standard Specification for Road and Bridge Construction

2203 Measurement and Payments

Measurement and payment for all day works items shall be in accordance with the items listed in the Bill of Quantities, the preamble to Bill of quantities and the specifications above and cover the payment of plant, labour and materials for work executed in accordance with the Engineer's instructions.

2300 ENVIRONMENTAL MANAGEMENT PLAN

The Contractor shall implement the Environmental Management Plan (EMP) measures (Matrix Tables given below both for construction and maintenance and use phases), enhancement measures as directed by the Engineer. He shall submit the report on compliance with the Environmental Mitigation measures periodically to the Engineer. The Engineer will review the compliance submitted by the Contractor.

Environment and Social Management Plan Matrix

(a) Construction Phase

Table 1: Actions Matrix

Item No	Anticipated Impacts and Sources	Proposed Actions	Responsibility and Timeframe	Targets to Achieve	Monitoring Parameters
1	<u>Degradation of water sources:</u> - Over-abstraction of water, - Water quality degradation, - Effects on downstream dependants, - Stream bed siltation, <u>Sources:</u> - Silt from earth moving, - Oil and grease, - Raw asphalt concrete, - Workshops and machinery maintenance areas, - Construction camp sites, - Material preparation sites.	- Observe regulations on water abstraction permits, slope excavations, etc.), - Monitor standards of sanitation at the construction camps, - Establish a mechanism for solid waste collection, storage, transfer and disposal, - Liaise with water authorities for installation of RGSs at all crossings.	The Contractor, The Resident Engineer. DEO and Municipal Manager Engineers. Immediate action and maintained throughout the project period.	- Minimal silt discharging into water bodies, - NO effects on physical status of water quality, - Centralized effective collection of solid wastes	- Status of streams and wetlands and water quality along reserve, - General social Concerns. Specific attention at all crossings and other water bodies.
2.	<u>Air quality:</u> - Dust and particulate matter, - Visual disruption, - Particulate matter, - Surface depositions, - Bronchial and eye problems. <u>Sources:</u> Construction activities (earth moving and machinery operations).	- Ensure earth surface roads, deviations and dry materials are kept damp at all times, - Establish information flow process to the communities on dusty conditions, - Keep inevitable dusty conditions and/or emissions as short as possible,	The Contractor and the Resident Engineer. Surveillance by the, NEMA Officials, DEO and Public Health Officials. Project period	Low visible particulate matter in the air. Requirements of Clause 19 of the General Conditions of Contract	- Dust level within the project, - Exhaust fumes from construction machineries. Project wide situation.

Item Nº	Anticipated Impacts and Sources	Proposed Actions	Responsibility and Timeframe	Targets to Achieve	Monitoring Parameters
3	<u>Vegetation Cover Degradation:</u> - Removal of vegetation from road reserve and deviation routes, - Loss of vegetation from material sites and access routes, <u>Sources:</u> - Construction of deviations, - Material borrow pits and quarries,	- Collaborate with the Local authorities in their beatification programmes, - Implement top-soiling and grassing programme for the road reserve and material sites, - Introduce soft shrubs in the median of the dual carriage, - Introduce trees on canopies on reserves near built-up areas, - Ensure vegetation does not compromise road safety.	The Contractor and Resident Engineer Municipal Manager Engineers Engineers and DEO to keep surveillance	Vegetation trend that is also safe to the road users. Requirements of Clause 19 of the standard Bid Docs	Greenery along the route of the road. Special attention at sloppy sections and river crossings will be necessary.
4	<u>Environmental Pollution:</u> - Siltation of water bodies, - Pollution of water (turbidity and hydrocarbons residuals), - Visual pollution (from dust and emissions), <u>Sources:</u> - Oil/grease storage, - Solid waste disposal (filters, greases, asphalt wastes, etc.), - Construction machinery and vehicles, - Excavated earth, - Water abstraction points,	- Develop Standard Operating Procedures (SOPs), schedules and supervision guidelines for the project works, - Focus on sensitive features (e.g. stream crossings and slopes) for necessary precautions, - Establish dust control programme and machinery performance and waste disposal controls,	The Contractor Resident Engineer NEMA offices, water offices and Municipal Manager Engineers Engineers to keep surveillance.	Minimal disruption to physical and biological environmental quality throughout the route.	- Water quality, - Environmental features, - Risks to health and safety, - Wastes characteristics. Pollutants from camp sites, service yards and material preparation yards.
Item	Anticipated Impacts and	Proposed Actions	Responsibility and	Targets to Achieve	Monitoring Parameters

Nº	Sources		Timeframe		
5	<u>Land degradation:</u> • Soil loss, • Soil quality degradation, • Land use changes, • Material sites, Source: • Surface runoff channels from camps and working areas, • Temporary road diversion routes, • Material extraction and transportation.	• Monitor land use trends along the route in liaison with planning department, • Initiate a planned vegetation programme on road reserve, • Rehabilitation plans of materials sites with landowners (lease agreements to reflect this aspect).	The Contractor and the Resident Engineer Surveillance by the Municipal Manager Engineers KURA Engineers and DEO	Conservation of soils on each side of the road.	Land use trends. A project wide concern, specific locations of camp sites, sloppy zones and crossings. The Contractor to carry out full ESIA for all material sites
6	<u>Health and Safety</u> • Personal injuries (construction employees), • Communicable diseases including HIV/AIDS), • Potential accidents at material quarries, • Environmental diseases (bronchial and eye problems), <u>Sources:</u> • Construction dust and emissions, • Interaction of construction workers with communities, • Pollution of water from construction activities, • Material sites, • Traffic deviations, • Construction camp sites.	• Provide safety programmes for material sites and working areas, • Provide safety provisions (signage and lighting) for deviations, • Awareness, prevention and training on HIV/AIDS and other social diseases, • Provide service roads and bus at settlement areas to reduce road accidents. • Provide medical, insurance cover and PPEs for all the construction workers.	The Contractor and Resident Engineer. The PPRO, Surveillance by the Respective DWO, DPHO, and the DEO Entire project period.	Information flow and dissemination on health and safety. Specific response to HIV/AIDS issues Requirements of Clause 19 of the standard Bid Docs Requirements of Clause 34 and 35 of the General Condition Of Contract	Complaints on health safety aspects related to the road construction activities. Trends in HIV/AIDS cases along the corridor, Special focus on material sites and road diversions routes. Focus on major towns and settlement areas I the project corridor.

Item Nº	Anticipated Impacts and Sources	Proposed Actions	Responsibility and Timeframe	Targets to Achieve	Monitoring Parameters
7	<u>Social and Economic:</u> • Temporary disruption of business activities, • Insensitivity to public concerns during construction, • Access into and out of highway by special social groups, • Benefits to riparian communities • Safety issues (deviations and materials sites, etc.), • Noise to residents living along the route, <u>Sources:</u> Materials sites, Deviation routes, Construction machineries, Crossings, Construction camps.	• Enhance consultations with communities on activities affecting them and collaborate on the impacts reduction, • Establish modalities of recruiting manual labour from within the project areas, • Provide service roads and slips accesses, • Relevant Locals Authorities to consider physical planning along the highway / road (s) for maximum benefits, • Integrate construction works with other projects ongoing in the project route, • The contractor to establish and manage environmental and social committee to oversee mitigation measures,	The Resident Engineer in conjunction with the Contractor, Liaison with local authorities and the Provincial Administration, Entire construction period	An acceptable, sustainable and economically viable road with long term benefits to the people without adverse implications on the physical and social environment.	Trends in socio-economic dynamics along the project road and its catchments , Special attention on realigned and expanded sections of the road. Encroached sections will also require attention.

Item No	Anticipated Impacts and Sources	Proposed Actions	Responsibility and Timeframe	Targets to Achieve	Monitoring Parameters
8	<u>Provision of Road Reserve</u>	- County government of Wajir to undertake availability of the road reserve, - Serve adequate quit notices to the encroaching developments	Municipal Manager Upon commencement of the project	Clear project route and get back the road reserve.	The design of the road is confined within the 60m. Completed survey will provide actual encroachments and necessary acquisitions.
9	<u>Material Sites (hard stone, gravel and water)</u> - Land degradation, - Loss of land vegetation cover, - Surface hydrology changes, - Access roads' damages, - Water sources' degradation, - Water quality.	Full ESIA studies should be undertaken on all materials sites upon final identification, Rehabilitate the material sites after construction. Lease responsibilities with landowners necessary, Obtain appropriate permits for construction water abstractions	Contractor and Resident Engineer. DEO and Municipal Manager Engineers to supervise Throughout the construction phase.	Sustainable abstraction of materials.	It is likely that all material sites will be on private land. Sources of construction water have other uses by the communities.
10	<u>Decommissioning</u> - Removal of construction camps, - Materials sites and preparation yards, - Equipment removals.	- Carry out decommissioning audits for the camp sites, - Rehabilitate all material sites and preparation yards, - Remove all construction equipments and excess materials from the site.	The Contractor under supervision of the Resident Engineer, PPRO and the DEOs	Rehabilitated material sites and cleared material preparation yards.	Usability of the affected camps' and material sites.

(b) Road Maintenance and Use

Table 2: Action Plan Matrix (Maintenance and Use)

Item Nº	Anticipated Impacts and Sources	Proposed Actions	Responsibility and Timeframe	Targets to Achieve	Monitorable Indicators
1	<u>Environmental Pollution:</u> • Water quality degradation, • Air pollution, • Solid waste dumping (road litter), • Material spills (pollutants), • Vehicular scraps, • Residuals from material sites and preparation yards, <u>Sources:</u> • Surface runoff drains from the road, • Oils spills on road surface, • Road litter (from road users and roadside clearing), • Poorly maintained vehicles – higher related emissions, • Spills from accident sites, • Emerging social and economic centres, • Road repairs and maintenance activities.	• Establish a policy and implementation guidelines in close collaboration with experts and NEMA, • Develop monitoring compliance with vehicular emission standards along the road, • Introduce clean-up responsibilities for the road users (e.g. spills from accident vehicle owners), • Provide public waste receptacles at strategic locations along the route (bus stops and crossing areas), • Drainage channels be kept clear at all times to prevent overloading with polluting materials, • Collaboration with the traffic police on enforcement of road regulations.	Municipal Manager Consultation with the DEO and Water Offices for surveillance, Administration, Traffic Police Department and the Local Authorities.	A road that is compatible with the social conditions and features.	Complaints on the utilization of the roads, Environmental quality trends (status of water sources, water quality and aquatic vegetation), Compliance with road transport regulations.

Item No	Anticipated Impacts and Sources	Proposed Actions	Responsibility and Timeframe	Targets to Achieve	Monitorable Indicators
2	<u>Health, Safety and Security</u> - Contamination of water and water sources, - Noise and vibrations, - Increased road accidents, - Security aspects, - Spread of infectious diseases (HIV/AIDS and other social diseases) <u>Sources:</u> - Contaminated runoff from the road surface, - Roadside litter and solid wastes, - Increased traffic and driving style variances along the route, - Social interactions, - Inadequate road safety signage and facilities.	- Draw strategies for road safety measures and sensitize residents within risk areas, , - Integrate safety measures in the overall maintenance of the road, - Develop liaison with health provision arms for emergence response on the road, - Liaise with appropriate department to ensure compliance with road regulations and traffic rules along the stretch, - Ensure maintenance of signage and other facilities at all times.	Municipal Manager Traffic Police department, Administration Leadership, Health department and rescue groups. Continuous	Enhanced safety throughout the road and construction of the road to enforce security.	Complaints from the riparian residents, Recorded cases and categories of road accidents, HIV/AIDS trends within towns along the route.

3	<u>Social and Economic Aspects</u> • Land use changes due to efficient transport, • Increased settlements and population, • Higher traffic volumes, • Mixed economic activities (general trading, industrial, institutional, etc.), • Road safety issues, • Road ownership by all.	• Collaboration with physical planning Depts. to enhance roadside planning. • Collaborations for sustainable social and economic development, • Include environmental aspects in scheduled road audits.	Municipal Manager Continuous process	Compatibility of the road with social and economic interests of the local residents and road users.	Land use trends in time and along the route, Population trends Complaints received from the local communities and the road users in general.

Item No	Anticipated Impacts and Sources	Proposed Actions	Responsibility and Timeframe	Targets to Achieve	Monitorable Indicators
4	<u>Maintenance</u> • Drainage clearance for free storm water flow, • Vegetation clearing for enhance visibility, • Roadside litter collection, • Road safety facilities and signage maintenance, • Re-encroachment into the road reserve, • Roadside land development practices,	• Establish modalities for the involvement of the riparian landowners in the maintenance of the road, • Install and maintain appropriate road signs. Liaise with other authorities in the control of roadside advertisement billboards that masks the safety signs, • Maintain trash bins at strategic locations along the route (bus stops and major crossing points), • Prepare a maintenance procedure in line with existing guidelines.	Municipal Manager DEO, water authorities the Administration for surveillance Continuous process	Maintained high level quality of road surface, installations and components.	
5	<u>Decommissioning phase:</u>	Undertake a decommissioning audit of part, sections or entire road reconstruction and establish appropriate measures to prevention environmental pollution and public safety.	Municipal Manager After the design road life span (15 – 25 years) Any major repairs along the route.	None or minimum impacts to the environment and social well being	–

2400 TRAFFIC MANAGEMENT AND DIVERSION

2401 General

The Contractor shall prepare and submit to Engineer within one month of the date of commencement of the works a detail traffic diversion plan as per the requirement of traffic authorities. The Contractor shall have to carry out the modifications in the traffic diversion plan at various stages of work as required. The Contractor shall maintain liaison with the traffic/highway police/authorities so as to ensure smooth flow of traffic at all stages of the work without causing inconveniences to the traffic.

2402 Traffic Rotary

The Contractor shall provide traffic rotary showing traffic direction made up of four blinders mounted on M.S. Frame of 5-x50 mm x 6 mm size 250 Hz frequency electrically operated at both ends of the cordoned area for help and guidance of road users. Necessary arrangements for supply of electricity shall be made by the Contractor.

2403 Road Delineates

Road delineates as per the relevant codes and as per the relevant drawings and as directed by Engineer shall be fixed at suitable intervals to have a suitable guidance to the road users at the night time for smooth flow of traffic. Delineators shall be fixed firmly in the ground. Also, red flags and cat eye reflectors shall be fixed on the barricades. Alternative arrangements shall also be kept ready in case of failure of electricity.

2404 Signs, Lights, Barriers and other Traffic Control Devices

Signs, lights, barriers and other traffic control devices shall be provided and maintained in a satisfactory condition till such time that they are not required as directed by the Engineer, so as to ensure smooth and safe traffic on the road throughout the length of the project road.

2405 Barricades

The barricades erected on either side of the carriageway/portion of the carriageway closed to traffic, shall be of strong design to resist violation, and painted with alternate black and white stripes. Red lanterns or warning lights of similar type shall be mounted on the barricades at night and kept lit throughout from sunset to sunrise.

At the points where traffic is to deviate from its normal path, whether on temporary diversion or part width of the carriageway, the channel for traffic shall be clearly marked with the aid of pavement markings, painted drums or similar devices to the directions of the Engineer. At night, the passage shall be delineated with lanterns of other suitable light source.

2406 Passage through Works 2406.1

One-Way Traffic Operation

One-way traffic operation shall be established whenever the traffic is to be passed over part of the carriageway inadequate for two-lane traffic. This shall be done with the help of temporary traffic signals or flagmen kept positioned on opposite sides during all hours. For regulation of traffic, the flagmen shall be equipped with red and green flags and lanterns/lights.

2406.2 Two Way Traffic Operation

On both sides, suitable regulatory/warning signs as approved by the Engineer shall be installed for the guidance of road users. On each approach, at least two signs shall be put up, one close to the point where transition of carriageway begins and the other 120 m away. The signs shall be of approved design and of refractory type, if so directed by the Engineer.

2406.3 Traffic Control Devices

Signs, lights, barriers and other traffic control devices, as well as the riding surface of diversions shall be maintained in a satisfactory condition till such time that they are not required as directed by the Engineer. The temporary travelled way shall be kept free of dust by frequent applications of water as necessary.

The details of work which is to be carried out by the Contractor as part of the traffic management during the construction period are given under Bill No 9 of the Bill of Quantities.

2500 HIV/AIDS, GENDER, SOCIAL ISSUES AND LOCAL PARTICIPATION

2501 Scope

This specification sets out the Contractor's obligations with regard to on-site HIV/AIDS awareness campaign and preventive measures which are to be instituted.

2502 Interpretation and Documentation

The following documents shall inter-alia be read in conjunction with this specification.

- The instruction to bidders
- The Conditions of Contract
- The drawings

2503 HIV/AIDS Awareness Campaign

The Contractor shall institute an HIV/AIDS awareness campaign amongst his workers for the duration of the Contract. As part of the Campaign the Contractor will be required to display AIDS awareness posters in all buildings frequented by workers employed on the Contract where such buildings fall under the control of the Contractor. In addition, at least ten (10) of the Contractor's vehicles, regularly used on site shall display HIV/AIDS awareness posters. The posters shall be printed on gloss paper and shall be at least A1 size on building and A3 size or other approved size on vehicles. The message on the posters shall be supplied by the Employer through the Engineer before the posters are printed.

AIDS awareness shall also be included in the orientation process of all workers employed on the Contract.

In the awareness campaign, the Contractor shall employ and designate a safety officer who will undertake and coordinate all aspects of the HIV/AIDS awareness campaign.

2504 AIDS Prevention Campaign

The Contractor shall institute an HIV/AIDS prevention campaign amongst his workers for the duration of the Contract. As part of the campaign the Contractor will be required to make condoms available to workers. The condoms shall be from an approved manufacturer and comply with the current ISO Standards or WHO/UNAIDS Specifications and Guidelines for condoms, 1998, or any more recent equivalent publication. The Contractor shall make available at least 4,000 condoms every month, through dispensing machines or other approved method of distribution. The Contractor shall at all times keep the site adequately supplied with condoms.

As part of the campaign the Contractor shall operate at least one STD and HIV/AIDS clinic on site or make alternative arrangements with an existing suitably qualified and equipped Local clinic. The clinic shall have a minimum of two rooms each at least 10 m² with ablution and washroom. The clinic shall be suitably staffed and equipped for screening, diagnosis and counselling of STD and HIV/AIDS of the project staff and labour. The Contractor shall cover the costs of the clinic to provide free treatment for general STD cases, whereas workers with HIV/AIDS shall be referred to the national HIV/AIDS programme coordinated by the Ministry of Health.

2505 HIV/AIDS Training

2505.1 Objective

The objective of the AIDS/HIV training programme is to reduce the risk of exposure to and spread of the HIV virus in the Area influenced by the construction project. The target group will be local labourers and their superintendents employed by the works Contractor. The wider community will benefit indirectly through their normal day-to-day interaction with the target group.

2505.2 Scope of activities

Activities for HIV/AIDS awareness and prevention will be broad-based, targeting both individuals and groups. They may consist of:

- Information posters in public places, both on and offsite (eating houses, bars and guest houses) and on the Contractor's vehicles
-

- Availability of socially marketed condoms
- Peer educators (reference people) drawn from the local labour and educated in HIV/AIDS issues for discussion with colleagues (estimate 1 per 100 employees).
- Small focus group discussions to disseminate information covering key issues
- Theatre groups and video presentations
- Promotional events (such as football matches) to encourage openness and discussion of HIV/AIDS issues.
- Promotional bill boards to raise awareness of the integration of construction and HIV/AIDS activities
- Inclusion of HIV/AIDS activities at site meetings with the Local Aids Committees and other approved representatives.
- Availability of promotional materials including T-shirts, caps, bumper stickers and key rings.

The scope of activities may be tailored as required to meet the perceived needs and priorities of the labourers and should involve participatory approaches to ensure that they are appropriate and have a public health impact. The scale and frequency of activities may also be adjusted to suit the requirements of the target group. The education will cover:

- Preventive behaviour including partner reduction, condom use, awareness and appreciation of the importance of treatment of sexually transmitted incidences (STIs)
- Skills including negotiating safer sex, correct condom use, purchase of condoms without embarrassment, and
- Referral to local health centres and available services.

Tasks to be undertaken to support the above activities services shall include:

- Establishing the status and focus of all current and planned HIV/AIDS activities in the area to ensure complementarities and determining potential involvement in project activities
- Carrying out a brief review of regional activities combining road construction with HIV/AIDS campaigns to determine options, best practice key issues and constraints
- Reviewing of Information, Education and Communication (IEC) materials available and their relevance to road construction, making recommendations for future development of IEC materials
- Providing education and training for the site personnel, superintendents and peer educators for the scope of activities as above.
- Providing supervision for peer educators to ensure sustained quality of education and provision of incentives for the scope of activities as above.
- Providing Mechanism for the social marketing of condoms and distribution of materials
- Monitoring activities regularly to assess effectiveness and impact. This should include an initial, interim and final assessment of basic knowledge, attitude and practices (KAP) taking account of the existing data sources and recognizing the limitations due to the short time frame to show behaviour change. The KAP shall be supported by qualitative information from focus group discussion.

2505.3 Collaboration

HIV/AIDS activities are coordinated nationally by the National Aids Control Council (NACC). The Kenya Urban Roads Authority in consultation with NACC and the Ministry of Health (MOH) shall coordinate with the local representatives. Representatives of Local Health Authorities shall be invited to attend training and communication activities.

Activities on the construction site shall be linked as far as possible with the on-going HIV/AIDS awareness and prevention in the area. This will ensure complementarity of approaches, reinforcing education and minimizing duplication, in addition, these links will ensure that the target group will have access to continued information after the end of the construction period.

2505.4 Contractor's Responsibilities

The Contractor will employ and designate a qualified HIV/AIDS expert, to be approved by the Engineer, who will work closely with the Employer, Ministry of Health and other implementing agencies to support the HIV/AIDS awareness and prevention activities. This will ensure maximum effectiveness and integration with construction activities. Specific but not exclusive, issues to be addressed by the Contractor shall include:

- Scheduling appropriate timing and durations of the implementation of HIV/AIDS activities as part of work plan for labourers and superintendents.
- Designated rest times such as lunch breaks and paydays shall be excluded.
- Identification of suitable individuals from recruitment records for education with the implementing organization
- Provision of suitable sites for communication activities and for condom distribution
- Monitoring of the implementation of peer educator activities, and
- Provision of support as necessary to the implementing organization.

2505.5 Inputs

An organization experienced in the provision of HIV/AIDS awareness and prevention activities shall be selected as a subcontractor to provide the above scope of activities on behalf of the main Contractor.

2505.6 Reporting

The implementing organization shall produce the following reports to be submitted to the Contractor, Consultants, Kenya Urban Roads Authority and NACC:

- Monthly progress briefs for inclusion in site meetings discussions
- Quarterly reports detailing activities carried out, issues and follow ups
- A review report of activities in the road construction sector
- A review report of the existing IEC materials with recommendations for development of materials specifically for the road sector
- A final report detailing the methodology and activities carried out under this project including lessons learnt, impact, liaison with the Contractor and other parties.

In addition, a report with the recommended approach for integration of HIV/AIDS awareness and prevention activities in the road construction sector shall be produced. This shall be a synthesis of project activities including contractual approaches, communication activities, availability of materials and liaison with the existing organizations. It shall be developed with all parties involved in the construction activities to ensure that the wide range of views and experiences are gained.

The final report and recommended approach will be presented to the Kenya Urban Roads Authority, NACC and other interested organizations including private sector, funding agencies and Non-Governmental Organisations.

2506 Timing

Activities shall commence at the start of the construction period and continue throughout the Contract period to ensure that a sustained impact reporting and dissemination activities shall continue for three months after the project is completed to ensure integration into the current practice.

2507 Measurement and Payment

The payment items in this Clause shall include full compensation for all work associated with the provision of HIV/AIDS related services as specified.

Item: Instituting an HIV/AIDS awareness campaign

Unit: Months

The unit of measurement shall be the calendar month or part thereof, measured over the duration of the campaign. The rate shall include for providing a Safety Officer to deal with HIV/AIDS together with his/her transport requirements. The payment shall be made monthly, pro-rata for parts of a month, from the date of appointment of the officer until the completion of the works or substantial demobilization of the local workforce whichever comes first.

Item: Instituting an HIV/AIDS prevention campaign

Unit: Months

The unit of measurements shall be the month. The rate shall include the cost of providing a clinic or make alternative suitable

arrangements, running the clinic, providing condoms as per the specifications and meeting all the costs of time related costs.

The payment shall be made monthly, pro-rata for parts of a month, from the date of establishing the clinic until the completion of the works or substantial demobilization of the local workforce whichever comes first.

Payment shall only be made for periods during which the Contractor has effectively provided the services.

Item: HIV/AIDS training

Unit: Provisional Sum

Payment shall be made for the actual expenditure incurred by the Contractor for which receipted vouchers shall be produced. The rate shall include full compensation for equipment, labour and material required for the provision of the services.

In addition, the Contractor will be paid for handling, overheads and profit at a percentage (%) rate of the receipted expenses incurred.

SECTION 6: CONDITIONS OF CONTRACT

SECTION 6A - CONDITIONS OF CONTRACT PART I: GENERAL CONDITIONS OF CONTRACT

The Conditions of Contract, Part I: General Conditions shall be those forming Part I of the “Conditions of Contract for Works of Civil Engineering Construction,” fourth edition 1987, reprinted in 1992 with further amendments, prepared by the *Fédération Internationale des Ingénieurs-Conseils* (FIDIC). These Conditions are subject to the variations and additions set out in Part II hereof entitled “Conditions of Particular Application.”.

Copies of the FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat
P.O. Box 86
1000 Lausanne 12
Switzerland
Facsimile: 41 21 653 5432
Telephone: 41 21 653 5003

SECTION 6B - CONDITIONS OF CONTRACT PART II: (CONDITIONS OF PARTICULAR APPLICATION)

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

SECTION VII - SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions shall supplement the GC. They are to be completed by the Procuring Entity and presented as part of the tendering document. Whenever there is a conflict, the provisions herein shall prevail over those in the GC.

Reference to GC clauses

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.	The site is the area OF THE ROAD RESERVES OF ALL THE ROADS AS STATED IN ITT 1.1 The name of the Engineer is <i>SENIOR SUPERINTENDING ENGINEER</i>
	In the definition of Certificate of Completion after the words “or part thereof” add the words “and performance maintenance services”
	In the definition of Defect add at the end “and/or with deformation detected”.
	In the definition of drawings delete the word “include” and replace with “the drawings of the works including”
	In the definition of construction works, <i>insert</i> the words “perform in..” immediately after the words “the contractor is required to”
	Amend the definition of Intended Completion Date to read; The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works and Services, as is the day after the lapse of the contract period stated in the contract (or as may be extended by the Procuring Entity) computed from the date of commencement.
	In the definition of Services <i>insert</i> the words “less applicable payment reductions as certified by the Engineer” after the words “full payment of monthly fee”
	In the definition of Start Date delete the words “ It does not necessarily coincide with any of the Site Possession Dates and <i>Insert</i> ; “It shall be calculated based on the date of the order to commence, commencement period and commencement conditions as prescribed in the contract”.
	Public Procurement Regulatory Authority is a Statutory Government Agency responsible for oversight of public procurement.

3.1	Amend the documents for the contract by inserting “Special Specifications as item No. 6” thus amending the order of priority as follows: - 1. Agreement, 2. Form of Acceptance, 3. Contractor's Tender and Appendix to Form of Tender, 4. Special Conditions of Contract (SCC),

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	5. General Conditions of Contract (GCC), 6. Special Specifications 7. Specifications, 8. Drawings, 9. Bill of Quantities, and 10. Any other document listed in the PC as forming part of the Contract.
5.	The address of the Procurement Entity is: COUNTY GOVERNMENT OF WAJIR. Street Address: WAJIR ROAD. Postal Address/Code : 9-70200, WAJIR Country: KENYA. Telephone: +254- Electronic Mail Address: info@wajir.go.ke The address of the Contractor is: Name: Street Address:..... Floor/Room Number: City:_____ Postal Code :_____ Country:_____ Telephone:_____ Electronic mail address: _____ <i>[insert exact street address, including telephone, and E-Mail address]</i>
6.2.4	Delete the words “approved by the Contractor” and replace with “agreed to by the

	Contractor”
6.4.1.	Delete Sub-Clause 6.4.1 and replace with; 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 if not mutually agreed upon: - a Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions. - b Engineer’s determination, including certification not agreeable to the Contractor or Procuring Entity - c Any dispute arising in respect of war risks or war damage. - d 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.

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract			
6.5.6	Insert the words “or arguments previously put before other fora to obtain decisions on the matter in dispute” immediately after the word “evidence”			
6.5.11	Delete the word “have” and replace with “be”			
8.3	Insert in line 3 the words “if so adopted by the Government of Kenya” immediately after the words “Tender Submission			
8.4.1	The Contractor is obliged to prepare and to furnish to the Engineer for Approval any works on the road that would relate to Rehabilitation, Improvement or Emergency works.			
8.4.5	Add paragraph 2 the statement; Provided such additional costs and extension of time are awarded by the Arbitrators or determined by the Engineer in Consultation with the Procuring Entity, based on verifiable facts supported by records provided by the Contractor.			
10.1	The Start Date shall be not later than 28 days after the issuance of the order to commence by the Procuring Entity.			
10.2	The Time Schedule for the achievement of specific Service Levels is:			
	Contract Month	Road Usability Compliance required on % of contract road	Road User Comfort Compliance required on % of contract road	Road Durability Compliance required o of contract road
	1	50	50	50
	2	100	75	75
	3	100	100	100
	Until end of Contract	100	100	100
11.4	Insert the words “The Contractor Shall provide and ensure that” at the beginning of the Sub-Clause			

11.7	Add the following sub-clauses The Contractor Shall be responsible for the adequacy, stability and safety of all site operations and of all methods of construction and whenever required by the Engineer, shall submit details of the arrangements and methods contractor proposes to adopt for execution of works. No significant alterations shall be made without prior notification to the Engineer.
12.1	The Contractor is specifically not allowed to sub-contact the any of the activities.
12.2	The Contractor Shall not subcontract under his own responsibility and without prior approval of the Procurement Entity any Works and Services.
14.2	The Procuring Entity shall give full possession of and access to the Site to the Contractor as indicated <i>in the Appendix to Form of Tender</i> .
15.1	Add the following words at the end of the 1st sentence “except for the purposes of verification of such information from relevant sources or confirmation contractual performance”

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
16.2	Key Personnel Key Personnel are defined as the Contractor’s personnel named in the Special Conditions of Contract. ROAD MANAGER: SENIOR FOREMAN:
16.2.4	Amend the sub-clause numbering to read 16.2.5 and Add the statement in the statement in the immediate sub-clause 16.2.5 as a paragraph, as follows; “Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with this Sub-Clause 16.2.5 shall be deemed to be an act or exercise by the Road Manager.”
16.2.6	Insert at the end of the sub-clause the words “with the Engineer’s consent”
16.2.8	Add a paragraph as follows; If any representative or person employed by the Contractor is removed in accordance with Sub-Clause 16.2.7, the Contractor shall, where required, promptly appoint a replacement
16.2.9	Delete the sub-clause
19.1	Add at the end of paragraph 2 the words; “unless otherwise such qualifications are proven to be not available in the Country and consented to by the Procuring Entity”
19.2.1	<i>Insert</i> in the first sentence the words “or applicable minimum labor wage as published in the Kenya Gazette from time to time” immediately after the word “carried out”
19.2.2	<i>Insert</i> the words “and remittance” immediately after the word “deductions”
19.7.4	The provisions concerning HIV-AIDS prevention shall apply.

19.9.1	Add a paragraph after sub-clause 19.9.1 (d) as follows; “Which requirement the Contractor shall comply with without delay and shall then appoint (or cause to be appointed) a suitable replacement”
19.9.2	Delete this sub-clause
20.3	Insert the words “not less than 48 hours” immediately after “advance notice”
20.4	In sub-clause 20.4; Delete the words “and may” and replace with “but shall” Delete the words “a signed” and replace with “duly certified”
20.9	Insert the word “not less than 48 hours” immediately after the words “a reasonable notice”
20.10	Insert at the end of sub-clause 20.10 The cost of such uncovering, reinstatement and making good shall be borne by the Contractor.
20.11	Delete this sub-clause
21.	The Contractor shall carry out the Rehabilitation Works, which are detailed in the TDS, Specifications and Bill of Quantities.
22.	There shall be no Improvement works in this contract.
23	Delete the last sentence and replace with; These Services shall be remunerated on monthly payment computed by the length of the roads maintained to the required performance standards at the tender unit rates less the

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract				
	applicable non-compliance payment reduction during the entire maintenance service contract period.				
25.2	The Contractor shall establish a Self-Control Unit. <i>[Note: The Self-control Unit should always be required, except for very small contracts.]</i>				
27	In clause 27, Whenever the word “Engineer” appear, add immediately after, the words “or Engineer’s representative”				
28.2	In Sub-Clause 28.2 (c) Delete the word “Contractor” which appears first and replace with “Contract”				
29.2	In the first line of sub-clause 29.2 insert “that” immediately after the word “damages”				
29.4	Add “or deducted from the amounts due or may fall due to the contractor” immediately after the words “shall be paid by the contractor to the Procuring Entity”				
31.2	Replace the word “by passes” with “deviations”				
33.1 and 34.1	Further to Clause 32.1 and 33.1, schedule of allocated risks are as follows;				
Risk Item		Rehabilitation Contracts		PBC Contracts	
		Public Sector	Contractor	Public Sector	Contract or
		Design Risk	√		√
		Construction Risk		√	√

	Technical & Management Risk	√			√
	Performance Risk	√			√
	Traffic & Volume Risk	√		√	
	Political Risk	√		√	
	Social & Environmental Risk	√		√	√
36.1	The Contractor shall take out and maintain in effect the following insurance in the sums and deductibles shown below in the name of both the contractor and the employer: (a) <i>Loss of or damage to the Plant and Materials -</i> Covering loss or damage occurring prior to Completion. (b) <i>Third Party Liability Insurance</i> Covering bodily injury or death suffered by third parties (including the Procurement Entity's personnel) and loss of or damage to property occurring in connection with Works and Services. (c) <i>Automobile Liability Insurance</i> Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the execution of the Contract.				

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	(d) <i>Workers' Compensation</i> In accordance with the statutory requirements applicable in any country where the Contract or any part thereof is executed. (e) <i>Procurement Entity's Liability</i> In accordance with the statutory requirements applicable in any country where the Contract or any part thereof is executed. (f) <i>Other Insurances</i> Such other insurances as may be specifically agreed upon by the parties.
37.1	In line 3 of Sub-Clause 37.1 delete "by an experienced contract" and substitute "by an experienced contractor"
37.2	Insert "shall" before "decide"
40.1	The Time for Completion are the following: The Time for Completion of Rehabilitation Works shall be as indicated in the Appendix to the form of Tender. The Time for Completion of Works shall be Six (3) Months.
40.3	For Works, the liquidated damages are 0.05% per calendar day of delay, of the payment normally due for the Works for which completion is delayed. The limit of liquidated damages under this is 5% of the Works Contract sum.

42.2	The Defect Liability Period for Rehabilitation works shall be as indicated in the Appendix to Form of Tender. The Defect Liability Period for PBC works shall be as indicated in the Appendix to Form of Tender.
42.8	Delete the word “law” and replace with “fault”
43.1b	The aggregate liability of the Contractor to the Procuring Entity, excluding payment reductions defined in GC 47.1, shall not exceed the amount of <i>15% of contract amount</i> .
45.1	The payment of the Contract Price will be made in KENYA SHILLINGS ONLY (100%).
46.1	No Advance payment Shall be made.
46.3	No Advance payment Shall be made.
47.2	Delete the word “fixed” before the word “monthly” and Insert “calculated on the basis of fixed tendered monthly rate and the road length maintained less the applicable payment reduction” immediately after “contract period”
47.4	Delete the paragraph and substitute Improvement Works shall be remunerated upon certification by the Engineer and shall be paid according to the product of measured works quantities and unit price included in the Bill of Quantities.
47.5	Delete “Procuring Entity” at the end of the paragraph and substitute “the Engineer”
48.2	The Works will be measured on the basis of the unit rates provided in the Bill of Quantities. <i>Note: the Works should normally be measured on the basis of work outputs.</i>

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
49	Price adjustment does not apply.
51.1	Insert “of such certification by the Engineer” immediately after “of the date” Insert “or as may be specified in the contract” immediately after “borrowing”
51.2	Insert “twenty-eight (28) days of” immediately after “calculated from”
52.	The procurement Entity shall retain the amount stated in the Appendix to Form of Tender as retention fees due to the Contractor and shall be refunded to the contractor on completion of the contract.
54.1	No Advance payment Shall be made.
55.2	The Performance Security shall be in the Form and Amount as stated in the Appendix to Form of Tender.
55.2	The performance security will be in the form of a <i>“performance bond”</i> .
56.1	Delete “deciding that the work is completed” and substitute “certifying that the works are completed in accordance with the contract”
58.1	The Contractor shall provide as-built drawings and/or Manuals to the Procurement Entity within fourteen (14) days on written request by the Employer.

60.2	The condition of persistent failure to execute the contract is given if and when the total amount of payment reductions and liquidated damages applied under the contract reaches 15% of the total contract amount. <i>[Depending on the type of roads and the structure of the contract, the recommended number could be in the order of 10 – 15 percent of the total contract amount.]</i>
66.1	The Procuring Entity has the right to propose a change in the contract
69.1	Value Engineering: NOT APPLICABLE
69.2	Value Engineering: NOT APPLICABLE

NOTES:

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

DEFINITIONS AND INTERPRETATION

1.1 Definitions

- (a) (i) The “Employer” shall be The County Government of Wajir.
- (iv) The “Engineer” shall be The Senior Superintending Engineer (Wajir), County Government of Wajir or any other competent person appointed by the Employer, and notified to the Contractor, to act in replacement of the Engineer.
- (b) (i) Insert in line 2 after “the Bill of Quantities”, the following, “the rates entered by the Contractor (whether or not such rate be employed in computation of the Contract Price)”.
- (v) The word “Tender” and its derivatives are synonymous with the word ‘Bid,’ and its derivatives, and the words ‘Tender Documents’ with ‘Bidding Documents’. The words “Appendix to Tender” and the words “Appendix to Bid” shall have the same meaning as the words ‘Appendix to the Form of Bid’.”

Add the following paragraph at the end of Subclause 1.1 (f) (vii):

The aforesaid includes lands waters, river beds and other places on, under, in through which the Works are to be carried out including all offices, workshops or places where materials are to be stored or used for the purposes of the Contract. It also includes quarries; borrow pits, stock pile areas and spoil areas”

Add Subclause 1.1 (g) (v):

Dates shall be construed in accordance with the Gregorian Calendar.

Add the following Subclause 1.6:

1.6 Gender Specific Words

Wherever in the Contract Documents the word ‘man’ or ‘men’ is used directly or as a suffix it means ‘woman’ or ‘women’ also. The Word ‘he’ includes ‘she’ also.

ENGINEER AND ENGINEER’S REPRESENTATIVE

2.1 Engineer’s Duties and Authority

With reference to Sub-Clause 2.1(b): Add the following

The Engineer shall obtain specific approval of the Employer before taking any of the following actions specified in the General Conditions of Contract:

- (a) Consenting to the sub-letting of any part of the Works under Clause 4.
- (b) Certifying additional cost determined under Clause 12
- (c) Determining an extension of time under Clause 44
- (d) Issuing a variation under Clause 52
- (e) Certifying payment if the Contract Price will be exceeded
- (f) Authorising the use of provisional sums in excess of the monetary limit for variations
- (g) Issuing any Taking-over Certificate
- (h) Certifying additional payment/costs under Clause 65;
- (i) Issuing a Defects Liability Certificate under Clause 62
- (j) Fixing rates or prices under Clause 52.

Notwithstanding the provisions set out above, to obtain approval of the employer, if in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibilities under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.”

ASSIGNMENT AND SUBCONTRACTING

4.1 Subcontracting

Delete the second and third sentence and substitute:

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

Add the following:

The Engineer should satisfy whether:

- (a) The circumstances brought out warrant such subcontracting; and
- (b) The subcontractors so proposed for the Work possess the necessary experience, qualifications and equipment for the job proposed to be entrusted to them in proportion to the quantum of work to be subcontracted.

If the contractor proposes payments to be made directly to that subcontractor, this should be subject to specific authorization by the Contractor so that such consent does not relieve him from any liability or obligations under the contract.

CONTRACT DOCUMENTS

5.1 Language and Law

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

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

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

5.2 Priority of Contract Documents

Delete the documents listed as (1) to (6) and substitute with the following:

- (1) The Contract Agreement (if completed)
- (2) The Letter of Acceptance
- (3) Minutes of Pre-Contract Award Discussion
- (3) Bid and Appendix to Form of Bid
- (4) The Conditions of Contract, Part II; Conditions of Particular Application
- (5) The Conditions of Contract, Part I; General Conditions of Contract
- (6) The Special Specifications
- (7) The Standard Specifications for Road and Bridge Construction, Ministry of Transport and Communications, 1986
- (8) Clarifications and Rectifications accepted by the Employer
- (9) The Drawings
- (10) The priced Bill of Quantities
- (11) Schedules and other documents forming part of the Contract.

Add to Clause 6 the following Subclauses 6.6 to 6.10:

6.6 Metric Units

All units used in the Contract shall be metric and for measurement of angles the 360 degrees circles systems shall be used

6.7 Intent of Drawings and Specifications

The intent of Drawings and Specifications is to describe the details for the complete construction and maintenance of the Works which the Contractor undertakes to perform in accordance with the terms of the Contract.

Where the Drawings or Specifications describe portions of the Works in general terms, but not in complete detail, it is understood that only materials and workmanship of the first quality are to be used. First quality refers to the quality as approved by the Engineer.

Unless otherwise specified, the Contractor shall furnish all labour, material, tools, equipment and incidentals, and do all the work involved in executing the Contract in a satisfactory and workman-like manner.

6.8 Design, Drawings and Specifications Prepared by the Contractor

No payment will be made to the Contractor for undertaking any kind of design work, preparation of drawings and specification, other than that specifically required by the terms of the Contract. Payment for design work, preparation of drawings and specifications, specifically required by the terms of the Contract shall be deemed to be included in the Rates and Lump Sums entered in the Bill of Quantities.

6.9 Submissions of Designs and Drawings

All detailed working drawings/shop drawings, design calculations and fabrication drawings for Temporary Works (such as formwork, staging, centring, scaffolding, specialized constructional, handling and launching equipment and the like) as well as bar bending and cutting schedules for reinforcement, material lists for structural fabrication including detailed

drawings for templates, end anchorage and temporary support details for pre-stressing cables shall be prepared by the Contractor at his own cost and forwarded in triplicate to the Engineer at least six weeks in advance of actual constructional requirements. The Engineer will check and return one copy of the same for the Contractor's use with amendments, if any, noted in red ink. Such approval shall not relieve the Contractor of any of his responsibilities in connection with temporary works.

The Contractor will supply four copies of the approved drawings for the Engineer's use. The cost of preparing all such items of work shall be deemed to have been included in the respective rates/prices quoted by the Contractor in the Bill of Quantities.

6.10 As-Built Drawings

On completion of the Works, the Contractor shall arrange to furnish to the Employer two (2) bound sets of all "As Built" drawings for every component of the Works at his own cost, all such copies being on Polyester film of quality to be approved by the Engineer or his Representative and digitized copy (2 No.) in a Compact Discs (CDs) of quality approved by the Engineer or his Representative. The Taking-over Certificate of the Works, as per the provisions of Clause 48.1 herein, shall not be issued by the Engineer in the event of the Contractor's failure to furnish the aforesaid "As Built" drawings for the entire works."

Add to Clause 7 the following Sub-clauses 7.4 to 7.6:

7.4 Drawings for Temporary Works

Drawings for Temporary works to be carried out by the Contractor shall be submitted to the Engineer for approval.

Working drawings of concrete structures consisting of such details as may be reasonably required for the successful execution of the work and which are not included in the plans furnished by the Employer, shall be prepared by the Contractor. Three sets of working drawings shall be submitted to the Engineer for approval.

7.5 Size of Drawings

All drawings submitted by the Contractor shall for convenience in filing be as far as possible of a uniform size, and not more than 1010 mm x 680 mm. The drawings shall be numbered and dated, and shall include the title of the Contract at the bottom of the drawing followed by the title of the drawing. All drawings shall have the appropriate scales drawn on them and notes shall be in English. All amendments to such drawings shall be noted and dated on the drawing.

7.6 Submission to the Engineer

Whenever the Contractor is required to submit to the Engineer proposals, details, drawings, calculations information, literature, materials, test report and certificates, the Engineer will consider each submission and, if appropriate, will reply to the Contractor in accordance with the relevant provision of the Conditions of Contract. Unless a defined period of time is stated in the contract, each submission shall be made by dates to be agreed with the Engineer having regard to the approved programme and the need to give the Engineer adequate time to consider each submission.

The approval of the Engineer of any submission shall not relieve the Contractor of his responsibilities under the Contract.

GENERAL OBLIGATIONS

Add to Subclause 8.1 the following:

8.1 Contractors General Responsibilities

Add to Subclause 8.1 the following:

- (a) Within 28 days after receipt of the Engineer's Order to Commence the Works, the Contractor shall establish an office at the Site duly equipped for the Contractor's representative and his superintending personnel.

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

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

Add to Clause 8 the following Subclause 8.3:

8.3

General Requirements

- (a) Materials delivered to the site by Contractor or materials made available or supplied by the Employer shall be used solely for the execution of the Works.
- (b) The Contractor shall minimise the pollution of and disturbance of lands, roads and other places on and around the Site. No trees or other vegetation shall be removed except to the extent necessary for the works.
- (c) The Contractor shall comply with the current Government regulations with regard to the transport, storage and use of explosives and radio-active materials and use of radio communication equipment.
- (d) The Contractor shall take all reasonable precautions:
 - (i) In connection with any rivers, streams, waterways, drains, water courses, lakes and the like to prevent as a consequence of the works, silting, erosion of beds and banks and pollution of the water that may adversely affect the quality or appearance thereof or cause injury or death to human, animal or plant life.
 - (ii) In connection with underground water resources, including percolating water, to prevent any interference as a consequence of the work with the supply to or abstraction from such sources and to prevent pollution of water that may adversely affect the quality thereof.
- (e) The Contractor shall provide, maintain and remove on completion of the Works, settling lagoons and other facilities to minimise pollution due to the Contractor's operations including but not limited to quarrying, aggregate washing, concrete mixing and grouting.
- (f) The Contractor shall provide, maintain and remove on completion of the Works, fencing around the site installations including housing, camps, offices and laboratories, providing free access to the Employer, the engineer, other Contractors and any other persons entitled to such access and provide appropriate security measures on such access roads.
- (g) All buildings erected by the Contractor upon the site and camp sites, and the layout of the buildings and the sites, shall comply with the Laws of the country and all local By-laws in so far as they are applicable.
- (h) The Contractor shall be absolutely and solely responsible for the safety and security of Temporary Works including, but not limited to, all work yards, pilings, staging, dams, coffer dams, trenches, fencing or other works and for the Plant and Contractor's Equipment in connection therewith which may be erected or provided for the execution of the Contract Works.

This provision shall be applicable to all temporary Works, Plant and Contractor's Equipment whenever provided and erected by the Contractor or his Subcontractor(s) for the purpose of or in connection with the Contract Works.
- (i) The contractor shall keep in close contact with the police, Labour officers and all other officials as appropriate regarding their requirements for the control of workmen, restricted area permits or other matters and shall provide all assistance and facilities which may be required by such officials in the execution of their duties.

10.1

Performance Security

Replace the text of Subclause 10.1 with the following:

The Contractor shall provide security for his proper performance of the Contract to the Employer within 28 days after the receipt of the Letter of Acceptance. The Performance Security shall be as stipulated in the Appendix to the Form of Bid. The Performance Security shall normally be in the currency or currencies requested for payment by the Contractor and in the same proportions as those requested for payment in the Contract. The Contractor shall notify the Engineer when providing the Performance Security to the Employer.

The Performance Security shall be a bank guarantee which shall be issued either:

- (a) By a bank located in Kenya or a foreign bank through a correspondent established and reputable bank located in Kenya or;

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 and/or legislation or as a result of a variation amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor, at the Engineer's written request, shall promptly increase the value of the Performance Security in that currency by an equal percentage.

The performance security of a joint venture shall be in the name of the joint venture.

10.2 Period of Validity of Performance Security

The performance security shall be valid until a date 28 days from the date of issue of the Taking-Over Certificate for the last section in case of partial handover. The security shall be returned to the Contractor within 28 days of expiration.

10.3 Claims under Performance Security

Delete sub-clause 10.3

Add the following Subclause 10.4:

10.4 Cost of Performance Security

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

11.1 Inspection of Site

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

Delete the last paragraph completely and replace with the following:

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

Add a new Subclause 11.2:

11.2 Access to Data

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

14.1 Programme to be Submitted

Delete Subclause 14.1 and replace with the following:

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

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

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

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

The Programme shall be submitted in two copies in the form of a Critical Path Method Network (CPM Network) showing the order of procedure and description of the construction methods and arrangements by which he proposes to carry out the Works. In addition, the aforesaid critical path programme should be supplemented by:

- (i) A Gantt/time-bar chart detailing each construction activity, showing for each construction activity; the periods of construction activity planned; the percentage completion anticipated per month; the total estimated quantity of work; the average monthly production planned, and
 - (ii) A detailed work method statement in respect of each construction activity. It should also be supplemented by a time-bar chart of the same programme. The programme shall be coordinated with climatic, groundwater and other conditions to provide for the completion of the works in the order and by the time specified. The Programme shall be
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revised at quarterly intervals and should include a chart of the principal quantities of the forecast for execution monthly.

The detailed work method statement of each particular construction activity shall list by category/type and quantity the labour, skilled labour, supervisors, plant, equipment and materials to be employed on the particular construction activity; together with: the estimated average daily production anticipated, the estimated equipment availability and utilisation factor anticipated and a detailed step description of the way in which resources are to be utilised to achieve the required rate of construction/production.

The Contractor's attention is particularly drawn to the need to familiarise himself with customs procedures in connection with importation and to allow sufficient time in its programme for these to be completed.

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

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

The various operations pertaining to the Works shall be carried out in such a progressive sequence so as to achieve a continuous and consecutive output of fully completed road works inclusive of bridge works and culverts within the time limits specified in the Contract.

The Contractor shall, wherever required by the Engineer, also provided in writing for information a detailed description of the arrangements and methods which the Contractor proposes to adopt for the execution of any particular part of the Works as directed by the Engineer.

Progress reporting by the Contractor should be supported on a monthly basis with an up-to-date analysis of the progress including a statement on items which are or are about to become critical to the Progress of Works, along with proposals on how the Contractor intends to address the situation.

The consent by the Engineer on any programme shall have no contractual significance other than that the Engineer would be satisfied if the work is carried out according to such programme, and that the Contractor undertakes to carry out the work in accordance with the programme, nor shall it limit the right of the Engineer to instruct the Contractor to vary the programme should circumstances make this necessary. The above shall not be taken to limit the right of the Contractor to claim for damage or extension of time to which he may be fairly entitled to in terms of the General Conditions of the Contract for delay or disruption of his activities.

Notwithstanding the General Conditions of Contract Clause 14.1, the programme to be submitted for the execution of the Works shall, in addition to the programme of pure construction activities, include an alleviation programme for Site staff and labour in respect of Sexually Transmitted Disease (STD) including HIV/AIDS. The STD and HIV/AIDS alleviation programme shall indicate when, how and what cost the Contractor plans to satisfy the requirements of Subclause 19.1 herein and the related Technical Specifications. For each component, the programme shall detail the resources to be provided or utilized and any related sub-contracting proposed. The programme shall also include provision of a detailed cost estimate with supporting documentation.

14.2 Revised Programme

Add the following at the end of this subclause:

The Contractor shall, when instructed by the Engineer, amend, correct or modify the Programme of the Works so as to take into account any delays and/or advances and modifications designs or for other reasons considered necessary by the Engineer.

If, during the progress of the work, the quantities of work performed per month fall below those shown in the Programme, or if the sequence of operations is altered, or if the Programme is deviated from in any other way, the Contractor shall, within two weeks after being notified by the Engineer, submit a revised Programme necessary to ensure completion of the Works or any part thereof within the Time for Completion, or any extended time granted pursuant to Clause 43 and Clause 44 of the General Conditions of Contract or so as to take into account any delays or advances or for other reasons considered necessary by the Engineer without prejudice to the Employer's right under Clause 63 of the General Conditions of Contract.

Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by providing more labour and plant on Site, or by using the available labour and plant in a more efficient manner.

Should the Employer request and the Contractor undertake to finish the whole or part of the Works ahead of the time originally required by the Contract, payment for accelerating the work shall only be made if agreed to beforehand in writing and according to the terms of such agreement.

If the Programme is to be revised by reason of the Contractor falling behind his Programme, he shall produce a revised Programme showing the modifications to the original Programme to complete the Works within the time as defined in Clause 43 of the General Conditions of Contract.

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

14.3 Cash Flow Estimate to be Submitted

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

In preparing the estimates, the Contractor shall make provision for Advance payment, repayment of advance, retention, payment for services provided by the Employer and timing implications of Clause 60 Certificates and Payments. A schedule of Payments for both local and foreign currency expected to be made to the Contractor by the Employer, shall be provided.

The cash flow estimate submitted with the bid shall be revised each time the construction Programme is submitted, and revised, under Subclauses 14.1 and 14.2 above.

15.1 Contractor's Superintendence

Add the following at the end of the first paragraph of Subclause 15.1:

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

15.2 Contractor's Agent or Representative

Add the following Subclause 15.2:

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

16.2 Engineer at Liberty to Object

At the end of this clause add "by a competent substitute approved by the Engineer at the Contractor's own expense". Add the following Subclauses 16.3 and 16.4:

16.3 Language Ability of Superintending Staff

A reasonable proportion of the Contractor's superintending staff shall have a working knowledge of the language specified in the Appendix to Form of Bid pursuant to Subclause 5.1(a), or the Contractor shall have available on site at all times a number of competent interpreters, as required by the Engineer, to ensure proper transmission of instructions and information.

16.4 Employment of Local Personnel

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

17.1 Setting Out

The following additional paragraph shall apply to the provisions of the Subclause 17.1:

- (d) The checking of all the setting-out of the proposed works relative to existing ground features, to be undertaken prior to the commencement of fabrication of structural steelworks for superstructures. This preparation is to include providing the facility for the Engineer to undertake a timely check on this setting-out and alerting the Engineer to any likely problems foreseen.

The contractor shall give to the Engineer not less than 48 hours of notice of his intention to set out or give layout for any part of the works so that timely assignment can be made for checking the same.

Add the following new Subclause 17.2:

17.2 Notice to Engineer

The Contractor shall give to the Engineer not less than 48 (Forty eight) hours notice of his intention to set out or give levels for any part of the works so that timely arrangement may be made for checking or issuing instructions. He shall indicate therein by which date the information, if any, is required by him."

19.1 Safety, Security and Protection of the Environment

Add Subclauses 19.1 (d), (e), (f), (g), (h), (i), (j), (k), (l) and (m) and the subsequent text as follows:

- (d) Notwithstanding the Contractor's obligation under Subclauses 19.1 (a), (b) and (c) of the Conditions of Contract, the Contractor shall carry out, without limitation, the following measures with a view to reducing or eliminating adverse environmental effects by the site Works:
- (i) All quarries, borrow pits, diversions and detours shall be filled and landscaped, as far as practical, to their original condition after extraction of construction material.
 - (ii) Soil erosion and sedimentation due to the surface runoff or water from culverts or other drainage structures should be avoided by putting in place proper erosion control measures.
 - (iii) Long traffic diversion roads shall be avoided so as to minimise the effect of dust on the surrounding environment. In any case, all diversions shall be kept damp to reduce dust.
 - (iv) Haulage routes shall be kept as short as possible and watered as necessary.
 - (v) Spillage of oil, fuel, and lubricants shall be avoided. If spilt, they shall be collected and disposed of in such a way that there do not adversely affect the natural environment.
 - (vi) Rock blasting near settlement areas shall be properly coordinated with the relevant officers of the Kenya government in an attempt to minimise levels of noise pollution and community interference.
- (e) The formulation and enforcement of an adequate safety programme shall be the obligation of the Contractor with respect to all the works under this Contract, regardless of whether performed by the Contractor or his Subcontractors. The Contractor shall, within 14 days after commencement of the Works, meet the Engineer to present and discuss his plan for the establishment of such safety measures as may be necessary to provide against accidents, unsafe acts, and so forth.
- Within 28 days after commencement of the Works, the Contractor shall submit a written safety, security and environmental protection programme to the Engineer covering the overall works and based on the laws and regulations of Kenya. In addition, he shall prepare special safety programmes for blasting and handling of explosives as may be stipulated in the Specifications.
- (f) The Contractor shall take all due precautions to avoid soil and water contamination by spillage of oil, grease, fuel and paint in the equipment yard, workshop or the site of works. Lubricants should be recycled.
- (g) The Contractor shall install pollution control device in his asphalt plant.
- (h) The Contractor shall implement re-plantation and grading of steep slopes in quarries and borrow pits to prevent disfiguration of landscape.
- (i) The Contractor shall implement compensatory afforestation plan to counteract destruction of vegetation when required to do so by the Engineer. The Contractor shall pay proper attention to the aspect of borrow pit drainage to prevent formation of stagnant pools of water and incidence of mosquito vectors. All borrow pits will be provided with efficient drains which shall be connected to the natural outfalls.
- (j) Notwithstanding implementation of any other provision contained in the Conditions of Contract, the failure on the part of the Contractor or his staff in the cases listed bellow will be considered default on the part of the Contractor and will attract the terms of Subclause 63.1 for remedies.
- Poor sanitation and solid waste in the workers camp
 - Possible transmission of communicable diseases, including HIV/AIDS, between local people and the Contractor's workers
 - Poaching by the Contractor's workers
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- Illegal invasion of indigenous people by the Contractor's labour.
- (k) All lights provided by the Contractor shall be screened so as not to interfere with any signal light on the railways or with any traffic or signal lights of any local or other authority.
- (l) The Contractor shall be deemed to be in possession of, and ensure that the Contractor's personnel are fully aware of, relevant safety regulations.
- (m) The Contractor shall ensure that all equipment, tools and other items used in accomplishing the Works, whether purchased, rented or otherwise provided by the Contractor are in safe, sound and good condition for performing the intending function.

Notwithstanding the terms of Clause 19.1 of the General Conditions of Contract, the Contractor shall throughout the contract (including the Defects Liability Period):

- (i) Conduct Information, Education and Consultation (IEC) campaign, at least every other month, addressed to all the Site staff and labour (including all Contractor's Employees, all Subcontractors and Consultant's employees, and all truck drivers and crew marketing deliveries to Site) and to the immediate local communities, concerning the dangers and impact of Sexually Transmitted Diseases (STD) in general and HIV/AIDS in particular;
- (ii) Provide male or female condoms for all Site staff and labour as appropriate; and
- (iii) Provide for STD and HIV/AIDS professional screening, diagnosis, counselling and full treatment (except that in the case of HIV/AIDS cases treatment shall be limited to referral to a dedicated national or regional HIV/AIDS programme) of all Site staff and labour.

Amend Subclause 20.4 to read as follows:

20.4 Employer's Risks

The Employer's risks are:

- (a) Insofar as they directly affect the execution of the Works in Kenya where the Permanent Works are to be executed:
 - (i) War and hostilities (whether war be declared or not), invasion, act of foreign enemies
 - (ii) Rebellion, revolution, insurrection, or military or usurped power, or civil war
 - (iii) Ionising radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
 - (iv) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds
 - (v) Riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Subcontractors and arising from the conduct of the Works.
 - (b) Loss or damage due to the use or occupation by the Employer of any section or part of the Permanent Works, except as may be provided for in the Contract
 - (c) Loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible, and
 - (d) Any operation of the forces of nature (insofar as it occurs on the Site) which an experienced contractor:
 - (i) Could not have reasonably foreseen, or
 - (ii) Could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:
 - i. Prevent loss or damage to physical property from occurring by taking appropriate measures, or
 - ii. Insure against such loss or damage."
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- 21.1 Insurance of Works and Contractor's Equipment**
Delete the first sentence of this clause and replace with the following:
"Prior to commencement of the Works the Contractor shall, without limiting his or the Employer's obligations and responsibilities under Clause 20, insure to the satisfaction of the Employer."
Add the following words at the end of subparagraph (a) and immediately before the last word of subparagraph (b):
"it being understood the insurance shall provide for compensation to be payable in the types and proportions of the currencies required to rectify the loss or damage incurred."
In Subclause 21.1(b), delete the words "or as may be specified in Part II of these Conditions".
- 21.2 Scope of Cover**
(a) Delete the words "from the start of Work at the Site" and substitute with the words "from the first working day after the commencement date"
Add the following Subclause 21.2 (c):
(c) It shall be the responsibility of the Contractor to notify the insurance company of any change in the nature and extent of the Works and to ensure the adequacy of the insurance coverage at all times during the period of the Contract.
Amend Subclause 21.4 to read as follows:
- 21.4 Exclusions**
There shall be no obligation for the insurances in Subclause 21.1 to include loss or damage caused by the risks listed under Subclause 20.4 subparagraphs (a) (i) to (v) above.
Add the following Subclause 21.5:
- 21.5 Insurance of Goods**
The Contractor shall insure or cause to be insured all imported goods financed out of the proceeds of the Contract against marine and other hazards incidental to the acquisition, transportation and delivery thereof to the place of use or installation and where appropriate against all usual risks pertaining to the construction of the Works.
- 23.1 Third Party Insurance (Including Employer's Property)**
Add the following at the beginning of this Subclause:
Prior to commencement of the Works ...
- 23.2 Minimum Amount of Insurance**
Add the following at the end of this subclause:
... with no limits to the number of occurrences
- 25.1 Evidence of Terms of Insurance**
Insert the words "as soon as practicable after the respective insurances have been taken out but in any case" before the words "prior to the start of Work at the Site"
Add the following Subclauses 25.5 to 25.8:
- 25.5 Source of Insurance**
The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to, the insurance referred to in Clauses 21, 23, and 24) with insurers from any eligible source country which has been determined to be acceptable to the Employer.
- 25.6 Insurance Notices**
Each policy of insurance effected by the Contractor for the purpose of the Contract shall include a provision to the effect that the Insurer shall have a duty to give notice in writing to the Contractor and Employer of the date when a premium becomes payable not more than thirty (30) days after the giving of such notice.
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- 25.7 Insurance in Kenya**
The risks against which the Contractor is obliged to insure under the Contract shall be insured through established and reputable companies approved by the Employer and located in Kenya and any cover against risks which the Contractor may enjoy shall be insured in Kenya by an approved Kenyan Insurance Company in respect of the Contractor's obligations under the Contract.
- 25.8 Notification to Insurers**
It shall be the responsibility of the Contractor to notify the insurers under any of the insurances referred or event which by the terms of such insurances are required to be so notified and the Contractor shall indemnify and keep indemnified the Employer against all losses, claims, demands, proceedings, costs, charges and expenses whatsoever arising out of or in consequence of any default by the Contractor in complying with the requirements of this subclause whether as a result of avoidance of such insurance or otherwise.
- 26.2 Compliance with Statutes, Regulations**
Add the following Subclauses 26.2 and 26.3
The Employer will repay or allow to the Contractor all such sums as the Engineer shall certify to have been properly payable and paid by the Contractor in respect of such fees, provided always that, without prejudice to Subclause 26.1, nothing contained in this sub clause shall be deemed to render the Employer liable to all claims which may be considered to fall within the provisions of Subclause 22.1.
- 26.3 Inspection and Audit by the Funding Agency**
The Contractor shall permit the funding agency to inspect the Contractor's accounts and records relating to the performance of the Contract and to have them audited by auditors appointed by the agency, if so required by the agency.
- 28.2 Royalties**
Add the following at the end of Subclause 28.2:

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

Add the following Subclauses 29.2 to 29.5:
- 29.2 Passage and Control of Traffic**
The Contractor's attention is drawn to Specifications covering the Passage and Control of Traffic and in particular to the requirement for the submission of a detailed Programme for Passage of Traffic as required following the award of the Contract.

In case any operation connected with traffic which necessitates diversion, obstruction or closure of any road, railway or any other right of way, the approval of the Engineer or the Engineer's Representative and the concerned authorities shall be obtained well in advance by the Contractor.
- 29.3 Reinstatement and Compensation for Damage to Persons or Property**
The Contractor shall reinstate all properties whether public or private which are damaged in consequence of the construction and maintenance of the Works to a condition at least equal to that prevailing before his first entry on them.

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

The Contractor shall promptly refer to the Employer all claims, which may be considered to fall within the provisions of Clause 22.1.
- 29.4 Protection of Existing Works and Services**
The Contractor shall acquaint himself with the position of all existing services, such as sewers, surface water drains, cables for electricity, data and telephone, telephone and lighting poles, water mains, and the like before commencing any excavation or other works likely to affect the existing services.

The Contractor will be held liable for all damage to roads, irrigation ditches, mains pipes, electric cables, lines or services of any kind caused by him or his subcontractors in the execution of the Works. The Contractor must make good any damage without delay and, if necessary, carry out any further work ordered by the Engineer or Engineer's Representative,
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all at the Contractor's cost. Where work is to be carried out in the vicinity of overhead power lines, the Contractor shall ensure that all persons working in such areas are aware of the relatively large distance that high voltage electricity can "short" to earth when crane, or other large masses of steel, are in the vicinity of power lines. The Contractor's attention is drawn to appropriate standards which gives safe clearances for the various voltages.

The Contractor shall be held responsible for damage to existing works or services, and shall indemnify the Employer against any claims in this respect (including consequential damages). The Contractor shall be responsible for the reinstatement of the services, so affected, to the satisfaction of the Engineer.

In all cases where such works or services are exposed, they shall be properly shored, hung up or otherwise protected. Special care must be exercised in filling and compaction of the grounds under mains and cable. The exposed water meters, stopcock boxes and similar items shall be left uncovered.

As soon as any such existing works or services or structures are encountered on, over, under, in or through the Site during the performance of the Contract, the Contractor shall make a record of the location and description of such service or structure and shall send the same forthwith to the Engineer.

Installations adjacent to the Works shall be kept securely in place until the work is completed and shall then be made as safe and permanent as before.

Notwithstanding the foregoing requirements, and without reducing the Contractor's responsibility, the Contractor shall inform the Engineer immediately if any existing works or services are located, exposed or damaged.

29.5 Protection of Survey Beacons

The Contractor shall not remove, damage, alter or destroy in any way plot beacons. Should the Contractor consider that any beacons will be interfered with by the Work he shall notify the Engineer who, if he considers it necessary, will make arrangements for the removal and replacement of the beacons.

30.2 Transport of Contractor's Equipment or Temporary Works

Add the following at the end of this subclause.

If it is found necessary for the Contractor to move one or more loads of heavy constructional plant and equipment, materials or pre-constructed units of work over roads, highways, bridges on which such oversized and overweight items are not normally allowed to be moved, the Contractor shall obtain prior permission from the concerned authorities. Payments for complying with the requirements, if any, for protection of or strengthening of the roads, highways or bridges shall be made by the Contractor and such expenses shall be deemed to be included in his Contract Price.

Add the following Subclauses 30.5 and 30.6.

30.5 Complying with State Laws and Regulations

Nothing contained above shall excuse the Contractor or any of his Subcontractor(s) from complying with state laws regulating traffic on highways and bridges.

30.6 Effects of other Concurrent Construction Projects

The Contractor shall be deemed to have fully familiarised himself with planned construction operations or any other concurrent construction projects in Kenya which may have any material effect on the Contractor's own operations. In particular, the Contractor shall be deemed to have allowed for the effects of other concurrent construction contract(s) on any necessary transportation operations in connection with the Contract(s).

LABOUR

Add the following Subclauses 34.2 to 34.23

34.2 Labour Regulations

The Contractor and his Subcontractors shall, at all times, during the Contract period abide fully by the governing local laws and regulations.

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

34.3 Engagement of Local Labour

The Contractor is encouraged to the extent practicable and reasonable to employ staff and labour with the required qualifications and experience from sources within Kenya, particularly in the vicinity of the Site.

34.4 Rates of Wages and Conditions of Labour

The Contractor shall pay rates of wages and observe conditions of labour not less favourable than those established for the trade or industry where the work is carried out. In the absence of any rates of wages or conditions of labour so established, the Contractor shall pay rates of wages and observe conditions of labour which are not less favourable than the general level of wages and conditions observed by other employers whose general circumstances in the trade or industry in which the Contractor is engaged are similar.

34.5 Repatriation of Labour

The Contractor shall be responsible for the return to the place where they were recruited or to their domicile of all such persons as he recruited and employed for the purposes of or in connection with the Contract, and shall maintain such persons as are to be so returned in a suitable manner until they shall have left the site or, in the case of persons who are not nationals of and have been recruited outside the Republic of Kenya shall have left Kenya or the site, as appropriate.

34.6 Housing for Labour

Save insofar as the Contract otherwise provides, the Contractor shall provide and maintain such accommodation and amenities as he may consider necessary for all his staff and labour, employed for the purposes of or in connection with the Contract, including all fencing, water supply (both for drinking and other purposes), electricity supply, sanitation, cookhouses, fire prevention and fire-fighting equipment, cookers, refrigerators, furniture, and other requirements in connection with such accommodation or amenities. On completion of the Contract, unless otherwise agreed with the Employer, the temporary camps or housing provided by the Contractor shall be removed and the site reinstated to its original condition, all to the approval of the Engineer.

34.7 Accident Prevention Officer

The Contractor shall have on his staff on Site an officer dealing only with questions regarding the safety and protection against accidents of all staff and labour. This officer shall be qualified for this work and shall have the authority to issue instructions and shall take protective measures to prevent accidents.

34.8 Health and Safety

Due precautions shall be taken by the Contractor, and at his own cost, to ensure the safety of his staff and labour and, in collaboration with and to the requirements of the local health authorities, to ensure that medical staff, first aid equipment and stores, sick bay and suitable ambulance services are available at the camps, housing, and on the Site at all times throughout the period of the Contract and that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements. Workers shall always be transported using vehicles that meet the current transport regulations.

34.9 Life Saving Appliances and First Aid Equipment

The Contractor shall provide and maintain upon the Works sufficient, proper and efficient life-saving appliances and first-aid equipment to the approval of the Engineer. The appliances and equipment shall be available for use at all times.

34.10 Measures against Insect and Pest Nuisance

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 caused by the same. The Contractor shall provide his staff and labour with suitable prophylactics for the prevention of malaria, and shall take steps to prevent the formation of stagnant pools of water. He shall comply with all the regulations of the local health authorities in these respects and shall in particular arrange to spray thoroughly with approved insecticide all buildings erected on the Site. Such treatment shall be carried out at least once a year or as instructed by the Engineer. The Contractor shall warn his staff and labour of the dangers of bilharzias and wild animals.

34.11 Epidemics

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders, and requirements as may be made by the Government or the local medical or sanitary authorities for the purpose of dealing with and overcoming the same.

34.12 Burial of the Dead

The Contractor shall make any necessary arrangements for the transport, to any place as required for burial, of any of his expatriate employees or members of their families who may die in Kenya. The Contractor shall also be responsible, to the

extent required by the local regulations, for making any arrangements with regard to burial of any of his local employees who may die while engaged upon the Works.

34.13 Supply of Foodstuffs

The Contractor shall arrange for the provision of a sufficient supply of suitable food at reasonable prices for all his staff, labour, and subcontractors for the purposes of or in connection with the Contract.

34.14 Supply of Water

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 the Engineer and his staff, the Contractor's staff and labour.

34.15 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Statutes, Ordinances, and Government Regulations or Orders for the time being in force, import, sell, give, barter, or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importation, sale, gift, barter, or disposal by his subcontractors, agents, staff, or labour.

34.16 Arms and Ammunition

The Contractor shall not give, barter, or otherwise dispose of, to any person or persons, any arms or ammunition of any kind or permit or suffer the same as aforesaid.

34.17 Festivals and Religious Customs

The Contractor shall, in all dealings with his staff and labour, have due regard to all recognised festivals, days of rest, and religious and other customs.

34.18 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous, or disorderly conduct by or among his staff and labour and take all reasonable precautions for the preservation of peace and protection of persons and property in the neighbourhood of the Works against the same.

34.19 Records of Labour

The Contractor shall keep proper wages books, in the language stipulated in the Appendix to the Form Bid, pursuant to Sub-Clause 5.1 (a) showing the time worked and wages paid to all employees in and about the execution of the Works, together with such other records as are required by any Statute, Ordinance, Law, Regulation or Bye-Law in force in Kenya governing the employment of labour. He shall be bound, whenever required, to produce such wages books and other records for the inspection of any persons authorized by the Engineer.

34.20 Trade Unions

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

34.21 Default in payment of Wages

In the event of default in payment of wages of any workmen employed on the Contract, and if a claim thereafter is filed in the office of the Engineer and satisfactory proof thereof is furnished, the Employer shall be notified forthwith and may, failing payment of such claim by the Contractor, arrange the payment out of monies at any time payable under the Contract and the amount so paid shall be deemed payment to the Contractor under the Contract.

34.22 Breach and Removal from List

Should the Contractor or any subcontractor be found to be in breach of any of the provisions of Clause 34, the Employer may recommend to the Government for his removal from the list of approved Contractors.

34.23 Observance by Subcontractors

The Contractor shall be responsible for the observance by his subcontractor of the foregoing provisions.

Add the following Subclauses 35.2 and 35.3:

35.2 Maintenance of Records

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

- 35.3 Reporting of Accidents
- The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer immediately by the quickest available means. The Contractor shall also notify the relevant authority (ies) whenever such report is required by the law of Kenya.
- MATERIALS, PLANT AND WORKMANSHIP
- Rename Subclause 36.1 as below.
- 36.1 Quality of Materials, Equipment, Supplies, Plant, and Workmanship
- Add the following paragraph at the end of this subclause.
- The Contractor is encouraged, to the extent practicable and reasonable, to use materials, Contractor's Equipment, Plant, and supplies from sources within Kenya.
- COMMENCEMENT AND DELAYS
- 41.1 Commencement of Works
- Replace the words "as soon as reasonably possible" with the words "on Site within 28 days".
- Add the following subclause:
- 41.2 Definition of Commencement
- For the purposes of this subclause, the Works shall be deemed to have commenced when all of the following conditions are satisfied:
- (a) The approved competent and authorized agent or representative of the Contractor is resident in the project area and is giving his whole time to the superintendence of the Works.
 - (b) The provision by the Contractor of evidence that all insurances required by the Contract are in force.
 - (c) The Contractor has established an office in the project area with postal address for receipt of correspondence.
 - (d) The principal items of constructional plant have been brought to Site and put to work in the execution of the permanent Works.
- 42.1 Possession of Site and Access Thereto
- At the end of Subclause 42.1, add the following:
- The Contractor shall bear all costs and charges for such lands as the Contractor may reasonably require for camps, offices, workshops, diversion roads, borrow pits, and quarries and any additional facilities outside the site required by him for the purpose of works.
- Add the following subclause:
- 42.4 Possession of Site and Access thereto
- The Contractor shall not enter any part of the Site until he has requested and received permission to do so from the Employer or the Engineer.
- The Contractor shall not use any portion of the Site for any purpose not connected with the Works.
- 45.1 Restriction on Working Hours
- Delete Subclause 45.1 and substitute with the following:
- If the Contractor requests for permission to work by day and night and if the Engineer shall grant such permission, the Contractor shall not be entitled to any additional payment for so doing.
- All such work at night shall be carried out without unreasonable noise or other disturbance and the Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while carrying out night work and from against all claims, demands, proceeding, costs, charges and expenses whatsoever in regard or in relation to such liability. In addition, the Contractor shall be required to provide, for any work carried out by night or recognised days of rest, adequate lighting and other facilities, so that the work is carried out safely and properly.
-

45.2 Overtime Hours

Working hours shall be observed by the Contractor as stipulated in the Labour Laws of Kenya. However when deemed necessary to expedite the Works, overtime, night time or holiday working may be allowed by the Engineer in accordance with the provisions of Subclause 46.1. The Contractor, in these cases, shall pay all costs of the Engineer and his staff for such overtime, night time or holiday working at site as stipulated under Subclause 46.1 of the General Conditions of Contract.

47.2 Reduction of Liquidated Damages

The following supplements this subclause.

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

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

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

Add the following Subclause 47.3:

47.3 Currency of Liquidated Damages

Liquidated damages shall be paid by the Contractor to the Employer in the types and proportions of currencies as shall be payable to the Contractor under the Contract.

DEFECTS LIABILITY

49.2 Completion of Outstanding Work and Remedying Defects

Add at the end of this subclause the following sentence:

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

Add Subclause 49.5 as follows:

49.5 Defects Liability Period Replacements

The provisions of this clause shall apply to all replacements or renewals of Plant and equipment to be provided with respect to the utilities under the Contract, carried out by the Contractor to remedy defects and damages as if the replacements and renewals had been taken over on the date they were completed. The Defects Liability Period for the Works shall be extended by a period equal to the period during which the Works can not be used by reason of the defect or damage. If only part of the Works is affected the Defects Liability Period shall be extended only for that part.

ALTERATIONS, ADDITIONS AND OMISSIONS

52.1 Valuation of Variation

Add the following final sentences to this subclause:

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

Where the Contract provides for the payment of the Contract Price in more than one currency, and varied work is valued at, or on the basis of, the rates and prices set out in the Contract, payment for such varied work shall be made in the proportions of various currencies specified in the Appendix to Form of Bid for payment of the Contract Price. Where the Contract provides for payment of the Contract Price in more than one currency, and new rates or prices are agreed, fixed, or determined as stated above, the amount or proportion payable in each of the applicable currencies shall be specified when the rates or prices are agreed, fixed, or determined, it being understood that in specifying these amounts or proportions the Contractor and the Engineer (or, failing agreement, the Engineer) shall take into account the actual or expected currencies of cost (and the proportions thereof) of the inputs of the varied work without regard to the proportions of various currencies specified in the Appendix to Form of Bid for payment of the Contract Price.

52.2 Power of Engineer to Fix rates

Add a final sentence to the first paragraph as follows:

Where the Contract provides for the payment of the Contract Price in more than one currency, the amount or proportion payable in each of the applicable currencies shall be specified when the rates or prices are agreed, fixed, or determined as stated above, it being understood that in specifying these amounts or proportions the Contractor and the Engineer (or, failing agreement, the Engineer) shall take into account the actual or expected currencies of cost (and the proportions thereof) of the inputs of the varied work without regard to the proportions of various currencies specified in the Appendix to Form of Bid for payment of the Contract Price.

52.3 Daywork

Add the following at the end of this subclause:

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

PROCEDURE FOR CLAIMS

53.1 Notice of Claims

Add the following at the end of this subclause:

The Contractor shall also state the references of the Contract Clauses and Subclauses on which he has based his claims.

CONTRACTOR'S EQUIPMENT, TEMPORARY WORKS AND MATERIALS

For the purpose of these subclauses, the term "Equipment" shall be read as "Contractor's Equipment" where the context so requires.

54.1 Contractor's Equipment, Temporary Works and Materials

Amend Subclause 54.1 as follows:

Line 5; add "written" between "the" and "consent".

Add a final sentence to this subclause as follows:

The Contractor shall every month give to the Engineer a statement showing the amount of plant and Contractor's equipment, which has been brought to the Site.

54.2 Employer not Liable for Damage

Delete this subclause entirely.

54.5 Conditions of Hire of Contractor's Equipment

Delete this subclause entirely.

Add Subclauses 54.9 and 54.10 as follows:

54.9 Contractor's Responsibilities for Licenses

The Contractor shall obtain his own information with regard to the granting of import and export licenses for materials, equipment and plant. The Contractor shall bear all expenses for Plant, Materials, Equipment and Maintenance required for the completion and maintenance of the works and shall be deemed to have satisfied himself with regard to all his liabilities under the laws and regulations governing the granting of these licenses. The Contractor shall ensure that requests for import and export licenses are submitted in sufficient time to clear all formalities before the said licenses are required.

54.10 Equipment and Plant

The Contractor shall identify each piece of his equipment, other than hand tools, by means of an identification number plainly stencilled or stamped on the equipment at a conspicuous location, and shall furnish to the Engineer a list giving the description of each piece of equipment and its identification number. In addition, the make, model number and empty gross weight of each unit of compaction equipment shall be plainly stamped or stencilled in a conspicuous place on the unit. The gross weight shall be either the manufacturer's rated weight or the scale weight. The make, model, serial number and manufacturer's rated capacity of each scale shall be clearly stamped on the load-receiving element and its indicator or indicators. All meters shall be similarly identified, rated and marked.

MEASUREMENT

55.1 Quantities

Add the following to this subclause:

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

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

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

Add the following new sub clause:

55.2 Bill of Quantities with no Rates

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

56.1 Works to be Measured

Delete Subclause 56.1 and replace with the following:

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

The Contractor shall furnish all personnel, equipment and materials to make such surveys and computations as necessary to determine the quantities of work performed. Unless otherwise prescribed in the specifications or the drawings, all measurements for payment shall be made by the dimensions, lines and grades as shown on the drawings or by direct survey of which the methods shall be approved by the Engineer.

The documents submitted for measurement and payment shall become the property of the Employer and shall be used to the extent necessary to determine the monthly progress payment to be made to the Contractor under the Contract. Direct survey, if conducted, shall be subject to checking and verification by the Engineer and all errors in the said survey work and related computations as found during such checking shall be immediately corrected by the Contractor.

In case of any disagreement on an item of measurement, the Engineer's opinion will prevail during the assessment of the statement for monthly interim payments. Should the Contractor consider himself entitled to any form of claim with respect to the disagreement in measurement, the procedure for such is detailed under Clause 53 of the Conditions of Contract.

57.1 Method of Measurement

Delete this subclause and substitute with the following:

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

PROVISIONAL SUMS

Add the following Subclause 58.4:

58.4 Prime Cost Sum

Wherever an item in the Bill of Quantities has been referred to as a "P.C. Sum" (Prime Cost Sum), that item shall be construed as a Provisional sum and the provisions of Subclauses 58.1 to 58.3 will apply.

NOMINATED SUBCONTRACTORS

59.5 Certification of Payment to Nominated Subcontractors

Add the following paragraph at the end of Subclause 59.5:

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

CERTIFICATES AND PAYMENTS

Delete Subclauses 60.1 to 60.10 entirely and substitute with the following:

60.1 Advance Payment

In the event that an Advance Payment is granted, the following shall apply:

- (a) On signature of the Contract, the Contractor shall at his request, and without furnishing proof of expenditure, be entitled to an advance of upto maximum of 10% (ten percent) of the original amount of the Contract Sum. The advance shall not be subject to retention money.
- (b) No advance payment may be made before the Contractor has submitted proof of the establishment of deposit or of a directly liable guarantee satisfactory to the Employer in the amount of the advance payment. The guarantee shall be in the same currency as the advance.
- (c) Amortization of the advance shall be effected by deductions from monthly interim payments.
- (d) Amortization of the lump sum advance shall be made by deductions from the Interim payments and where applicable from the balance owing to the Contractor.

The amortization shall begin when the amount of the sums due under the Contract reaches 20% of the original amount of the Contract. It shall have been completed by the time 80% of this amount is reached.

The amount to be amortized by way of successive deductions shall be calculated by means of the

$$\text{formula: } R = \frac{A (X^1 - X^{11})}{80 - 20}$$

Where:

R = Amount to be amortized

A = Amount of the advance which has been granted

X¹ = Amount of proposed cumulative payments as a percentage of the original amount of the Contract. This figure will exceed 20% but not exceed 80%.

X¹¹ = Amount of the previous cumulative payments as a percentage of the original amount of the Contract. This figure will be below 80% but not less than 20%.

With each amortization, the counterpart of the directly liable guarantee may be reduced accordingly.

60.2 Interim Payment Certificate

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

- (i) The materials are in accordance with the specifications for the Works.
 - (ii) The materials have been delivered to Site and are properly stored and protected against loss, damage or deterioration.
 - (iii) The Contractor's record of the requirements, orders, receipts and use of materials are kept in a form approved by the Engineer, and such records are available for inspection by the Engineer.
 - (iv) The Contractor has submitted a statement of his cost of acquiring and delivering the materials and goods to the Site, together with such documents as may be required for the purpose of evidencing such cost.
 - (v) The materials are to be used within a reasonable time.
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The Contractor will be paid on the certificate of the Engineer the amount due to him on account of the estimated total value of the permanent Work executed up to the end of the previous month together with such amount (not exceeding 75% of the value) as the Engineer may consider proper on account of materials and goods for permanent Work delivered by the Contractor on Site and in addition, such amount as the Engineer may consider fair and reasonable for any Temporary Works for which separate amounts are provided in the Bill of Quantities, all of which shall be subject to a retention of the percentage named in the Appendix to Form of Bid until the amount retained (hereinafter and in all Contract documents called the "Retention Money") shall reach the "Limit of Retention Money" named in the said Appendix to the Form of Bid. Provided always that no interim certificate shall be issued for a sum [such sum always being the net amount thereof after all deductions for retention etc] less than that named in the Appendix to Form of Bid as "Minimum Amount of Interim Certificate" at one time.

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

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

60.3 Final Account and Final Payment Certificate

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

The Final Payment Certificate shall state:

- (a) The (final) total value of all Work executed in accordance with the Contract
- (b) After giving credit to the Employer for all amounts previously paid to the Contractor, the balance, if any, due from the Employer to the Contractor or the Contractor to the Employer, as the case may be.

Unless the Contractor notifies the Engineer of his objection to the Final Payment Certificate within twenty eight [28] days of delivery thereof, he shall be deemed to have agreed that he accepts the total Contract Price as set out in the Final Payment Certificate as full settlement for all work executed under the Contract including any claims, variations and omissions thereof.

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

- (i) To the extent that fraud or dishonesty relates to or affects any matter dealt with in the Certificate, or
- (ii) If any arbitration or court proceedings under the Contract have been commenced by either party before the expiry of 90 days after the issue of the Final Certificate of Payment.

60.4 Payment of Certificates

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

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

Payments to the Contractor by the Employer shall be made in the currencies in which the Contract Price is payable into a bank account or accounts nominated by the Contractor.

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

60.5 Retention Money

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

60.6 Currency of Payment

The Contract price shall be stated in Kenya Shillings. All payments to the Contractor shall be made in Kenya shillings.

60.7 Overdue Payments

Unless otherwise stated in the Appendix to the Form of Bid interest shall be paid on the overdue amounts and the interest to be paid shall be based on the rates of the Central Bank of Kenya 28 days prior to the opening of the bids.

60.8 Correcting and Withholding

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

60.9 Completion by Sections

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

60.10 Statement at Completion

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

- (a) The final value of all work executed in accordance with the Contract up to the date stated in such Taking-Over Certificate.
- (b) Any further sums which the Contractor considers to be due; and
- (c) An estimate of amounts, which the Contractor considers, will become due to him under the Contract.

Estimated amounts at Completion shall be shown separately in the Statement. The Contractor shall amend and correct the Statement as directed by the Engineer who shall issue a Certificate at Completion to be processed in accordance with Subclause 60.4.

60.11 Final Statement

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

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

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

60.12 Discharge

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

60.13 Final Payment Certificate

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

- (a) The final value of all work executed in accordance with the Contract
- (b) After giving credit to the Employer for all amounts previously paid by the Employer, the balance, if any, due from the Employer to the Contractor or the Contractor to the Employer as the case may be

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

60.14 Cessation of Employer's Liability

Unless the Contractor notifies the Engineer of his objection to the Final Certificate within 14 (fourteen) days of delivery thereof he shall be deemed to have agreed that he accepts the total Contract Price as set out in the Final Certificate as full settlement for all work executed under the Contract including any variations and omissions thereof.

62.1 Defects Liability Certificate

Delete the last sentence of this subclause beginning "Provided that the issue.....in Sub-Clause 60.3".

REMEDIES

63.1 Default of Contractor

Delete the last paragraph of this subclause and substitute with the following:

then the Employer may, after giving 14 days' notice to the Contractor, enter upon the Site and expel the Contractor there from without thereby avoiding the Contract, or releasing the Contractor from any of his obligations or liabilities under the Contract, or affecting the rights and powers conferred on the Employer or the Engineer by the Contract, and may himself complete the Works or may himself complete the work or may employ any other contractor to complete the Works. The Employer or such other contractor may use for such completion so much of the Contractor's Equipment, Plant, Temporary Works and materials, which have been deemed to be reserved exclusively for the execution of the Works, under the provisions of the Contract, as he or they may think proper, and the Employer may, at any time, sell any of the said Contractor's Equipment, Temporary Works and unused Plant and materials and apply the proceeds of sale in or towards the satisfaction of any sums due or that may become due to him from the Contractor under the Contract."

63.2 Valuation of Date of Expulsion

Modify the heading of Subclause 63.2 by substituting "Valuation at Date of Termination" for "Valuation at Date of Expulsion." In Subclause 63.2, delete the word "termination" on the second and fifth lines and substitute "expulsion".

63. Valuation of Date of Expulsion

Modify the heading of Subclause 63.3 by substituting "Payment after Expulsion" for "Payment after Termination." In Subclause 63.3, delete the words "terminates the Contractor's employment" on the first line and substitute "shall enter and expel the Contractor".

63.4 Assignment of Benefit of Agreement

In Subclause 63.4, delete the word "termination" on the second line, and substitute "expulsion".

Add the following at the end of this subclause:

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

Add the following subclause 63.5:

63.5 Corrupt or Fraudulent Practices

If in the judgment of the Employer the Contractor has engaged in corrupt or fraudulent practices, in competing for or in executing the Contract, then the Employer may, after having given 14 days notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of Clause 63 shall apply as if such expulsion had been made under Subclause 63.1.

For the purpose of this Subclause:

“corrupt practice” means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.

“fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.

SPECIAL RISKS

Subclause 65.2 is amended to read as follows:

65.2 Special Risks

The Special Risks are the risks defined under paragraph (a), subparagraphs. (i) to (v) of Subclause 20.4 of the Conditions of Contract”.

65.4 Projectile, Missile

Delete “whenever and wherever occurring” under line 2 and add “on or near the site” after “explosive of war” under line 3.

Add Subclause 65.9 as follows:

65.9 Special Risks

- (a) In the event of the Employer unilaterally ordering the final cessation of performance of the Contract for reasons not specified elsewhere in the Conditions of Contract the Contract shall be considered to be frustrated and the Contractor shall be indemnified as provided for under Clause 65.1.
- (b) In the event of the Employer ordering the adjournment of the Contract before or after commencement of the Works for reasons not specified elsewhere in the Conditions of Contract, the Contractor shall be entitled to indemnity for any injury which he may have suffered as a consequence of such adjournment.

The Engineer shall award the Contractor payment of such sum as in his opinion shall be reasonable giving regard to all material and relevant factors including the Contractor’s on costs and overheads, and the nature of the instruction to adjourn the Contract.

SETTLEMENT OF DISPUTES

67.1 Engineers Decision

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

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

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

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no notice of intention to commence adjudication as to such dispute has been given by either the Employer or the Contractor on or

before the twenty eighth day after the day on which the parties received notice as to such decision from the Engineer, the said decision shall become final and binding upon the Employer and the Contractor. “.

67.2 Amicable Settlement

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

Subclause 67.3 is deleted and substituted with the following subclause:

67.3 Arbitration

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

NOTICES

68.1 Notices to Contractor

Add the following at the end of this subclause:

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

68.2 Notices to Employer and Engineer

Delete the words “nominated for that purpose in Part II of these Conditions” in this subclause and substitute with “given in the Appendix to Form of Bid”.

DEFAULT OF EMPLOYER

Under Subclause 69.1, 69.4 and 69.5, substitute “Subclause 60.4 for “Subclause 60.10”.

69.1 Default of Employer

In Subclause 69.1 (a), delete the words “28 days” in the second sentence and substitute with the words “60 days”.

Delete Subclause 69.1 (d).

69.3 Payment on Termination

Delete from “, but in addition to the payments specified...” to the end of the Subclause.

69.4 Contractor’s Entitlement to Suspend Work

Delete the words ‘28 days’ and substitute with ‘60 days’.

Delete sub-clause 69.4 (b) and substitute with the following:

the amount of such cost, which shall be added to the Contract Price. However, the costs due to idle time for plant, equipment and labour shall not be included in the said costs and shall be borne by the Contractor.

Add to Subclause 69.4 as follows:

Without prejudice to the Contractor’s entitlement to interest under Subclause 60.7 (of these Conditions of Particular application) and to terminate under Subclause 69.1, the Contractor may suspend work or reduce the rate of work within 56 days after notification by the Foreign Funding Agency to the Kenya Government that the Financier has suspended disbursements from its loan, which finances in whole or in part the execution of the Works.

Add Subclause 69.6 as follows:

69.6 Suspension of Funding Agency Loan

In the event that the Foreign Funding Agency suspends the loan or credit to the Employer from which part of the payments to the Contractor are being made:

- (a) The Employer shall notify the Contractor, with a copy to the Engineer, of such suspension within 7 days of having received the suspension notice from the Funding Agency, provided that:
 - (i) The Employer shall state in such notification whether sufficient funds in the appropriate currencies are expected to be available to the Employer to continue making payments to the Contractor beyond a date 60 days after the date of the Funding Agency's notification of the suspension, and
 - (ii) If such funds are not expected to be available, the Employer shall immediately inform the Engineer to instruct the Contractor to suspend progress of the Works pursuant to Subclause 40.1 of the General Conditions of Contract.
- (b) If the Contractor has not received sums due to him upon the expiration of the 14 days from the time when the Foreign Funding Agency's loan or credit, from which part of the payments to the contractor is being made under Interim Certificates, is suspended, the Contractor may, without prejudice to the Contractor's entitlement to interest under Subclause 60.7, immediately take one or both of the following actions:
 - (i) Suspend work or reduce the rate of work, and/or
 - (ii) Terminate his employment under the Contract by giving notice to the Engineer. Such termination shall take effect 14 days after giving of the notice.

70 CHANGES IN COST AND LEGISLATION

Delete Clause 70 in its entirety, and substitute by 70.1 – 70.8 (inclusive):

70.1 Price Adjustment	"The amounts payable to the Contractor, in various currencies pursuant to Sub-Clause 60.1, shall be adjusted in respect of the rise or fall in the cost of labour, Contractor's Equipment, Plant, materials, and other inputs to the Works, by comparing the Basic Rates at tendering stage and the current prevailing market prices.
70.2 Other Changes in Cost	To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other Clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise or fall of costs.
70.8 Subsequent Legislation	If, after the date 28 days prior to the latest date for submission of bids for the Contract, there occur in the country in which the Works are being or are to be executed changes to any National or State Statute, Ordinance, Decree, or other Law or any regulation or by-law of any local or other duly constituted authority, or the introduction of any such State Statute, Ordinance, Decree, Law, regulation or by-law which causes additional or reduced cost to the Contractor, other than under the preceding sub-clauses of this clause, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be added to or deducted from the Contract Price and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same shall already have been taken into account in any inputs to the Price Adjustment in accordance with the provisions of Sub-Clauses 70.1.

CURRENCY AND RATES OF EXCHANGE

72 Currency Proportions

Delete clause 72 in its entirety and substitute the following:

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

73.4 Duties on Contractor's Equipment

Notwithstanding the provisions of Subclause 73.2, the Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall not be exempt from the payment of import duties and any other taxes upon initial importation.

ADDITIONAL CLAUSES

74.1 Illegal Payments

If the Contractor, or any of his Sub-Contractors, agents or servants gives or offers to give to any person any payment, gift, gratuity or commission as an inducement or reward for doing or forbearing to do any action in relation to the Contract or any other contract with the Employer, or for showing or forbearing to show favour or disfavour to any person in relation to the Contract or to any other contract with the Employer, then the Employer may enter upon the Site and the Works and expel the Contractor and the provisions of Clause 63 hereof shall apply as if such entry and expulsion had been made pursuant to that Clause.

75.1 Termination of Contract for Employer's Convenience

The Employer shall be entitled to terminate this Contract at any time for the Employer's convenience after giving 56 days prior notice to the Contractor, with a copy to the Engineer. In the event of such termination, the Contractor:

- (a) Shall proceed as provided in Subclause 65.7, and
- (b) Shall be paid by the Employer as provided in Subclause 65.8.

76.1 Restriction on Eligibility

- (a) Any Plant, materials, or services which will be incorporated in or required for the Works, as well as the Contractor's Equipment and other supplies, shall have their origin in any of the countries and territories eligible under the Foreign Financier's Rules for Procurement.
- (b) For the purposes of this clause, 'origin' means the place where the materials and equipment were mined, grown, produced, or manufactured or from which the services are provided.
- (c) The origin of goods and services is distinct from the nationality of the supplier.

77.1 Joint and Several Liability

If the Contractor is a joint venture of two or more persons, all such persons shall be joint and severally bound to the Employer for the fulfilment of the terms of the Contract and shall designate one of such persons to act as a leader with authority to bind the joint venture. The composition or the constitution of the joint venture shall not be altered without the prior consent of the Employer.

78.1 Details to be Confidential

The Contractor shall treat the details of the Contract as private and confidential, save insofar as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of the Employer or the Engineer. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract the same shall be referred to the Employer whose determination shall be final.

78.2 Drawings and Photographs of the Works

The Contractor shall not disclose details of drawings furnished to him and works on which he is engaged without the prior approval of the Engineer in writing. No photograph of the work or any part thereof or equipment employed thereon shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his Subcontractors without the prior approval of the Engineer in writing and no such photographs shall be published or otherwise circulated without the approval of the Engineer in writing.

79.1 Official Visitors

The Contractor shall at all times when authorized by the Engineer give free and undisputed access of all facilities to any authorized employee of the Kenya Government or other authorized person wishing to view or inspect any part of the Site or Works or the materials therein.

80.1 Substantial Completion of the Works

The Contractor shall note that the Engineer reserves the right to certify the Works to be "substantially completed" in accordance with the provisions of Clause 48 of the General Conditions of Contract, unless the following portions of the Works are completed according to the Specifications:

- (a) Works up to and including the bituminous wearing courses,
 - (b) All drains and drainage structures including bridges,
 - (c) Construction of the shoulders,
 - (d) Finishing of medians and slopes of cuts and fills and
-

(e) Reinstatement and environmental treatment of quarries and borrow pits.

81.1 Monthly Site Meetings

The Contractor or his authorised representative shall attend monthly meetings on the site with representatives of the Employer and the Engineer at dates and times to be determined by the Engineer. Such meetings will be held for evaluating the progress of the Contract and for discussion of matters pertaining to the Contract which any of the parties represented may wish to raise. Such meetings are not intended for discussing matters concerning the normal day-to-day running of the Contract.

The Contractor shall prepare and submit to the Resident Engineer one week before the meeting a monthly report in the format approved by the Engineer giving all the information and details regarding its accomplishment against the prevailing approved programme.

81.2 Minutes of Site Meetings

Agreements recorded in the Minutes of the Site Meetings are binding to all parties, if objections to the minutes have not been given in due time.

The Minutes of the Site Meetings shall be issued within 7 days and shall be numbered consecutively. Minutes shall be deemed to have been received by the Contractor unless the Contractor gives notice at the following meeting that the Minutes were not received.

Any objections to the Minutes of the Site Meetings shall at the latest be raised at the succeeding Site Meeting or presented to the Engineer in writing not later than 2 weeks after the meeting. If the Contractor at this time has not received the Minutes of the Site Meeting, the objection must be given in writing to the Engineer not later than 2 working days after the subsequent receipt of the said Minutes.

82.1 Legal Provisions

The Contractor shall keep himself fully conversant with the latest enactment's, provisions and regulations of all legislative and statutory bodies, and, in all respects and at all times, shall comply with such enactment's, provisions and regulations in regard to executing the Contract.

83.1 Noise and Disturbance

All works shall be carried out without unreasonable noise and disturbance. The Contractor shall indemnify and keep indemnified the Employer from and against any liability for damages on account of noise or other disturbances created while or in carrying out the work and from and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in regard to or in relation to such liability.

83.2 Pollution

Subject, and without prejudice, to any other provision of the Contract and the law of the land and its obligations as applicable, the Contractor shall take all reasonable precautions in connection with:

(a) The rivers, streams, waterways, drains, water-course, lakes, reservoirs and the like to prevent:

- (i) Silting
- (ii) Erosion of their beds and banks, and
- (iii) Pollution of the water so as to affect adversely the quality or appearance thereof or cause injury or death to animal and plant life.

(b) The underground water resources including percolating water to prevent:

- (i) Any interference with the supply to or obstruction from such sources, and
- (ii) Pollution of the water which may adversely affect the quality thereof.

The Contractor shall further comply with any and all laws, rules and regulations of governmental agencies having jurisdiction which now exist or which may be promulgated during the course of the works contracted for herein, relating to the control, regulation and prevention of pollution. Not by way of limitation of the foregoing, but in furthermore thereof, the Contractor shall use the highest prevailing and approved standards of care and diligence to prevent and to take care of all waste, oil, water and other waste materials that may accumulate and be caused by the Contractor's operations and performance of this Contract so as to prevent pollution of any nature or kind resulting from the Works performed under this Contract.

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 (Review
Board)

AND

..... RESPONDENT (Procuring
Entity)

Request for review of the decision of the (Name of the Procuring Entity of dated the ... day
of 20 in the matter of Tender No of 20 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 of 20

SIGNED

Board Secretary

FORM NO 3: NOTIFICATION OF AWARD - LETTER OF ACCEPTANCE

[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 Oblige (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, ~~a~~ 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.

SECTION 10: DRAWINGS