NAIROBI CITY COUNTY

www.nairobi.go.ke

WARD DEVELOPMENT PROGRAMME

BID DOCUMENT FOR

TARMACKING OF MUIRIGO CENTRE ROAD AND PUBLIC LIGHTING WITHIN CLAY CITY WARD

TENDER NO: NCC/WDP/T/625/2024-2025

(ALL CATEGORY)

CLOSING/OPENING 22ND MAY 2025 AT 11.30AM

Chief Executive Officer **Ward Development Program** **Nairobi City County** **P.O. Box 30075 - 00100** **NAIROBI** **Email:** info@nairobi.go.ke	**County Secretary & Head of County Public Service** **Nairobi City County** **P.O. Box 30075 - 00100** **NAIROBI** **Email:** info@nairobi.go.ke

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TENDER DOCUMENTS FOR PROCUREMENT OF SMALLWORKS

1) NAME AND CONTACT ADDRESSES OF PROCURING ENTITY

Name: NAIROBI CITY COUNTY

Address: P.O. BOX 30075-00100 NAIROBI

Email address: info@nairobi.go.ke

2) Invitation to Tender (ITT) No. NCC/WDP/T/625/2024-2025

Tender Name: TARMACKING OF MUIRIGO CENTRE ROAD AND PUBLIC LIGHTING WITHIN CLAY CITY WARD

INVITATION TO TENDER

PROCURING ENTITY: NAIROBI CITY COUNTY P.O. BOX 30075-00100 NAIROBI

CONTRACT NUMBER AND DESCRIPTION: NCC/WDP/T/625/2024-2025

TARMACKING OF MUIRIGO CENTRE ROAD AND PUBLIC LIGHTING WITHIN CLAY CITY WARD.

The NAIROBI CITY COUNTY invites sealed tenders for

1. Contract Number: - NCC/WDP/T/625/2024-2025

   Contract Name: -

   TARMACKING OF MUIRIGO CENTRE ROAD AND PUBLIC LIGHTING WITHIN CLAY CITY WARD

   Tendering will be conducted under open competitive method National using a standardized tender document. Tendering is open to ALL qualified and interested Tenderers category NCA 7 and above.

2. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours *FROM 9.00AM to 4.00PM* at the address given below.

3. A complete set of tender documents may be purchased or obtained by interested tenders upon payment of a non- refundable fees of Kenya shillings One Thousand only (Kshs 1,000.00) in cash or Banker's Cheque and payable to the address given below. Tender documents may be obtained electronically from the Website www.nairobi.go.ke or www.tenders.go.ke. Tender documents obtained electronically will be free of charge.

4. Tender documents may be viewed and downloaded for free from the website (www.nairobi.go.ke A & www.tenders.go.ke.). Tenderers who download the tender document must forward their particulars immediately to NAIROBI CITY COUNTY NAIROBI P.O BOX 30075 – 00100 NAIROBI *to* facilitate any further clarification or addendum.

5. Tenders shall be quoted be in Kenya Shillings and shall include all taxes. Tenders shall remain valid for 210 days from the date of opening of tenders.

6. All Tenders must be accompanied by a tender security of Kshs. 340,000.00 (Kenya Shillings Four Hundred Sixty Thousand Only)

7. The Tenderer shall chronologically and sequentially serialize all pages in a numerical format 1,2,3,4,5……. Including the cover page of the tender documents submitted.

8. Completed tenders must be delivered to the address below on or before22nd May 2025 at 11.30AM. Electronic Tenders *will not* be permitted.

9. Tenders will be closed on 22nd May 2025 Time11.30AM. Tenders will be opened immediately thereafter in the Nairobi City County Procurement boardroom in the presence of tenderers or their representatives who choose to attend.

10. Late tenders will be rejected.

11. The addresses referred to above are:

A. AAddress for obtaining further information and for purchasing tender documents

NAIROBI CITY COUNTY
DIRECTORATE OF SUPPLY CHAIN MANAGEMENT
P.O BOX 30075-00100
MAMA NGINA STREET, MAIN CITY HALL 4TH FLOOR ROOM 400
EMAIL. nairobiprocurement@gmail.com

B. Address for submission of tenders

NAIROBI CITY COUNTY
COUNTY SECRETARY & HEAD OF COUNTY PUBLIC SERVICE
P.O BOX 30075-00100
MAMA NGINA STREET, MAIN CITY HALL 4TH FLOOR ROOM 400
EMAIL. nairobiprocurement@gmail.com

c. Address for opening of tenders

DIRECTORATE OF SUPPLY CHAIN MANAGEMENT
P.O BOX 30075-00100
MAMA NGINA STREET, MAIN CITY HALL 4TH FLOOR ROOM 400
EMAIL. nairobiprocurement@gmail.com

CHIEF EXECUTIVE OFFICER, WARD DEVELOPMENT PROGRAMME

PART 1 - TENDERING PROCEDURES

SECTION I: INSTRUCTIONS TO TENDERERS

A General Provisions

1. Scope of Tender

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

2. Fraud and Corruption

2.1 The Procuring Entity requires compliance with the provisions of the Public Procurement and Asset Disposal Act, 2015, Section 62 "Declaration not to engage in corruption". The tender submitted by a person shall include a declaration that the person shall not engage in any corrupt or fraudulent practice and a declaration that the person or his or her subcontractors are not debarred from participating in public procurement proceedings.

2.2 The Procuring Entity requires compliance with the provisions of the Competition Act 2010, regarding collusive practices in contracting. Any tenderer found to have engaged in collusive conduct shall be disqualified and criminal and/or civil sanctions may be imposed. To this effect, Tenders shall be required to complete and sign the "Certificate of Independent Tender Determination" annexed to the Form of Tender.

2.3 Unfair Competitive Advantage - Fairness and transparency in the tender process require that the firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender. To that end, the Procuring Entity shall indicate in the Data Sheet and make available to all the firms together with this tender document all information that would in that respect give such firm any unfair competitive advantage over competing firms.

2.4 Unfair Competitive Advantage -Fairness and transparency in the tender process require that the Firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender being tendered for. The Procuring Entity shall indicate in the TDS firms (if any) that provided consulting services for the contract being tendered for. The Procuring Entity shall check whether the owners or controllers of the Tenderer are same as those that provided consulting services. The Procuring Entity shall, upon request, make available to any tenderer information that would give such firm unfair competitive advantage over competing firms.

3. Eligible Tenderers

3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.7 or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. Public employees and their close relatives *(spouses, children, brothers, sisters and uncles and aunts)* are not eligible to participate in the tender. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have

the authority to conduct all business for and on behalf of any and all the members of the JV during the tendering process and, in the event the JV is awarded the Contract, during contract execution. The maximum number of JV members shall be specified in the TDS.

3.2 Public Officers of the Procuring Entity, their Spouses, Child, Parent, Brothers or Sister. Child, Parent, Brother or Sister of a Spouse, their business associates or agents and firms/organizations in which they have a substantial or controlling interest shall not be eligible to tender or be awarded a contract. Public Officers are also not allowed to participate in any procurement proceedings.

3.3 A Tenderer shall not have a conflict of interest. Any tenderer found to have a conflict of interest shall be disqualified. A tenderer may be considered to have a conflict of interest for the purpose of this tendering process, if the tenderer:

a) Directly or indirectly controls, is controlled by or is under common control with another tenderer; or

b) Receives or has received any direct or indirect subsidy from another tenderer; or

c) Has the same legal representative as another tenderer; or

d) Has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer, or influence the decisions of the Procuring Entity regarding this tendering process; or

e) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender; or

f) any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Engineer for the Contract implementation; or

g) Would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the contract specified in this Tender Document or

h) Has a close business or family relationship with a professional staff of the Procuring Entity wh0

   a. are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract; or

   b. would be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Procuring Entity throughout the tendering process and execution of the Contract.

3.4 A tenderer shall not be involved in corrupt, coercive, obstructive, collusive or fraudulent practice. A tenderer that is proven to have been involved any of these practices shall be automatically disqualified.

3.5 A Tenderer (either individually or as a JV member) shall not participate in more than one Tender, except for permitted alternative tenders. This includes participation as a subcontractor in other Tenders. Such participation shall result in the disqualification of all Tenders in which the firm is involved. A firm that is not a tenderer or a JV member may participate as a subcontractor in more than one tender. Members of a joint venture may not also make an individual tender, be a

subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender.

3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.8.A Tenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or sub-consultants for any part of the Contract including related Services.

3.7 Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA www.ppra.go.ke.

3.8 Tenderers that are state-owned enterprises or institutions may be eligible to compete and be awarded a Contract(s) only if they are accredited by PPRA to be (i) a legal public entity of the state Government and/or public administration, (ii) financially autonomous and not receiving any significant subsidies or budget support from any public entity or Government, and (iii) operating under commercial law and vested with legal rights and liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.

3.9 A Firms and individuals may be ineligible if their countries of origin (a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country, or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country. A tenderer shall provide such documentary evidence of eligibility satisfactory to the Procuring Entity, as the Procuring Entity shall reasonably request.

3.10 Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, subcontracts and labor) from national suppliers and contractors. To this end, a foreign tenderer shall provide in its tender documentary evidence that this requirement is met. Foreign tenderers not meeting this criterion will be automatically disqualified. Information required to enable the Procuring Entity determine if this condition is met shall be provided in for this purpose is be provided in *"SECTION III - EVALUATION AND QUALIFICATION CRITERIA, Item 9".*

3.11 Pursuant to the eligibility requirements of ITT 4.10, a tender is considered a foreign tenderer, if the tenderer is not registered in Kenya or if the tenderer is registered in Kenya and has <u>less than 51 percent</u> ownership by Kenyan Citizens. JVs are considered as foreign tenderers if the individual member firms are not registered in Kenya or if are registered in Kenya and have less than 51 percent ownership by Kenyan citizens. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.

3.12 The National Construction Authority Act of Kenya requires that all local and foreign contractors be registered with the National Construction Authority and be issued with a Registration Certificate before they can undertake any construction works in Kenya. Registration shall not be a condition for tender, but it shall be a condition of contract award and signature. A selected tenderer shall be given

opportunity to register before such award and signature of contract. Application for registration with National Construction Authority may be accessed from the website www.nca.go.ke.

3.13 The Competition Act of Kenya requires that firms wishing to tender as Joint Venture undertakings which may prevent, distort or lessen competition in provision of services are prohibited unless they are exempt in accordance with the provisions of Section 25 of the Competition Act, 2010. JVs will be required to seek for exemption from the Competition Authority. Exemption shall not be a condition for tender, but it shall be a condition of contract award and signature. A JV tenderer shall be given opportunity to seek such exemption as a condition of award and signature of contract. Application for exemption from the Competition Authority of Kenya may be accessed from the website www.cak.go.ke

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

4. Eligible Goods, Equipment, and Services

4.1 Goods, equipment and services to be supplied under the Contract may have their origin in any country that is not eligible under ITT 3.9. At the Procuring Entity's request, Tenderers may be required to provide evidence of the origin of Goods, equipment and services.

4.2 Any goods, works and production processes with characteristics that have been declared by the relevant national environmental protection agency or by other competent authority as harmful to human beings and to the environment shall not be eligible for procurement.

5. Tenderer's Responsibilities

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

5.2 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine the Site of the Works and its surroundings, and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the tenderer's own expense.

5.3 The Tenderer and any of its personnel or agents will be granted permission by the Procuring Entity to enter upon its premises and lands for the purpose of such visit. The Tenderer shall indemnify the Procuring Entity against all liability arising from death or personal injury, loss of or damage to property, and any other losses and expenses incurred as a result of the inspection.

5.4 The tenderer shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including charts, as necessary or required.

B. Contents of Tender Documents

6. Sections of Tender Document

6.1 The tender document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT 8.

PART 1 Tendering Procedures
i) Section I - Instructions to Tenderers (ITT) ii) Section II - Tender Data Sheet (TDS) iii) Section III - Evaluation and Qualification Criteria iv) Section IV - Tendering Forms

PART 2 Works Requirements i) Section V - Drawings ii) Section VI - Specifications iii) Section VII - Bills of Quantities

PART 3 Conditions of Contract and Contract Forms
i) Section VIII - General Conditions of Contract (GCC)
ii) Section IX - Special Conditions of Contract (SC) iii) Section X - Contract Forms

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

6.3 Unless obtained directly from the Procuring Entity, the Procuring Entity is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 8. In case of any contradiction, documents obtained directly from the Procuring Entity shall prevail.

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

7. Site Visit

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

8. Pre-Tender Meeting

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

8.2 The Tenderer is requested to submit any questions in writing, to reach the Procuring Entity not later than the period specified in the TDS before the meeting.

8.3 Minutes of the pre-Tender meeting and the pre-arranged pretender site visit of the site of the works, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents in accordance withITT6.3. Minutes shall not identify the source of the questions asked.

8.4 The Procuring Entity shall also promptly publish anonym zed (*no names*) Minutes of the pre-Tender meeting and the pre-arranged pretender visit of the site of the works at the web page identified in the TDS. Any modification to the Tender Documents that may become necessary as a result of the pre-tender meeting and the pre-arranged pretender site visit, shall be made by the Procuring Entity exclusively through the issue of an Addendum pursuant to ITT 8 and not through the minutes of the pre-Tender meeting. Nonattendance at the pre-Tender meeting will not be a cause for disqualification of a Tenderer.

9. Clarification and amendments of Tender Documents

9.1 A Tenderer requiring any clarification of the Tender Document shall contact the Procuring Entity in writing at the Procuring Entity's address specified in the TDS or raise its enquiries during the pre-Tender meeting and the pre- arranged pretender visit of the site of the works if provided for in accordance with ITT 8.4. The Procuring Entity will respond in writing to any request for clarification, provided that such request is received no later than the period specified in the TDS prior to the deadline for submission of tenders. The Procuring Entity shall forward copies of its response to all tenderers who have acquired the Tender Documents in accordance with ITT 6.3, including a description of the inquiry but without identifying its source. If specified in the TDS, the Procuring Entity shall also promptly publish its response at the web page identified in the TDS. Should the clarification result in changes to the essential elements of the Tender Documents, the Procuring Entity shall amend the Tender Documents appropriately following the procedure under ITT 8.4.

10. Amendment of Tendering Document

10.1 At any time prior to the deadline for submission of Tenders, the Procuring Entity may amend the Tendering document by issuing addenda.

10.2 Any addendum issued shall be part of the tendering document and shall be communicated in writing to all who have obtained the tendering document from the Procuring Entity in accordance with ITT 6.3. The Procuring Entity shall also promptly publish the addendum on the Procuring Entity's web page in accordance with ITT 8.4.

10.3 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Procuring Entity shall extend, as necessary, the deadline for submission of Tenders, in accordance with ITT 25.2 below.

C. <u>Preparation of Tenders</u>

11. Cost of Tendering

11.1 The Tenderer shall bear all costs associated with the preparation and submission of its

Tender, and the Procuring Entity shall not be responsible or liable for those costs,

regardless of the conduct or outcome of the tendering process.

12. Language of Tender

12.1 The Tender, as well as all correspondence and documents relating to the tender exchanged by the tenderer and the Procuring Entity, shall be written in the English Language. Supporting documents and printed literature that are part of the Tender may be in another language provided they are accompanied by an accurate and notarized translation of the relevant passages into the English Language, in which case, for purposes of interpretation of the Tender, such translation shall govern.

13. Documents Comprising the Tender

13.1 The Tender shall comprise the following:

a) Form of Tender prepared in accordance with ITT 14;
b) Schedules including priced Bill of Quantities, completed in accordance with ITT 14 and ITT 16;
c) Tender Security or Tender-Securing Declaration, in accordance with ITT 21.1;
d) Alternative Tender, if permissible, in accordance with ITT 15;
e) Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT22.3;
f) Qualifications: documentary evidence in accordance with ITT 19establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
g) Conformity: a technical proposal in accordance with ITT 18;
h) Any other document required in the TDS.

13.2 In addition to the requirements under ITT 11.1, Tenders submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Tender shall be signed by all members and submitted with the Tender, together with a copy of the proposed Agreement. The Tenderer shall chronologically serialize pages of all tender documents submitted.

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

14. Form of Tender and Schedules

14.1 The Form of Tender and Schedules, including the Bill of Quantities, shall be prepared using the relevant form*s* furnished in Section IV, Tendering Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITT 20.3. All blank spaces shall be filled in with the information requested.

15. Alternative Tenders

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

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

15.3 Except as provided under ITT 13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Tenderer with the Winning Tender conforming to the basic technical requirements shall be considered by the Procuring Entity. When specified in the TDS, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the TDS, as will the method for their evaluating, and described in Section VII, Works' Requirements.

16. Tender Prices and Discounts

16.1 The prices and discounts (including any price reduction) quoted by the Tenderer in the Form of Tender and in the Bill of Quantities shall conform to the requirements specified below.

16.2 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Procuring Entity. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Tender, and provided that the Tender is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Tenderers will be added to the Tender price and the equivalent total cost of the Tender so determined will be used for price comparison.

16.3 The price to be quoted in the Form of Tender, in accordance with ITT 14.1, shall be the total price of the Tender, including any discounts offered.

16.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 14.1.

16.5 It will be specified in the TDS if the rates and prices quoted by the Tenderer are or are not subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, except in cases where the contract is subject to fluctuations and adjustments, not fixed price. In such a case, the Tenderer shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Procuring Entity may require the Tenderer to justify its proposed indices and weightings.

16.6 Where tenders are being invited for individual lots (contracts)or for any combination of lots (packages), tenderers wishing to offer discounts for the

award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 16.4, provided the Tenders for all lots (contracts) are opened at the same time.

16.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of Tenders, shall be included in the rates and prices and the total Tender Price submitted by the Tenderer.

17. Currencies of Tender and Payment

17.1 Tenderers shall quote entirely in Kenya Shillings. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya shillings. A Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya shall device own ways of getting foreign currency to meet those expenditures.

18. Documents Comprising the Technical Proposal

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

19. Documents Establishing the Eligibility and Qualifications of the Tenderer

19.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT4.

19.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract the Tenderer shall provide the information requested in the corresponding information sheets included in Section IV, Tender Forms.

19.3 A margin of preference will not be allowed. Preference and reservations will be allowed, individually or in joint ventures. Applying for eligibility for Preference and reservations shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.

19.4 Tenderers shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a contractor or group of contractors qualifies for a margin of preference. Further the information will enable the Procuring Entity identify any actual or potential conflict of interest in relation to the procurement and/or contract management processes, or a possibility of collusion between tenderers, and thereby help to prevent any corrupt influence in relation to the procurement process or contract management.

19.5 The purpose of the information described in ITT 19.4 above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep

information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by the Procuring Entity as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.

19.6 The Tenderer shall provide further documentary proof, information or authorizations that the Procuring Entity may request in relation to ownership and control which information on any changes to the information which was provided by the tenderer under ITT 6.3. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.

19.7 All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to the Procuring Entity. In submitting the information required pursuant to these requirements, the Tenderer shall warrant that the information submitted is complete, current and accurate as at the date of submission to the Procuring Entity.

19.8 If a tenderer fails to submit the information required by these requirements, its tender will be rejected. Similarly, if the Procuring Entity is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.

19.9 If information submitted by a tenderer pursuant to these requirements, or obtained by the Procuring Entity (whether through its own enquiries, through notification by the public or otherwise), shows any conflict of interest which could materially and improperly benefit the tenderer in relation to the procurement or contract management process, then:

i) If the procurement process is still ongoing, the tenderer will be disqualified from the procurement process,
ii) if the contract has been awarded to that tenderer, the contract award will be set
aside,
iii) the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other persons have committed any criminal offence.

19.10 If a tenderer submits information pursuant to these requirements that is incomplete, inaccurate or out-of-date, or attempts to obstruct the verification process, then the consequences ITT 6.7 will ensue unless the tenderer can show to the reasonable satisfaction of the Procuring Entity that any such act was not material, or was due to genuine error which was not attributable to the intentional act, negligence or recklessness of the tenderer.

20. Period of Validity of Tenders

20.1 Tenders shall remain valid for the Tender Validity period specified in the TDS. The Tender Validity period starts from the date fixed for the Tender submission deadline (as prescribed by the Procuring Entity in accordance with ITT 24). A Tender valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.

20.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Procuring Entity may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 21.1, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting the request shall not be required or permitted to modify its Tender, except as provided in ITT 20.3.

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

a) in the case of fixed price contracts, the Contract price shall be the tender price adjusted by the factor specified in the TDS;

b) in the case of adjustable price contracts, no adjustment shall be made; or in any case, tender evaluation shall be based on the tender price without taking into consideration the applicable correction from those indicated above.

21. Tender Security

21.1 The Tenderer shall furnish as part of its Tender, either a Tender-Securing Declaration or a Tender Security as specified in the TDS, in original form and, in the case of a Tender Security, in the amount and currency specified in the TDS. A Tender-Securing Declaration shall use the form included in Section IV, Tender Forms.

21.2 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security shall be a demand guarantee in any of the following forms at the Tenderer's option:

a) an unconditional Bank Guarantee issued by reputable commercial bank); or

b) an irrevocable letter of credit;

c) a Banker's cheque issued by a reputable commercial bank; or

d) another security specified in the TDS,

21.3 If an unconditional bank guarantee is issued by a bank located outside Kenya, the issuing bank shall have a correspondent bank located in Kenya to make it enforceable. The Tender Security shall be valid for thirty (30) days beyond the original validity period of the Tender, or beyond any period of extension if requested under ITT 20.2.

21.4 If a Tender Security or Tender-Securing Declaration is specified pursuant to ITT 19.1, any Tender not accompanied by a substantially responsive Tender Security or Tender Securing Declaration shall be rejected by the Procuring Entity as non-responsive.

21.5 If a Tender Security is specified pursuant to ITT 21.1, the Tender Security of unsuccessful Tenderers shall be returned as promptly as possible upon the successful Tenderer's signing the Contract and furnishing the Performance

Security and any other documents required in the TDS. The Procuring Entity shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined nonresponsive or a bidder declines to extend tender validity period.

21.6 The Tender Security of the successful Tenderer shall be returned as promptly as possible once the successful Tenderer has signed the Contract and furnished the required Performance Security, and any other documents required in the TDS.

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

e) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension thereto provided by the Tenderer; or

f) if the successful Tenderer fails to:

i) sign the Contract in accordance with ITT 50; or

ii) furnish a Performance Security and if required in the TDS, and any other documents required in the TDS.

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

21.9 The Tender Security or the Tender-Securing Declaration of a JV shall be in the name of the JV that submits the Tender. If the JV has not been legally constituted into a legally enforceable JV at the time of tendering, the Tender Security or the Tender-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITT 4.1 and ITT 11.2.

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

22. Format and Signing of Tender

22.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 13 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 15, shall be clearly marked "ALTERNATIVE." In addition, the Tenderer shall submit copies of the Tender, in the number specified in the TDS and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

22.2 Tenderers shall mark as "CONFIDENTIAL" all information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

22.3 The original and all copies of the Tender shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Tenderer. This authorization shall consist of a written confirmation as specified in the TDS and shall be attached to the Tender. The name and position held by each person signing the authorization must

be typed or printed below the signature. All pages of the Tender where entries or amendments have been made shall be signed or initialed by the person signing the Tender.

22.4 In case the Tenderer is a JV, the Tender shall be signed by an authorized representative of the JV on behalf of the JV, and to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

22.5 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Tender.

D. Submission and Opening of Tenders

23. Sealing and Marking of Tenders

23.1 Depending on the sizes or quantities or weight of the tender documents, a tenderer may use an envelope, package or container. The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Procuring Entity and a warning not to open before the time and date for Tender opening date. Within the single envelope, package or container, the Tenderer shall place the following separate, sealed envelopes:

a) in an envelope or package or container marked "ORIGINAL", all documents comprising the Tender, as described in ITT 11; and
b) in an envelope or package or container marked "COPIES", all required copies of the Tender; and
c) if alternative Tenders are permitted in accordance with ITT 15, and if relevant:
i) in an envelope or package or container marked "ORIGINAL –ALTERNATIVE TENDER", the alternative Tender; and ii) in the envelope or package or container marked "COPIES- ALTERNATIVE TENDER", all required Copies of the alternative Tender.

The inner envelopes or packages or containers shall:
a) bear the name and address of the Procuring Entity.
b) bear the name and address of the Tenderer; and
c) bear the name and Reference number of the Tender.

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

24. Deadline for Submission of Tenders

24.1 Tenders must be received by the Procuring Entity at the address specified in the TDS and no later than the date and time also specified in the TDS. When so specified in the TDS, Tenderers shall have the option of submitting their Tenders electronically. Tenderers submitting Tenders electronically shall follow the electronic Tender submission procedures specified in the TDS.

24.2 The Procuring Entity may, at its discretion, extend the deadline for the submission of Tenders by amending the Tender Documents in accordance with ITT 8, in which case all rights and obligations of the Procuring Entity and Tenderers

previously subject to the deadline shall thereafter be subject to the deadline as extended.

25. Late Tenders

25.1 The Procuring Entity shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 24. Any Tender received by the Procuring Entity after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the Tenderer.

26. Withdrawal, Substitution, and Modification of Tenders

26.1 A Tenderer may withdraw, substitute, or modify its Tender after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITT 22.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:

a) prepared and submitted in accordance with ITT 22 and ITT 23 (except that 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 24.

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

26.3 No Tender may be withdrawn, substituted, or modified in the interval between the deadline for submission of Tenders and the expiration of the period of Tender validity specified by the Tenderer on the Form of Tender or any extension thereof.

27. Tender Opening

27.1 Except in the cases specified in ITT 23 and ITT 26.2, the Procuring Entity shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified in the TDS, in the presence of Tenderers' designated representatives who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT24.1, shall be as specified in the TDS.

27.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelopes with the corresponding Tender shall not be opened, but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Tender opening.

27.3 Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Tender being substituted, and the substituted Tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Tender opening.

27.4 Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Tender. No Tender modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Tender opening.

27.5 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Tenderer and whether there is a modification; the total Tender Price, per lot (contract) if applicable, including any discounts and alternative Tenders; the presence or absence of a Tender Security or Tender-Securing Declaration, if required; and any other details as the Procuring Entity may consider appropriate.

27.6 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further for evaluation. The Form of Tender and pages of the Bills of Quantities are to be initialed by the members of the tender opening committee attending the opening. The number of representatives of the Procuring Entity to sign shall be specified in the TDS.

27.7 At the Tender Opening, the Procuring Entity shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 25.1).

27.8 The Procuring Entity shall prepare minutes of the Tender Opening that shall include, as a minimum:

a) the name of the Tenderer and whether there is a withdrawal, substitution, or modification;
b) the Tender Price, per lot (contract) if applicable, including any discounts;
c) any alternative Tenders;
d) the presence or absence of a Tender Security, if one was required.
e) number of pages of each tender document submitted.

27.9 The Tenderers' representatives who are present shall be requested to sign the minutes. The omission of a Tenderer's signature on the minutes shall not invalidate the contents and effect of the minutes. A copy of the tender opening register shall be distributed to all Tenderers upon request.

E. Evaluation and Comparison of Tenders

28. Confidentiality

28.1 Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 46.

28.2 Any effort by a Tenderer to influence the Procuring Entity in the evaluation of the Tenders or Contract award decisions may result in the rejection of its tender.

28.3 Notwithstanding ITT 28.2, from the time of tender opening to the time of contract award, if a tenderer wishes to contact the Procuring Entity on any matter related to the tendering process, it shall do so in writing.

29. Clarification of Tenders

29.1 To assist in the examination, evaluation, and comparison of the tenders, and qualification of the tenderers, the Procuring Entity may, at its discretion, ask any

tenderer for a clarification of its tender, given a reasonable time for a response. Any clarification submitted by a tenderer that is not in response to a request by the Procuring Entity shall not be considered. The Procuring Entity's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the tender shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Procuring Entity in the evaluation of the tenders, in accordance with ITT 33.

29.2 If a tenderer does not provide clarifications of its tender by the date and time set in the Procuring Entity's request for clarification, its Tender may be rejected.

30. Deviations, Reservations, and Omissions

30.1 During the evaluation of tenders, the following definitions apply:

a) "Deviation" is a departure from the requirements specified in the tender document;

b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the tender document; and

c) "Omission" is the failure to submit part or all of the information or documentation required in the Tender document.

31. Determination of Responsiveness

31.1 The Procuring Entity's determination of a Tender's responsiveness is to be based on the contents of the tender itself, as defined in ITT 13.

31.2 A substantially responsive Tender is one that meets the requirements of the Tender document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that, if accepted, would:

a) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or

b) limit in any substantial way, inconsistent with the tender document, the Procuring Entity's rights or the tenderer's obligations under the proposed contract; or

c) if rectified, would unfairly affect the competitive position of other tenderers presenting substantially responsive tenders.

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

31.4 If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

32. Non-material non-conformities

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

32.2 Provided that a Tender is substantially responsive, the Procuring Entity may request that the tenderer submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial non-conformities in the tender

related to documentation requirements. Requesting information or documentation on such non- conformities shall not be related to any aspect of the price of the tender. Failure of the tenderer to comply with the request may result in the rejection of its tender.

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

33. Arithmetical Errors

33.1 The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity.

33.2 Provided that the Tender is substantially responsive, the Procuring Entity shall handle errors on the following basis:

a) Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.

b) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, and subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and

c) if there is a discrepancy between words and figures, the amount in words shall prevail

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

34. Currency provisions

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

35. Margin of Preference and Reservations

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

35.2 Where it is intended to reserve the contract to specific groups under Small and Medium Enterprises, or enterprise of women, youth and/or persons living with disability, who are appropriately registered as such by the authority to be specified in the TDS, a procuring entity shall ensure that the invitation to tender specifically indicates that only businesses/firms belonging to those specified groups are the only ones eligible to tender. Otherwise if no so stated, the invitation will be open to all tenderers.

36. Nominated Subcontractors

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

36.2 Tenderers may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified in the TDS. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.

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

37. Evaluation of Tenders

37.1 The Procuring Entity shall use the criteria and methodologies listed in this ITT and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies the Procuring Entity shall determine the Best Evaluated Tender in accordance with ITT 40.

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

a) Price adjustment due to discounts offered in accordance with ITT16;
b) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT39;
c) price adjustment due to quantifiable nonmaterial non-conformities in accordance with ITT 30.3; and
d) any additional evaluation factors specified in the TDS and Section III, Evaluation and Qualification Criteria.

37.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be considered in Tender evaluation.

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

38. Comparison of Tenders

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

39. Abnormally Low Tenders

39.1 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price or that genuine competition between Tenderers is compromised.

39.2 In the event of identification of a potentially Abnormally Low Tender, the Procuring

Entity shall seek written clarifications from the Tenderer, including detailed price

analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

39.3 After evaluation of the price analyses, in the event that the Procuring Entity determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, the Procuring Entity shall reject the Tender.

40. Abnormally High Tenders

40.1 An abnormally high price is one where the tender price, in combination with other constituent elements of the Tender, appears unreasonably too high to the extent that the Procuring Entity is concerned that it (the Procuring Entity) may not be getting value for money or it may be paying too high a price for the contract compared with market prices or that genuine competition between Tenderers is compromised.

40.2 In case of an abnormally high tender price, the Procuring Entity shall make a survey of the market prices, check if the estimated cost of the contract is correct and review the Tender Documents to check if the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. The Procuring Entity may also seek written clarification from the tenderer on the reason for the high tender price. The Procuring Entity shall proceed as follows:

i) If the tender price is abnormally high based on wrong estimated cost of the contract, the Procuring Entity may accept or not accept the tender depending on the Procuring Entity's budget considerations.

ii) If specifications, scope of work and/or conditions of contract are contributory to the abnormally high tender prices, the Procuring Entity shall reject all tenders and may retender for the contract based on revised estimates, specifications, scope of work and conditions of contract, as the case may be.

40.3 If the Procuring Entity determines that the Tender Price is abnormally too high because genuine competition between tenderers is compromised (*often due to collusion, corruption or other manipulations*), the Procuring Entity shall reject all Tenders and shall institute or cause competent Government Agencies to institute an investigation on the cause of the compromise, before retendering.

41. Unbalanced and/or Front-Loaded Tenders

41.1 If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or front loaded, the Procuring Entity may require the Tenderer to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the tender prices with the scope of works, proposed methodology, schedule and any other requirements of the Tender document.

41.2 After the evaluation of the information and detailed price analyses presented by the Tenderer, the Procuring Entity may as appropriate:

a) accept the Tender; or

b) require that the total amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding a 30% of the Contract Price; or

c) agree on a payment mode that eliminates the inherent risk of the Procuring Entity paying too much for undelivered works; or
d) reject the Tender,

42. Qualifications of the Tenderer

42.1 The Procuring Entity shall determine to its satisfaction whether the eligible Tenderer that is selected as having submitted the lowest evaluated cost and substantially responsive Tender, meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

42.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 19. The determination shall not take into consideration the qualifications of other firms such as the Tenderer's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.

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

42.4 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regards to the Tenderer's ability to perform the Contract for the offered Tender Price.

42.5 In the event of identification of a potentially Abnormally Low Tender, the Procuring Entity shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

42.6 After evaluation of the price analyses, if the Procuring Entity determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, the Procuring Entity shall reject the Tender.

43. Best Evaluated Tender

43.1 Having compared the evaluated prices of Tenders, the Procuring Entity shall determine the Best Evaluated Tender. The Best Evaluated Tender is the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:
a) Most responsive to the Tender document; and
b) the lowest evaluated price.

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

44.1 The Procuring Entity reserves the right to accept or reject any Tender and to annul the Tender process and reject all Tenders at any time prior to Contract Award, without thereby incurring any liability to Tenderers. In case of annulment, all

Tenderers shall be notified with reasons and all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

F. Award of Contract

45. Award Criteria

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

46. Notice of Intention to enter into a Contract

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

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

47. Standstill Period

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

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

48. Debriefing by the Procuring Entity

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

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

49. Letter of Award

49.1 Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period specified in ITT 42.1, upon addressing a complaint that has been filed within the Standstill Period, the Procuring Entity shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Securitywithin21daysof the date of the letter.

50. Signing of Contract

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

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

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

51. Appointment of Adjudicator

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

52. Performance Security

52.1 Within twenty-one (21) days of the receipt of the Letter of Acceptance from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other

documents required in the TDS, in accordance with the General Conditions of Contract, subject to ITT 40.2 (b), using the Performance Security and other Forms included in Section X, Contract Forms, or another form acceptable to the Procuring Entity. A foreign institution providing a bank guarantee shall have a correspondent financial institution located in Kenya, unless the Procuring Entity has agreed in writing that a correspondent bank is not required.

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

52.3 Performance security shall not be required for contracts estimated to cost less than Kenya shillings five million shillings.

53. Publication of Procurement Contract

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

a) name and address of the Procuring Entity;
b) name and reference number of the contract being awarded, a summary of its scope and the selection method used;
c) the name of the successful Tenderer, the final total contract price, the contract duration.
d) dates of signature, commencement and completion of contract;

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

54. Procurement Related Complaints and Administrative Review

54.1 The procedures for making Procurement-related Complaints are as specified in the TDS.

54.2 A request for administrative review shall be made in the form provided under contract forms.

Section II - Tender Data Sheet (TDS)

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

ITT ~~Reference~~	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	A. General
ITT 1.1	The name of the contract: - TARMACKING OF MUIRIGO CENTRE ROAD AND PUBLIC LIGHTING WITHIN CLAY CITY WARD The reference number of the Contract is NCC/WDP/T/625/2024-2025
ITT 2.3	The Information made available on competing firms is as follows: NOT APPLICABLE
ITT 2.4	The firms that provided consulting services for the contract being tendered for are: NOT APPLICABLE
ITT 3.1	Maximum number of members in the Joint Venture NOT APPLICABLE
B. Contents of Tender Document	
8.1	(A) Pre-Tender conference *SHALL NOT* take place (B) A pre-arranged pretender visit of the site of the works *SHALL NOT* take place. Tenderers are 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 7days before closure/opening date.
ITT 8.4	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender site visit will be published is www.nairobi.go.ke

ITT 9.1	For Clarification of Tender purposes, for obtaining further information and for purchasing tender documents, the Procuring Entity's address is: Address for obtaining further information and for purchasing tender documents NAIROBI CITY COUNTY DIRECTORATE OF SUPPLY CHAIN MANAGEMENT P.O BOX 30075-00100 MAMA NGINA STREET, MAIN CITY HALL 4TH FLOOR ROOM 400 EMAIL. Nairobiprocurement@gmail.com
C. Preparation of Tenders	
ITT 13.1 (h)	The Tenderer shall submit the following additional documents in its Tender: 1. COPY OF CERTIFICATE OF REGISTRATION/ INCORPORATION 2. VALID TAX COMPLIANCE CERTIFICATE 3. COPY OF REGISTRATION CERTIFICATE WITH THE NATIONAL CONSTRUCTION AUTHORITY IN THE STATED CATEGORY NCA 7 AND ABOVE 4. COPY OF RECENT CR12 FORM – 6 MONTHS 5. APPENDIX TO FORM OF TENDER FULLY FILLED, STAMPED AND SIGNED 6. WRITTEN POWER OF ATTORNEY AS INDICATED IN FORM 9

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 13.2	The Tenderer shall chronologically and sequentially serialize all pages in a numerical format 1, 2, 3, 4, 5……. Including the cover page of the tender documents submitted
ITT 15.1	Alternative Tenders *SHALL NOT* be permitted
ITT 15.2	Alternative times for completion *SHALL NOT* permitted.
ITT 15.4	Alternative technical solutions SHALL NOT be permitted.
ITT 16.5	The prices quoted by the Tenderer shall be: *FIXED*
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 21.1	A Tender Security SHALL BE required. A Tender-Security Declaration SHALL NOT BE required. If a Tender Security shall be required, the amount and currency of the Tender Security shall be KSH. 340,000.00 (amount as per schedule) IN THE FORM OF TENDER BOND IN THE PRESCRIBED FORMAT

ITT 21.2 (d)	APPLICABLE (FOR ALL)
ITT 21.5	On the Performance Security, other documents required shall be: NOT APPLICABLE
ITT 22.1	The tenderer shall prepare and submit ONE original Tender document and ONE Copy Tender Document.
ITT 22.2	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 OR FILL FORM 9
D. Submission and Opening of Tenders	
ITT 24.1	For Tender submission purposes only, the Procuring Entity's address is: NNAIROBI CITY COUNTY COUNTY SECRETARY & HEAD OF COUNTY PUBLIC SERVICE P.O BOX 30075-00100 MAMA NGINA STREET, MAIN CITY HALL 4TH FLOOR ROOM 400 EMAIL. nairobiprocurement@gmail.com Date and time for submission of Tenders: 22nd May 2025 at Time11.30Am. Tenders shall not be submitted tenders electronically.
ITT 27.1	The Tender opening shall take place at the time and the address for Opening of Tenders provided below: NAIROBI CITY COUNTY DIRECTORATE OF SUPPLY CHAIN MANAGEMENT P.O BOX 30075-00100 MAMA NGINA STREET, MAIN CITY HALL 4TH FLOOR ROOM 400 EMAIL. nairobiprocurement@gmail.com State date and time of tender opening: 22nd May 2025 at Time 11.30 am

~~ITT Reference~~	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 27.1	ELECTRONIC SUBMISSION OF TENDERS SHALL NOT BE ALLOWED.
ITT 27.6	The tenders *shall* be initialed by representatives of the Procuring Entity attending Tender opening. Initialization shall be conducted as follows: - ALL APPOINTED MEMBERS OF TENDER OPENING COMMITTEE SHALL 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 35.2	The invitation to tender is extended to ALL
ITT 36.1	At this time, the Procuring Entity *DOES NOT INTEND to* execute certain specific parts of the Works by subcontractors selected in advance.

ITT 36.3	The parts of the Works for which the Procuring Entity permits Tenderers to propose Specialized Subcontractors are designated as follows: NOT APPLICABLE
ITT 37.2 (d)	Additional requirements apply. These are detailed in the evaluation criteria in Section III, Evaluation and Qualification Criteria.
ITT 51.1	The Adjudicator SHALL NOT APPLY
ITT 54.1	The procedures for making a Procurement-related Complaint are detailed in the "Notice of Intention to Award the Contract" herein and are also available from the PPRA Website www.ppra.go.ke or email complaints@ppra.go.ke. If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to: For the attention: DIRECTOR Title/position: : **SUPPLY CHAIN MANAGEMENT** Procuring Entity: **NAIROBI CITY COUNTY** E-mail address: nairobiprocurement@gmail.com In summary, a Procurement-related Complaint may challenge any of the following (among others): (i) the terms of the Tender Documents; and the Procuring Entity's decision to award the contract.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

1. General Provisions

Wherever a Tenderer is required to state a monetary amount, Tenderers should indicate the Kenya Shilling equivalent using the rate of exchange determined as follows:

a) For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.
b) Value of single contract - Exchange rate prevailing on the date of the contract signature.
c) Exchange rates shall be taken from the publicly available source identified in the ITT 14.3. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.

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 in all aspects in meeting the requirements of "Part 2 – Procuring Entity's Works Requirements", including checking for tenders with unacceptable errors, abnormally low tenders, abnormally high tenders and tenders that are front loaded. The Standard Tender Evaluation Report 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.

S/No.	Completeness and Responsiveness Criteria	References	Requirement
1.	Form of Equipment	Section IV; Form EQU	• Properly fill, sign and Stamp • Provide all required information
2.	Key personnel and Declaration	Section IV; Form PER 1 & 2	• Provide all required information • Properly fill, sign and stamp
3.	Tender Qualification	Section IV; Form 4, ELI-1.1, ELI-1.2	• Provide all required information • Properly fill, sign and stamp
4.	Non-Performance	Section IV; Form 4, Form CON-2	Provide all required information Properly fill, sign and stamp
5.	Pending Litigation	Section IV; Form 4, Form CON-2	• Provide all required information • Properly fill, sign and stamp
6.	Litigation History	Section IV; Form 4, Form CON-2	• Provide all required information • Properly fill, sign and stamp
7.	Financial Situation & Performance	Section IV; Form 4, Form, FIN-3.1	• Provide all required information • Properly fill, sign and stamp
8.	Average Annual Construction Turnover	Section IV; Form 4, Form FIN-3.2	• Provide all required information • Properly fill, sign and stamp
9.	Financial Resources	Section IV; Form 4, Form FIN-3.3	• Provide all required information • Properly fill, sign and stamp
10.	Current Contract Commitments/Works in Progress	Section IV; Form 4, Form FIN-3.4	• Provide all required information • Properly fill, sign and stamp
11.	General Construction Experience	Section IV; Form 4, Form EXP-4.1	• Provide all required information • Properly fill, sign and stamp
12.	Specific Construction and Contract Management Experience	Section IV; Form 4, Form EXP-4.1(a)	• Provide all required information • Properly fill, sign and stamp

13.	Form of Tender	Section IV; Format	• Provide all required information • Properly fill, sign and stamp • Tenderer to use stationery bearing its letterhead
14.	Tenderer's Eligibility	Section IV; Form 5 A(a-f)	• Provide all required information • Properly fill, sign and stamp
15.	Certificate of Independent Tender Determination	Section IV; Form 5 B	• Provide all required information • Properly fill, sign and stamp
16.	Self-declaration Forms	Section iv; Form 5 C - FORM SD1 & 2	• Provide all required information • Properly fill, sign and stamp
17.	Appendix 1-Fraud and Corruption	Section iv; Form 5 D	• Read, Understand and Comply • Properly fill, sign and stamp
18.	Form of Tender Security /Tender declaration Form	Section IV; 7	Form of Tender Security (Tender Bond) - In the format provided with all conditions
19.	Priced Bill of Quantities	• Section VII • (Bill of Quantities)	Fill all the bill of Quantities, sign stamp and counter sign any alteration(s)
20.	Serializing of document	TDS CLAUSE 13.2	Chronologically and sequentially serialize all pages in a numerical format 1,2,3,4,5……. Including the cover page of the tender documents

S/No.	Completeness and Responsiveness Criteria	References	Requirement
21.	Certificate of Incorporation certificate	ITT 13.1 (h)	Copy
22.	Tax Compliance Certificate	ITT 13.1 (h)	Must be valid
23.	National Construction Authority Certificate	ITT 13.1 (h)	Category stated in the Tender Notice
24.	Recent CR12 Certificate	ITT 13.1 (h)	Current Copy (for the last 6 months)
25.	Appendix to form of tender	Form 1	Must fill, stamp and sign
26.	Commitment to provide beneficial ownership INFORMATION	Section IV: 8	Must fill, stamp and sign
27.	Declaration of Knowledge of Site	ITT 8.1	There shall be no pre-arranged site visit, but tenderers are required to visit the site and appraise themselves, fill, sign and stamp the Site Visit Certificate in FORM CON 3

28.	Power of Attorney	ITT 22.2	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 OR Fill FORM 9

3. 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:

ITEM		DESCRIPTION	ASSESSMENT
1		**FINANCIAL CAPABILITY**	**Met/Not Met**
	a	**Working capital of Kshs. 3,400,000.00**	
	b	**Cash flow statement (forecasts)**	
	c	**Audited Statements of account for the last 2 years presented in the Internationally Financial Reporting Standard**	
	d	**Turnover of Kshs. 15,000,000.00**	
2		**EXPERIENCE**	
	a	**General Experience as Contractor in the last five years.**	
	b	**Experience in road construction in the last three years.**	
	c	**Experience as a prime contractor, joint venture member, management contractor or sub-contractor in at least three (3) road projects with value of Kshs. 5,000,000.00 in the last five years.**	
3		**KEY PERSONNEL**	
	a	**Site Agent meets criteria**	
	b	**Foreman meets criteria**	
	c	**Head Office Staff meets criteria**	
	d	**Surveyor**	
4		**PLANT AND EQUIPMENT**	
	a	**Details of all listed equipment in table 9 provided**	
5		**WORK METHODOLOGY**	
	a	**Submission of a brief work methodology and a proposed resource work programme with superimposed cash projection. Work programme to be done in A3 paper**	
6		**TRAFFIC MANAGEMENT**	
	a	**Provided as required**	
7		**ENVIRONMENTAL MANAGEMENT**	
	a	**Provided as required**	

8		**QUALITY & QUANTITY MANAGEMENT**	
	a	**Provided as required**	
9		**CURRENT COMMITMENTS**	
	a	**The total value of outstanding works on the on-going contracts not exceeding Kshs. 23,000,000.00**	
		REMARKS	**Met/Not Met**

Tenderers who do not score MET will automatically be disqualified. Tenderers who pass the technical evaluation will be evaluated further.

4. Tender Evaluation (ITT 37) Price evaluation: in addition to the criteria listed in ITT 37.2 (a) – (c) the following criteria shall apply:

i) Alternative Completion Times, if permitted under ITT 13.2, will be evaluated as follows:
NOT APPLICABLE

ii) Alternative Technical Solutions for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows: NOT APPLICABLE

iii) Other Criteria; if permitted under ITT 37.2(d): AS DETAILED IN EVALUATION CRITERIA IN SECTION111; EVALUATION AND QUALIFICATION CRITERIA

5. Multiple Contracts

Multiple contracts will be permitted in accordance with ITT 37.4. 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.

6. Alternative Tenders (ITT 13.1)

An alternative if permitted under ITT 15.1, will be evaluated as follows:

The Procuring Entity shall consider Tenders offered for alternatives as specified in Part 2WorksRequirements. 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.

7. Margin of Preference is: NOT APPLICABLE

8. 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 pre-qualification data, if so required.
   b) In case the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tenderer shall be considered for contract award, subject to meeting each of the following conditions.

      i) The Tenderer shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow of Kenya Shillings 3,400,000.00

      ii) Minimum average annual construction turnover of Kenya Shillings 15,000,000.00 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) of contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value Kenya Shillings 5,000,000.00

      iv) Contractor's Representative and Key Personnel, which are specified as detailed in the Qualification Form Summary below; -

      v) Contractors key equipment listed on the table “Contractor's Equipment” below; -

      vi) 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 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 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.

9. QUALIFICATION FORM SUMMARY

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)*
1	Nationality	Nationality in accordance with ITT 3.6	Forms ELI – 1.1 and 1.2, with attachments	
2	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority in accordance with ITT 3.14.	TDS; ITT 13.1 (h)	
3	Conflict of Interest	No conflicts of interest in accordance with ITT 3.3	Form of Tender Confidential Business Questionnaire	
4	PPRA Eligibility	Not having been declared ineligible by the PPRA as described in ITT 3.8	Form of Tender ITT 11.1	
5	State- owned Enterprise	Meets conditions of ITT 3.7	Forms ELI – 1.1 and 1.2, with attachments, Form of Tender	
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 4.1	Forms ELI – 1.1 and 1.2, with attachments, Form of Tender	
7	History of Non-Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since 1st January,2018	Form CON-2	
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 19.9	Form of Tender part xiii	

9	Pending Litigation	Tender's financial position and prospective long-term profitability still sound according to criteria established in section III of evaluation criteria 7 b(vi) b and assuming that all pending litigation will NOT be resolved against the Tenderer.	Form CON – 2	
10	Litigation History	No consistent history of court/arbitral award decisions against the Tenderer since 1st January, 2018	Form CON – 2	
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	Form FIN – 3.1, with attachments	

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)*

		3,400,000.00 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 *2* years shall be submitted and must demonstrate the current soundness of the Tenderer's financial position and indicate its prospective long-term profitability.		
12	Average Annual Construction Turnover	Minimum average annual construction turnover of Kenya Shillings 15,000,000.00 calculated as total certified payments received for contracts in progress and/or completed within the last 2 years, divided by 2 years	Form FIN – 3.2	
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 5 years, starting 1st January, 2020	Form EXP – 4.1	
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 subcontractor between 1st January, 2021 and tender	Form EXP 4.2(a)	

		submission deadline i.e. three (3) contracts with minimum value of Kenya shillings 5,000,000.00.		

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)*
15	Contractor's Equipment	-Bidder shall provide evidence of ownership whether owned or leased (except those from Mechanical & Transport Department (MOTIHUD) - Those hiring shall provide certified copies of Lease Agreement Valid for the current FY 2024/2025.	Form EQU and Equipment Table (9) below	

16	Contractor's Representative and Key Personnel	The site staff shall possess minimum levels of qualifications set below; HQ Staff: Qualification = Degree in Civil Engineering and Business-related field Site Agent: Qualification = BSc. in Civil Engineering General Experience – 5 yrs. Specific Experience - 3 yrs. Foreman: Qualification = Dip. Civil Engineering General Experience = 5 yrs. Specific Experience = 3 Yrs. Surveyor: Qualification = Diploma in Survey General Experience = 3 yrs. Specific Experience = 2 Yrs.	Form PER -1 and Form PER-2	

10. 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. should for FY 2022-2023. 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/purchased 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	1				
	B) Transport (Tippers, dumpers, water tankers)					
	(i) 6 X 4 tippers payload 16 – 20 tones	4				
	(ii) Water tankers (18,000 – 20,000 Lts. capacity)	1				
	C) Earth – Moving Equipment					
	(i) Wheeled loaders	-				
	(ii) Back-hoe excavator	1				
	D) Excavators					

	(iii) Hand sprayer	-				
	1. Hydraulic crawler mounted (7 – 10 tones) – 0.25 – 0.4 m3 SAE bucket.	-				
	E) Rollers					
	(i) Self-propelled single drum vibrating (ii) (various types) Plate compactor	1 1				
	F) F) Others					
	(i) Paver (ii) Pot hole cutter	- -				

Item No.	Equipment Details	Ideal Number Required for the Contract Execution	No. of Equipment Owned by the Bidder	No. of equipment to be hired/purchased by the Bidder	No. of equipment to be made available for the Contract by the Bidder	Date of Arrival on Project (Days after commence)
	(iv)Pedestrian Roller	1				

I certify that the above information is correct.

Signature of Tenderer: …… Date: ……

11. 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:

a) Most responsive to the tendering document; and

b) The lowest evaluated cost.

QUALIFICATION FORMS

1. FORM: EQUIPMENT

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

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment 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	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

2. FORM PER -1

Contractor's Representative and Key Personnel Schedule

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

Contractor' Representative and Key Personnel

1.	Title of position: HQ Staff	
	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*]
2.	Title of position: Site Agent	
	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*]
3.	Title of position: Foreman	
	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*]

4.	Title of position: Surveyor	
	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*]

3. FORM PER-2:

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

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

Name of Tenderer ……

Position: …….. [*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: …… …	
	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	*[role and responsibilities*	*[time in role]*	*[describe the experience relevant to this position]*

details]	*on the project]*		

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:	*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]*
Time commitment:	*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 understand that any misrepresentation or omission in this Form may:

a) be taken into consideration during Tender evaluation;

b) my disqualification from participating in the Tender;

c) 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: ……. [*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: …… ….	
	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:	*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]*
Time commitment:	*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 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): _____

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; **NCC/WDP/T/625/2024-2025**

TARMACKING OF MUIRIGO CENTRE ROAD AND PUBLIC LIGHTING WITHIN CLAY CITY WARD 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)

4. TENDERER'S QUALIFICATIONWITHOUTPRE-QUALIFICATION

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

4.1 FORM ELI -1.1 Tenderer Information Form

Date: _____

ITT No. 13.1 and title: DOCUMENTS COMPRISING THE TENDER

Tenderer's name ……....
In case of Joint Venture (JV), name of each member: NOTAPPLICABLE
Tenderer's actual or intended country of registration: ……
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 3.6 ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 In case of state-owned enterprise or institution, in accordance with ITT 3.8, 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.

4.2 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: *NOT APPLICABLE*
JV member's name: *NOT APPLICABLE*
JV member's country of registration: *NOT APPLICABLE*
JV member's year of constitution: *NOT APPLICABLE*
JV member's legal address in country of constitution: *NOT APPLICABLE*
JV member's authorized representative information Name: *NOT APPLICABLE* Address: *NOT APPLICABLE* Telephone/Fax numbers: *NOT APPLICABLE* E-mail address: *NOT APPLICABLE*
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 3.6. ☐ In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.8. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

4.3 FORM CON – 2

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.....specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1. ☐ Contract(s) not performed since..... *[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and Kenya Shilling equivalent)

…… …… .	…… …… *[insert amount and percentage]*	…… …… Contract Identification: …… …… …… *[indicate complete contract name/ number, and any other identification]* Name of Procuring Entity: …… Address of Procuring Entity: …… Reason(s) for nonperformance: …… *[indicate main reason(s)]*	…… …… *[insert amount]*
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, Subfactor 2.3 as indicated below.			

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

……..	……..	Contract Identification: …….. …….. Name of Procuring Entity: …….. …….. Address of Procuring Entity: …….. …… Matter in dispute: …… Party who initiated the dispute: …….. …….. Status of dispute: ……..	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
☐ 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)

…… *[insert year]*	…….. *[insert percentage]*	Contract Identification: …….. …… …… *[indicate complete contract name/ number, and any other identification]* Name of Procuring Entity: …… …….. Address of Procuring Entity: …….. …….. …….. [indicate complete contract name, number, and any other identification] Name of Procuring Entity: …….. …… *[insert full name]* Address of Procuring Entity: …….. …… Matter in dispute: …….. *[indicate main issues in dispute]* Party who initiated the dispute: …….. …… *[indicate "Procuring Entity" or "Contractor"]* Reason(s) for Litigation and award decision……. …… *[indicate main reason(s)]*	…….. *[insert amount]*

4.4 FORM FIN – 3.1:

Financial Situation and Performance

Tenderer's Name: ……..

Date: ……..

JV Member's Name: NOT APPLICABLE

ITT No. 37 (7) b i, ii & iii and title: FINANCIAL PERFORMANCE

4.4.1. Financial Data

Type of Financial information in_____ (currency)	Historic information for previous_____ *years,* (Amount in currency, currency, exchange rate*, USD equivalent)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Statement of Financial Position (Information from Balance Sheet)					

Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

*Refer to ITT 15 for the exchange rate

4.4.2 Sources of Finance

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

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

4.4.3 Financial documents

The Tenderer and its parties shall provide copies of financial statements for *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[1] for the *2*years required above; and complying with the requirements

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

4.5 FORM FIN – 3.2:

Average Annual Construction Turnover

Tenderer's Name: _____

Date: _____

JV Member's Name: NOT APPLICABLE
ITT No.37(7) b, iii and title:

	Annual turnover data (construction only)		
Year	Amount Currency	Exchange rate	Kenya Shilling equivalent
…….. [indicate year]	Kshs …….. [insert amount and indicate currency]		Kshs ……..
Average Annual Construction Turnover *	Kshs ……..		Kshs ……..

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

4.6 FORM FIN – 3.3:

Financial Resources

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

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

4.7 FORM FIN – 3.4:

Current Contract Commitments / Works in Progress

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

Current Contract Commitments

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

4.8 8 FORM EXP - 4.1

General Construction Experience

Tenderer's Name: _____

_____

JV Member's Name: _____

ITT No. and title: _____

Date: Page _____ of _____ pages

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

		Address: …….. ……..	
		Contract name: …….. …… Brief Description of the Works performed by the Tenderer: …….. …… Amount of contract: …… Name of Procuring Entity: …….. …….. Address: …….. …… ……	

4.9 FORM EXP - 4.2(a)

Specific Construction and Contract Management Experience

Tenderer's Name: _____

Date: _____

JV Member's Name: NOT APPLICABLE

ITT No. and title: _____

Similar Contract No……. …… …	Information…… ……
Contract Identification: ……	
Award date:	

Completion date: ……..				
Role in Contract: ……..	Prime Contractor	Member in JV	Management Contractor	Subcontractor
Total Contract Amount			Kshs……..	
If member in a JV or sub-contractor, specify participation in total Contract amount	*N/A*			
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:	…….. …….. ……..			

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

Specific Construction and Contract Management Experience (cont.)

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

4.11 1 FORM EXP - 4.2(b)

Construction Experience in Key Activities

Tenderer's Name: _____

Date: _____

Tenderer's JV Member Name: *NOT APPLICABLE*

Sub-contractor's Name[2] (as per ITT 34): _____

ITT No. and title: _____

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

1. Key Activity No One: _

_____

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

2 If applicable

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

2. Activity No. Two

OTHER FORMS

5. FORM OFTENDER

INSTRUCTIONS TO TENDERERS

i) The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.

ii) All italicized text is to help Tenderer in preparing this form.

iii) Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER attached to this Form of Tender.

iv) The Form of Tender shall include the following Forms duly completed and signed by the Tenderer.

- Tenderer's Eligibility- Confidential Business Questionnaire
- Certificate of Independent Tender Determination
- Self-Declaration of the Tenderer

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

Request for Tender No..... *[insert identification*]

Name and description of Tender..... *[Insert as per ITT)*

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

To: NAIROBI CITY COUNTY [*insert complete name of Procuring Entity*]

Dear Sirs,

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

The above amount includes foreign currency amount (s) of [*state figure or a percentage and currency*] [figures] NOT APPLICABLE [words] NOT APPLICABLE.

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

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.

3. We agree to adhere by this tender until..... *[Insert date],* and it shall remain binding upon us and may be accepted at any time before that date.

4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive.

5. We, the undersigned, further declare that:

i) *No reservations:* We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;

ii) *Eligibility:* We meet the eligibility requirements and have no conflict of interest in accordance

with ITT 3 and 4;

iii) *Tender-Securing Declaration:* We have not been suspended nor declared ineligible by the Procuring Entity based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;

iv) *Conformity:* We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: *[insert a brief description of the Works];*

v) *Tender Price:* The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*

Vi Option 1, in case of one lot: Total price is: [*insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies*]; Or

Option 2, in case of multiple lots:

a) Total price of each lot [*insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies*]; and

b) Total price of all lots (sum of all lots) [*insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies*];

vii) *Discounts:* The discounts offered and the methodology for their application are:

viii) The discounts offered are: [*Specify in detail each discount offered.*]

ix) The exact method of calculations to determine the net price after application of discounts is shown below: [*Specify in detail the method that shall be used to apply the discounts*];

x) *Tender Validity Period:* Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

xi) *Performance Security:* If our Tender is accepted, we commit to obtain a Performance Security in accordance with the Tendering document;

xii) *One Tender Per Tender:* We are not submitting any other Tender(s) as an individual Tender, and we are not participating in any other Tender(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITT 3.4, other than alternative Tenders submitted in accordance with ITT13.3;

xiii) *Suspension and Debarment:* We, along with any of our subcontractors, suppliers, Engineer, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.

xiv) *State-owned enterprise or institution:* [*select the appropriate option and delete the other*] [*We are not a state-owned enterprise or institution*] / [*We are a state-owned enterprise or institution but meet the requirements ofITT3.8*];

xv) *Commissions, gratuities, fees:* We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].*

Name of Recipient	Address	Reason	Amount

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

xvi) Binding Contract: We understand that this Tender, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;

xvii) Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Most Advantageous Tender or any other Tender that you may receive;

xviii) Fraud and Corruption: We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption;

xix) Collusive practices: We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the "Certificate of Independent Tender Determination" attached below.

xx) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from www.ppra.go.ke during the procurement process and the execution of any resulting contract.

xxi) 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.
c) Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
d) Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal

Further, we confirm that we have read and understood the full content and scope of fraud and corruption as informed in "Appendix 1- Fraud and Corruption" attached to the Form of Tender.

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

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

Title of the person signing the Tender: [*insert complete title of the person signing the Tender*] Signature of the person named above: [*insert signature of person whose name and capacity are shown above*] Date signed [*insert date of signing*] day of [*insert month*], [*insert year*]

Date signed_____ day of _____, _____

Notes
** In the case of the Tender submitted by joint venture specify the name of the Joint Venture as*
Tenderer
*** Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.*

APPENDIX TO FORM OF TENDER

CONDITIONS	GCC CLAUSE	DATA
Procuring Entity's Name and Address	1.1(q)	COUNTY SECRETARY & HEAD OF COUNTY PUBLIC SERVICE; NAIROBI CITY COUNTY, CITY HALL WAY P.O. BOX 30075-00100, NAIROBI Tel. No.: +254 – 020 – 2182114 info@nairobi.go.ke
Engineer's address	1.1(x)	DIRECTOR ROADS P.O. BOX 30075-00100, NAIROBI info@nairobi.go.ke
Electronic transmission		NOT APPLICABLE
Time for the Parties entering into a Contract Agreement		28 days after receipt of Letter of Acceptance
Possession of the site	20.1	No later than 14 days after the Order to commence. No later than the Commencement Date.
Performance Security	50.1	The performance security shall be in the form of an unconditional bank guarantee in the amount of Five (5%) percent of the Contract Price and denominated in Kenya Shillings.
Time for Provision of Performance Security	50.1	The Performance Security shall be delivered within 28 days after receiving the Letter of Acceptance.
Working Hours	6.5	Normal working hours shall be 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 pm on Saturdays, with Sunday being set aside as a day of rest.

Commencement of Works	1.1(cc)	Not later than 21 (Twenty-one) days after Notice of Order to Commence.
Programme of Works	26.1	Not later than 14 (Fourteen) days after issuance of Order to Commence
Time for Completion	53.1	Six (6) Months.
Amount of Liquidated Damages	47.1	0.05% of the Contract Price per day
Limit of Liquidated Damages	47.1	5% (Five percent) of the Contract Price.
Defects Liability Period	34.1	12.0 Months
Retention Money	46.1	10% (Ten percent) of Interim Payment Certificates
Cash Flow Estimate	39	Not later than 14 (Fourteen) days after issuance of Order to Commence
Advance Payment	49.1	NOT APPLICABLE.
Minimum Amount of Interim Payment Certificates	14.6	Thirty Percent (30%) of the Contract Sum
Time within which payment to be made after Interim Payment Certificate signed by Engineer	41.1	28 days
Time within which payment to be made after Final Payment Certificate signed by the Engineer	55.1	28 days
Periods for submission of insurance: a. Evidence of insurance	13.1	Prior to commencement of the Works, and in any case not later than 21 days after issuance of Order to Commence
Minimum amount of third• party insurance	13.1	1% of the Contract Sum. Not later than 14(Fourteen) days after issuance of Order to Commence
Date for Submission of operation and maintenance manuals	56.1	Not Applicable
Date for Submission of As Built drawings	56.1	Not Applicable
Appointer of Arbitrator	24.5.1	The Chartered Institute of Arbitrators (Kenya)

Notice to Procuring Entity and Engineer	1	The Procuring Entity's address is: County Secretary & Head of County Public Service Nairobi City County, City Hall Way. P.O. Box 30075 – 00100 NAIROBI. Tel. +254 - 020 – 2182114 Email: info@nairobi.go.ke, Web: www.nairobi.go.ke The Engineers' address is: Director Roads, Nairobi City County P.O. Box 30075 – 00100 NAIROBI. Tel. +254 - 020 – 2182114 Email: info@nairobi.go.ke, Web: www.nairobi.go.ke

Signature of Tenderer: …… Date: ……

A. TENDERER'S ELIGIBILITY- CONFIDENTIALBUSINESS QUESTIONNAIRE

Instruction to Tenderer

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

(a) Tenderer's details

	ITEM	DESCRIPTION
1	Name of the Procuring Entity	……
2	Reference Number of the Tender	……..
3	Date and Time of Tender Opening	……..
4	Name of the Tenderer	……..
5	Full Address and Contact Details of the Tenderer.	1. Country: 2. City : 3. Location: 4. Building: 5. Floor : 6. Postal Address:

		7. Name and email of contact person.
6	Current Trade License Registration Number and Expiring date	……..
7	Name, country and full address (*postal and physical addresses, email, and telephone number*) of Registering Body/Agency	
8	Description of Nature of Business	……
9	Maximum value of business which the Tenderer handles.	Kshs ……..
10	State if Tenders Company is listed in stock exchange, give name and full address (*postal and physical addresses, email, and telephone number*) of state which stock exchange	

General and Specific Details

b) Sole Proprietor, provide the following details.

Name in full NOT APPLICABLE Age _____ Nationality _____ Country of Origin _____ Citizenship _____

c) Partnership, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

d) Registered Company, provide the following details.

i) Private or public Company ii) State the nominal and _____

issued capital of the Company _____

Nominal Kenya Shillings (Equivalent).....

iii) Issued Kenya Shillings (Equivalent).....

iv) Give details of Directors as follows.

	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				

3				

(e)DISCLOSURE OFINTEREST- 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 controlling, 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 implementation of the contract specified in this Tender Document.		
7	Tenderer has a close business or family relationship		
	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
	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.CERTIFICATEOFINDEPENDENTTENDERDETERMINATION

I, the undersigned, in submitting the accompanying Letter of Tender to the [Nam
_____
for:_____ [Name and number of tenders]
request for tenders made by:_____ in response to the
[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 PROCUREMENTAND ASSET DISPOSALACT 2015.

I, …… of Post Office Box..... being a resident of

…….. In the Republic of..... do hereby make a statement as follows: -

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

…….. …… (Title)
(Signature) (Date)

Bidder Official Stamp

FORM SD2

SELF DECLARATION THAT THE PERSON/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
   ……
2. *(Insert name of the Company)* who is aBidder 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.

3. 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.

4. 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)

5. THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender

6. 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 *(Nameof 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… P. O. Box …….. Telephone……

E-mail……

Name of the Firm/Company……..

Date……..

(Company Seal/ Rubber Stamp where applicable)

Witness

Name ……..

Sign..... Date……

D. APPENDIX 1- FRAUDAND CORRUPTION

(Appendix 1 shall not be modified)

1. Purpose

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

3. Requirements

The Government of Kenya requires that all parties including Procuring Entities, Tenderers, (applicants/proposers), Consultants, Contractors and Suppliers; any Sub-contractors, Subconsultants, 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 asper paragraphs1.1 above.

Kenya's public procurement and asset disposal act *(no. 33 of 2015)* under Section 66 describes rules to be followed and actions to be taken in dealing with Corrupt, Coercive, Obstructive, Collusive or Fraudulent practices, and Conflicts of Interest in procurement including consequences for offences committed. A few of the provisions noted below highlight Kenya's policy of no tolerance for such practices and behavior: -

1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
3) Without limiting the generality of the subsection (1) and (2), the person shall be: -
   a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
   b) if a contract has already been entered into with the person, the contract shall be voidable;
4) The voiding of a contract by the procuring entity under subsection (7) does not limit any legal remedy the procuring entity may have;
5) An employee or agent of the procuring entity or a member of the Board or committee of the procuring entity who has a conflict of interest with respect to a procurement: a) shall not take part in the procurement proceedings;
   b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
   c) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.
6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;
7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5)(a) and the contract is awarded to the person or his relative or to another

person in whom one of them had a direct or indirect pecuniary interest, the contract shall be terminated and all costs incurred by the public entity shall be made good by the awarding officer.
Etc.

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

a)Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:

i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

ii) “fraudulent practice” is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

v) "obstructive practice" is:

- deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
- acts intended to materially impede the exercise of the PPRA's or the appointed authority's inspection and audit rights provided for under paragraph2.3 e. below.

b) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:

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

c) Rejects a proposal for award[3] 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, subcontractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction or recommend to appropriate authority (ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;

e) Requires that a clause be included in Tender documents and Request for Proposal documents requiring (i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub-consultants, Service providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect[4] all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and

---

[3] *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.*

[4] *Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding*

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.

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.

7. FORM OFTENDER SECURITY - DEMAND BANK GUARANTEE

Beneficiary: NOT

TENDER GUARANTEE No.:

APPLICABLE Request for
Tenders No: Date:

Guarantor:

1. We have been informed that (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its Tender (hereinafter called "the Tender") for the execution of

2. Under Request for Tenders No. ("the ITT").

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

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

(a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Applicant; or

b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.

5. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii)twenty-eight days after the end of the Tender Validity Period.

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

[signature(s)]

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 Oblige (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 there to provide 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) *(Signature)*

(Printed name and title) *(Printed name and title)*

TENDER-SECURING DECLARATION FORM

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

Date: .....*[insert date* as *day, month and year) of Tender Submission]*
Tender No..... *[insert number of tendering process]*
To: .....*[insert complete name of Purchaser]*

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.

2. I/We accept that I/we will automatically be suspended from being eligible for tendering in any contract with the Purchaser for the period of time of [insert number of months or years] starting on [insert date], if we are in breach of our obligation(s) under the bid conditions, because we – (a) have withdrawn our tender during the period of tender validity specified by us in the Tendering Data Sheet; or (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the instructions to tenders.

3. I/We understand that this Tender Securing Declaration shall expire if we are not the successful Tenderer(s), upon the earlier of:
   a) our receipt of a copy of your notification of the name of the successful Tenderer; or
   b) thirty days after the expiration of our Tender.

4. I/We understand that if I am/we are/in a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid, and the Joint Venture has not been legally constituted at the time of bidding, the Tender Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed: …….. Capacity/ title (director or partner or sole proprietor, etc.)

……..

Name: ..... Duly authorized to sign the bid for and on

behalf of: …….. *[Insert complete name of*

Tenderer]

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

Appendix to Tender

Schedule of Currency requirements

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

Name of currency	*Amounts payable*
Local currency:	
Foreign currency #1:	
Foreign currency #2:	
Foreign currency #3:	
Provisional sums expressed in local currency	[To be entered by the Procuring Entity]

8. COMMITMENT TO PROVIDE BENEFICIAL OWNERSHIP INFORMATION

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

1. THAT I am the Chief Executive Officer/Managing Director/Principal Officer/Director/

Authorized Officer of..... *(Insert name of the Company)* who is a Bidder in respect of Tender No…….. for …….. (Insert tender title/description) advertised by …….. *(Insert name of the Procuring entity)* (the Procuring Entity) and duly authorized and competent to make this statement.

2. THAT I do hereby commit to provide Beneficial Ownership Information in conformity with the Beneficial Ownership Disclosure Form to the procuring entity upon receipt of notification of award in the event we are the successful tenderer in this subject procurement proceeding. I fully understand that failure to furnish the procuring entity with the Beneficial Ownership Information within the period provided for in the letter of award shall invalidate my award and may considered as refusal to enter into a written contract which is punishable under Section 41(1) (e) of the Public Procurement and Asset Disposal Act, 2015.

Name of the Firm/Company…….. Registered

Physical Address of the Company…….. Posta

Address……

Telephone No…… Mobile Number ……..

Email Address ……..

Name of Authorized Signatory……..

Designation ……..

Signatory……

Date……..

Witnessed by …….. Signature of

Witness……..

Date……

BENEFICIAL OWNERSHIP DISCLOSURE FORM

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVECOMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful tenderer pursuant to Regulation 4 of the Companies (Beneficial Ownership Information) (Amendment) Regulations, 2022. In case of joint venture, the tenderer must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Tenderer is any natural person who ultimately owns or controls the legal person (tenderer) or arrangements or a natural person on whose behalf a transaction is conducted, and includes those persons who exercise ultimate effective control over a legal person (Tenderer) or arrangement.

Tender Reference No.: _____ [*insert identification no*] Name of the Tender Title/Description: _____ *[insert name of the assignment]* to: *[insert complete name of Procuring Entity]*

In response to the requirement in your notification of award ~~dated~~ *[insert date of notification of award]* to furnish additional information on beneficial ownership~~: *[select one option as applicable and delete the options that are not applicable]*~~

I) We here by provide the following beneficial ownership information.

Details of bene**fi**cial ownership

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights, a person holds in the company	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer (Yes / No)	directly or indirectly exercises significant influence or control over the tenderer /company (Yes / No)
	Full Name		**Directly----------% of shares**	**Directly…… % of voting rights**		
	National identity card					

	number					

	Details of all Beneficial Owners		% of shares a person holds in the company Directly or indirectly	% of voting rights, a person holds in the company	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer (Yes / No)	directly or indirectly exercises significant influence or control over the tenderer /company (Yes / No)
1.	**or Passport number**		**Indirectly---------% of shares**	**Indirectly---------% of voting rights**		
	Personal Identification Number (where applicable)					
	Nationality					
	Date of birth *[dd/mm/yyyy]*					
	Postal address					
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					
2.	**Full Name**		**Directly---------- % of shares**	**Directly…….. % of voting rights**		
	National identity card number or Passport number			**Indirectly---------- % of voting rights**		
	Personal Identification Number (where applicable)		**Indirectly---------- % of shares**			
	Nationality					

	Date of birth *[dd/mm/yyyy]*					
	Postal address					
	Residential address					
	Telephone number					
	Email address					
	Occupation or profession					
	Details of all Beneficial Owners		**% of shares a person holds in the company Directly or indirectly**	**% of voting rights, a person holds in the company**	**Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Tenderer (Yes / No)**	**directly or indirectly exercises significant influence or control over the tenderer /company (Yes / No)**
3.						
e.t.c						

II) Am fully aware that beneficial ownership information above shall be reported to the Public Procurement Regulatory Authority together with other details in relation to contract awards and shall be maintained in the Government Portal, published and made publicly available pursuant to Regulation 5 of the Companies (Beneficial Ownership Information) (Amendment) Regulations, 2022

III) What is stated to herein above is true to the best of my knowledge, information and belief.

Name of the Tenderer.....[insert complete name of the Tenderer]*_____

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

Designation of the person signing the Tender..... [insert complete title of the person signing the Tender]

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

Date this ..... [insert date of signing] day of.....[Insert month], [insert year]

Bidder Official Stamp/ Company Seal.

FORM 9: FORM OF WRITTEN POWER OF ATTORNEY

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

……..
(Name of Bidder's Representative in block letters)

……..
(Address of Bidder's Representative)

……..
(Signature of Bidder's Representative) Alternate:

……..
(Name of Bidder's Representative in block letters)

……..
(Address of Bidder's Representative)

……..
(Signature of Bidder's Representative)

*To be filled by all Bidders.

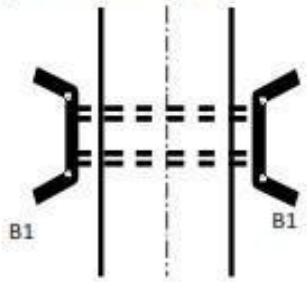
*Both representative and alternate must attach copy of National Identification card or Passport.

SECTION V - DRAWINGS

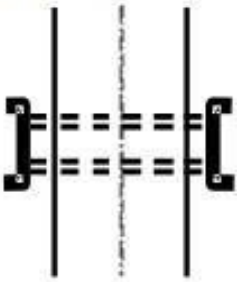
A list of drawings should be inserted here. The actual drawings including Site plans should be annexed in a separate booklet.

FIGURE C.1 - CULVERT ENTRY / EXIT STRUCTURE TYPES

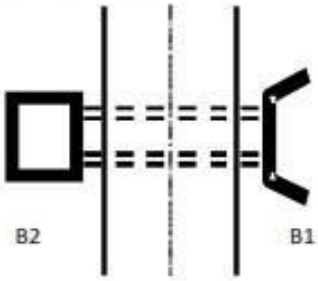
TYPE 1 (ENTRY AND EXIT)



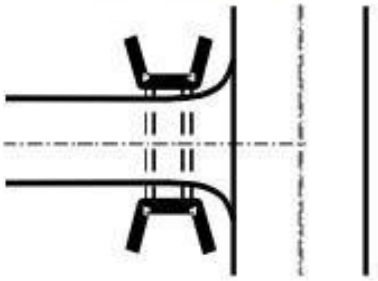
TYPE 3 (ENTRY AND EXIT)



TYPE 2 (ENTRY ONLY!)



TYPE 4 (ENTRY AND EXIT ON ACCESS)



NOTE:

Coding system has been used in describing the standardised designs of the various culvert entry and exit structures. The code names consist of a number

to specify shape and function as elaborated in above while the used construction materials are identified through an alphabetic symbol as follows:

A	=	Concrete block
B	=	Stone masonry
C	=	Dressed stones

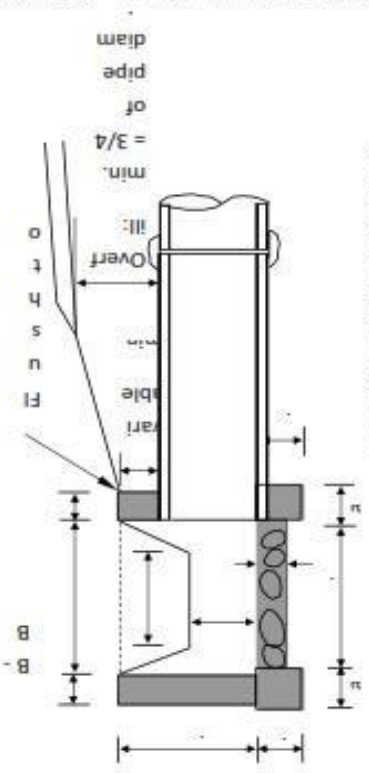
An example code of "B2" would therefore stand for a drop inlet type structure to be built in stone masonry.

FIGURE C.2 - HEADWALL TYPE 1 (HEAD AND WINGWALLS)

DIMENSIONS MATERIAL REQUIREMENTS			TYPE A (CONCRETE BLOCKS)			TYPE B (STONE MASONRY)		
PIPE DIAMETER (m)			4.50	6.00	9.00	4.50	6.00	9.00
DIMENSION	UNIT							
a	m		0.30	0.30	0.30	0.40	0.40	0.40
b	m		0.30	0.30	0.40	0.00	0.00	0.00
c	M		2.20	3.35	2.80	3.30	3.95	3.80
d	m		1.00	1.00	1.20	1.00	1.00	1.20
e	m		0.20	0.30	0.80	0.00	0.00	0.00
f	m		1.20	0.30	0.20	0.40	0.40	0.40
g	m		0.50	0.30	0.30	0.30	0.30	0.30
h	m		1.13	1.15	1.39	1.15	1.15	1.39
i	m		0.20	0.30	0.20	0.40	0.40	0.40
k	m		1.05	1.30	1.50	1.05	1.30	1.50
MATERIAL REQUIREMENT								
FOUNDATION (Concrete)	m³	0.3	0.32	0.51	0.4	0.42	1.03	
HEAD/WINGWALLS (Concrete/Masonry)	m³	0.4	0.47	0.67	0.8	0.93	1.35	
APRON (Concrete)	m³	0.33	0.36	0.53	0.33	0.36	0.53	

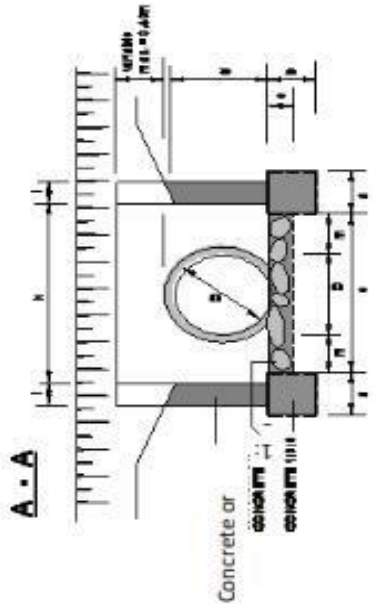
CULVERT PIPES	
X-SECTION WIDTH	No. of Pipes
4.50	6.00
5.50	7.00
6.50	8.00

FIGURE C.3 - HEADWALL TYPE 2 (DROP INLET)



DIMENSIONS AND MATERIAL REQUIREMENTS

PIPE DIAMETER IN (M)			TYPE A (CONCRETE BLOCKS)			TYPE B (STONE MASONRY)		
DIMENSION	UNIT		450	600	900	450	600	900
a FOUNDATION	m		0.50	0.50	0.50	0.40	0.40	0.40
b FOUNDATION	M		0.50	0.50	0.50	0.50	0.50	0.50
c FOUNDATION	m		1.10	1.10	1.40	1.20	1.20	1.50
d APRON	m		0.80	0.80	0.80	1.00	1.00	1.00
e APRON	m		0.20	0.20	0.20	0.20	0.20	0.20
f DROP INLET	m		0.60	0.60	0.60	0.60	0.60	0.60
g DROP INLET	m		0.30	0.40	0.60	0.30	0.40	0.60
h DROP INLET	m		0.60	0.80	1.20	0.60	0.80	1.20
i DROP INLET	m		0.20	0.20	0.20	0.40	0.40	0.40
k DROP INLET	m		1.20	1.20	1.50	1.20	1.20	1.50
l DROP INLET	m		1.00	1.00	1.00	1.00	1.00	1.00
m DROP INLET	m		0.36	0.30	0.30	0.36	0.30	0.30
MATERIAL REQUIREMENT								
FOUNDATION (Concrete)	m^3		0.47	0.47	0.52	0.72	0.72	0.79
HEADWINGWALLS (Concrete/Masonry)	m^3		0.53	0.69	1.11	1.24	1.63	2.61
APRON (Concrete)	m^3		0.24	0.24	0.30	0.24	0.24	0.30



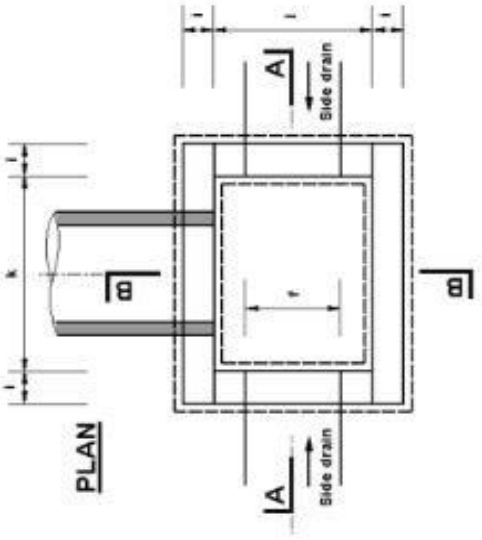


FIGURE C.4 - HEADWALL TYPE 3A (CONCRETE BLOCK HEADWALLS)

FIGURE C.5 - HEADWALL TYPE 3B (STONE MASONRY HEADWALLS)

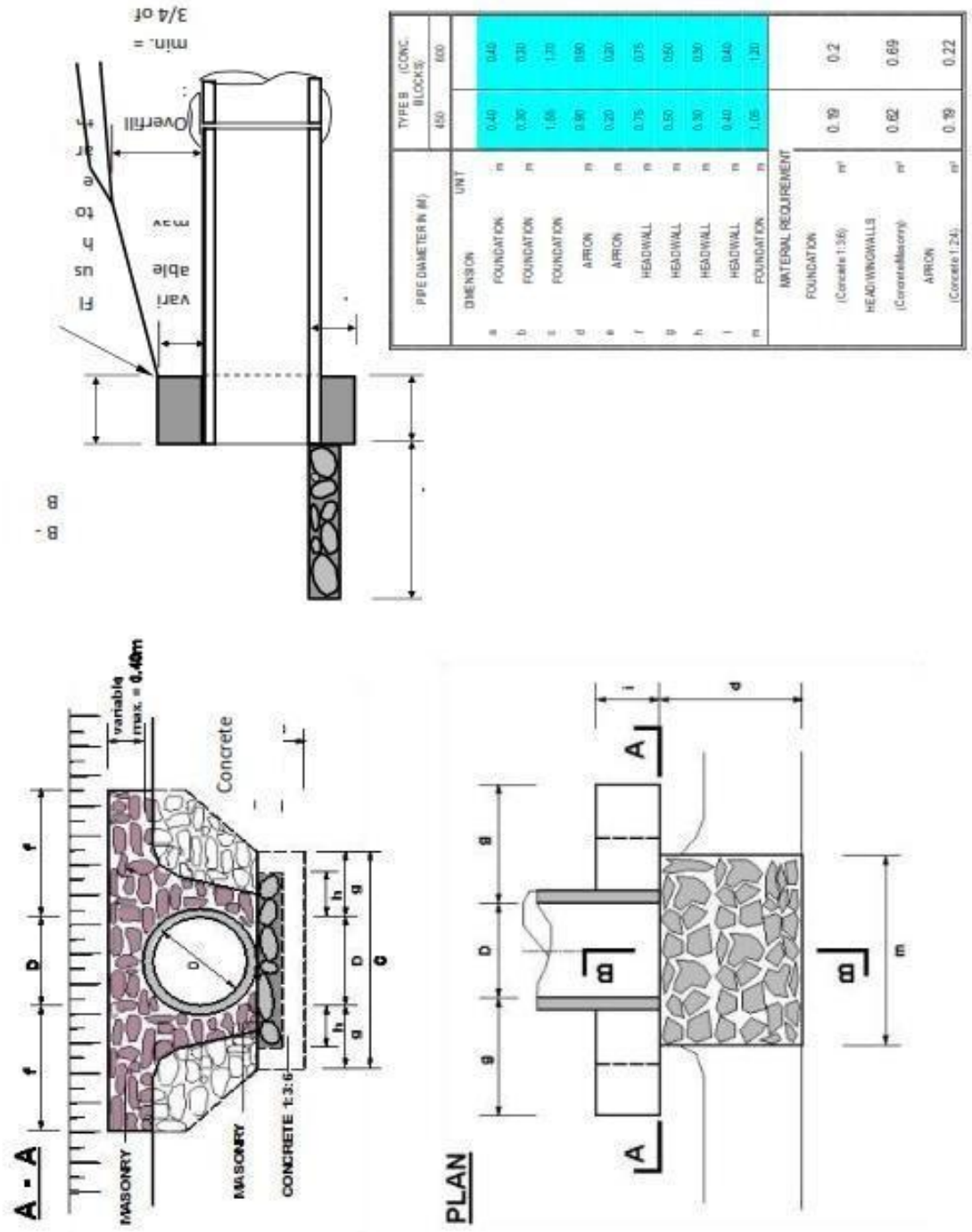
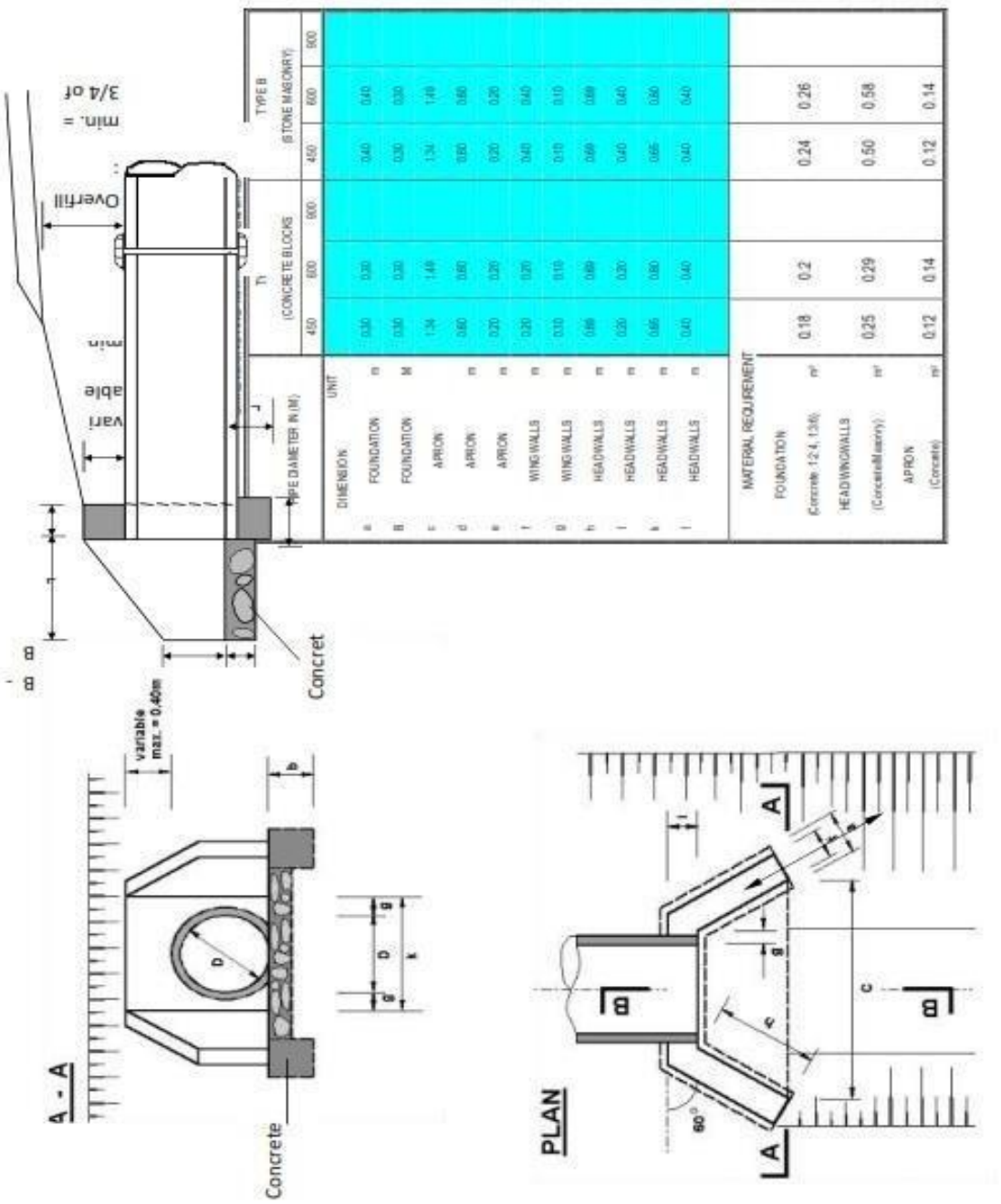


FIGURE C.6 - HEADWALL TYPE 4 (FOR ACCESS CULVERTS)

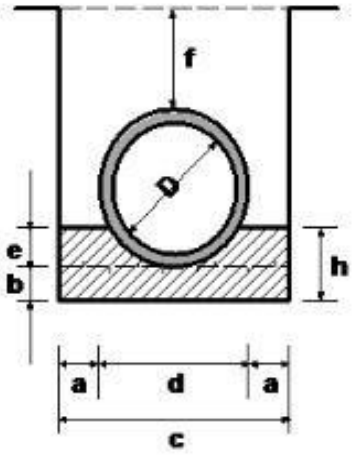


DIMENSION	UNIT	TYPE A (CONCRETE BLOCKS)			TYPE B (STONE MASONRY)		
		450	600	900	450	600	900
a FOUNDATION	m	0.30	0.30		0.40	0.40	
B FOUNDATION	M	0.30	0.30		0.30	0.30	
c APRON	m	1.34	1.49		1.34	1.49	
d APRON	m	0.60	0.60		0.60	0.60	
e APRON	m	0.20	0.20		0.20	0.20	
f WINGWALLS	m	0.20	0.20		0.40	0.40	
g WINGWALLS	m	0.10	0.10		0.10	0.10	
h HEADWALLS	m	0.69	0.69		0.69	0.69	
i HEADWALLS	m	0.20	0.20		0.40	0.40	
k HEADWALLS	m	0.60	0.60		0.60	0.60	
l HEADWALLS	m	0.40	0.40		0.40	0.40	
MATERIAL REQUIREMENT							
FOUNDATION (Concrete 1:2:4, 1:3:6)	m³	0.18	0.2		0.24	0.26	
HEADWINGWALLS (Concrete/Masonry)	m³	0.25	0.29		0.50	0.58	
APRON (Concrete)	m³	0.12	0.14		0.12	0.14	

FIGURE C.7- BEDDING AND HAUNCH PROFILES TYPES I & II

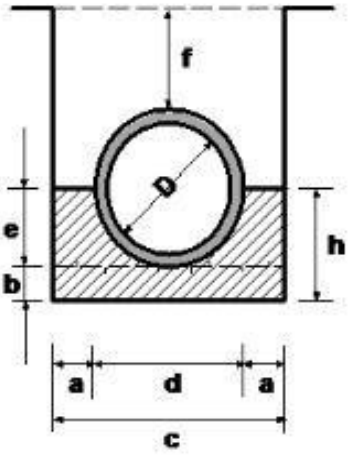
PROFILE I

(CONCRETE)



PROFILE II

(CONCRETE)



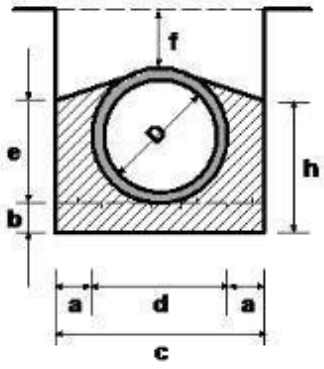
Diameter (D)	450 (mm)	600 (mm)	900 (mm)
	Dimensions in (m)		
a	0.15	0.2	0.2
b	0.1	0.15	0.15
c	0.86	1.12	1.48
d	0.56	0.72	1.08
e	0.14	0.18	0.27
f (min.)	0.34	0.45	0.68
g	-	-	-
h	0.24	0.33	0.42
i	-	-	-
Concrete	Volume in (m3/m)		
	0.16	0.3	0.48
Application	- Fair subgrade condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
Remarks	- Use gravel material for back/ overfill.		

450 (mm)	600 (mm)	900 (mm)
Dimensions in (m)		
0.15	0.2	0.2
0.1	0.15	0.15
0.86	1.12	1.48
0.56	0.72	1.08
0.28	0.36	0.54
0.34	0.45	0.68
-	-	-
0.38	0.51	0.69
-	-	-
Volume in (m3/m)		
0.2	0.37	0.56
- Fair to poor subgrade Condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
- Use gravel material for back/ overfill.		

FIGURE C.8 - BEDDING AND HAUNCH PROFILES TYPES III & IV

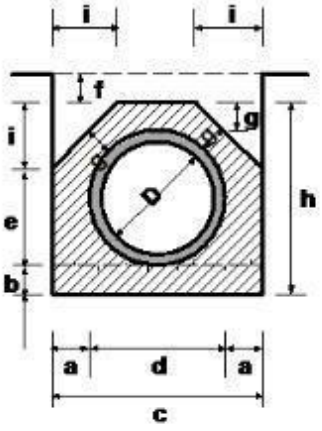
PROFILE III

(CONCRETE)



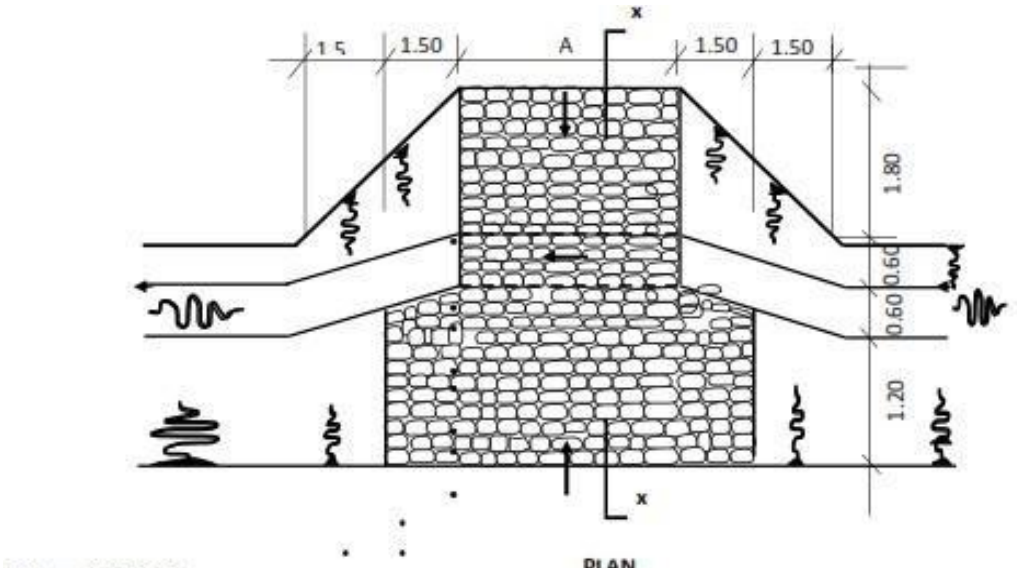
PROFILE IV

(CONCRETE)

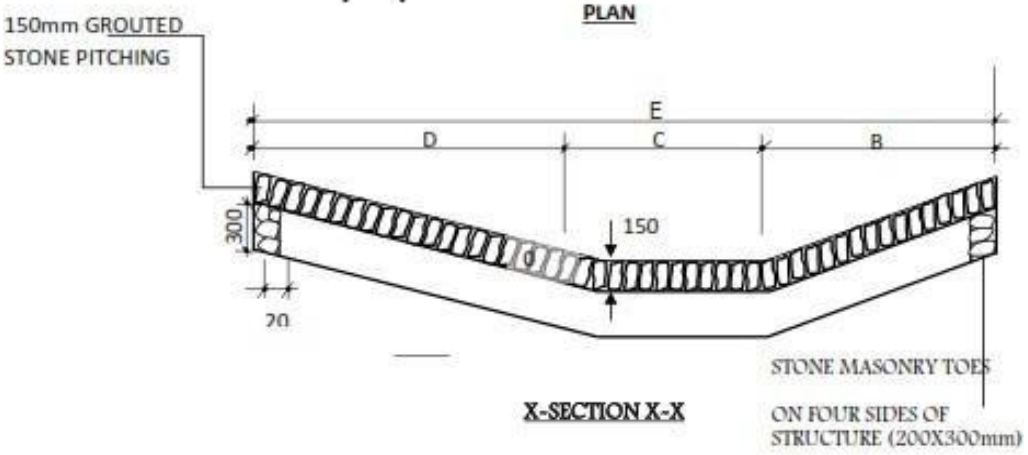


Diameter (D)	450 (mm)	600 (mm)	900 (mm)
	Dimensions in (m)		
a	0.15	0.2	0.2
b	0.1	0.15	0.15
c	0.86	1.12	1.48
d	0.56	0.72	1.08
e	0.42	0.54	0.81
f (min.)	0.23	0.3	0.45
g	-	-	-
h	0.52	0.69	0.96
i	-	-	-
Concrete	Volume in (m3/m)		
	0.26	0.47	0.71
Application	- Fair subgrade condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
Remarks	- Use gravel material for back/ overfill.		

450 (mm)	600 (mm)	900 (mm)
Dimensions in (m)		
0.15	0.2	0.2
0.1	0.15	0.15
0.86	1.12	1.48
0.56	0.72	1.08
0.46	0.52	0.78
0.15	0.15	0.15
0.15	0.15	0.15
0.81	1.02	1.38
0.28	0.35	0.45
Volume in (m3/m)		
0.37	0.61	0.92
- Fair to poor subgrade Condition; - Overfill > ¾ Diameter; - Seasonal waterflow only.		
- Use gravel material for back/ overfill.		



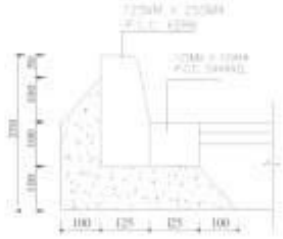
PLAN



X-SECTION X-X

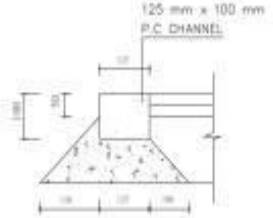
QUANTITIES TABLE

Cross section	DIMENSIONS					RED Excavation (m3)	Stone masonry (m^3)	150mm Grouted stone pitching (m3)
	A	B	C	D	E			
A	4000	1600	600	1600	4200	7.50	1.30	21.75
	6000	1600	600	1600	4200	10.00	1.60	30.15
B	4000	1400	400	1600	3600	7.00	1.20	18.30
	6000	1400	400	1600	3600	9.00	1.50	25.50



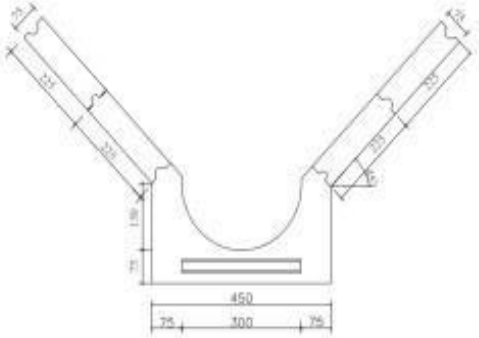
P.C.C. KERB AND CHANNEL

SCALE 1:10



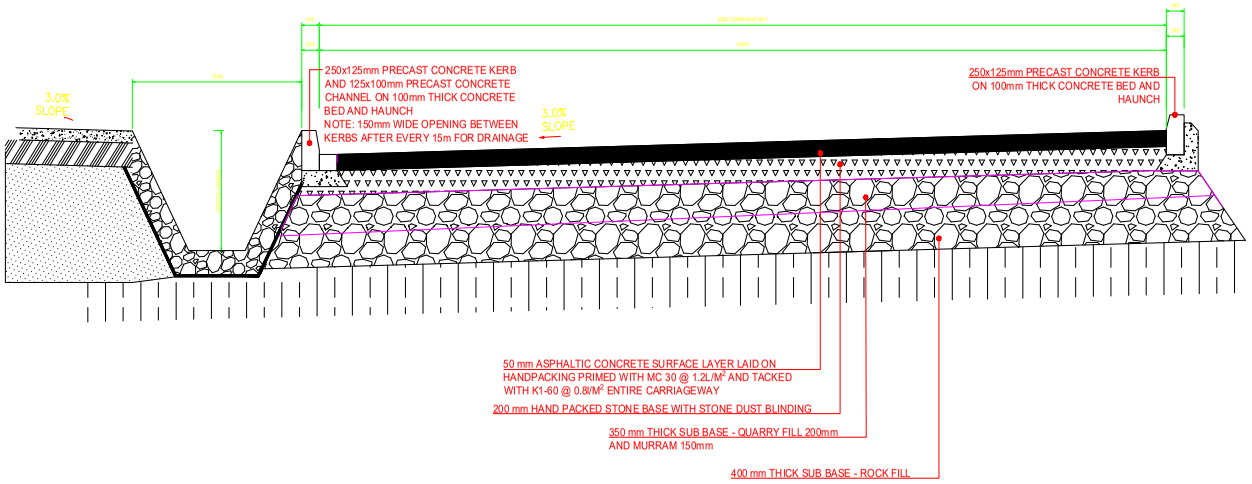
P.C.C. CHANNEL AND HAUNCH

SCALE 1:10



DIA. 300MM INVERT BLOCK DRAIN
SIDE SLABS VARIES

SCALE 1:10



TYPICAL ROAD PAVEMENT STRUCTURE FOR 6.0m WIDE CARRIAGEWAY

MOBILITY & WORKS SECTOR	SURVEYED BY:	No.	REFERENCE	DRG No.	No.	AMENDMENT	INITIALS	DATE	PROJECT TITLE: PROPOSED CONSTRUCTION OF UHURU GARDENS ROAD	DRAWING TITLE: 1. TYPICAL PAVEMENT STRUCTURE
	DESIGNED BY:									
	DRAWN BY:									
	CHECKED BY:									

DRG. No. SHEET No. 1	APPROVED BY: ___ DIRECTOR ROADS
	NAIROBI CITY COUNTY
	DATE: NOV 2024

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.

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SECTION 1 – GENERAL

101 SPECIAL SPECIFICATIONS

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

102 LOCATION OF CONTRACT

The works are located in Clay City Ward within the jurisdiction of the Nairobi City County as outlined below: -

1) Tarmacking of Muirigo centre Road
2) Public Lighting Within Clay city ward

LOCATION MAP – Not to Scale.

103 EXTENT OF CONTRACT

Muirigo Centre Road is a 0.8 km roadway with a variable width ranging from 6 meters to 7 meters, serving as a vital access route for residential areas and small-scale commercial establishments. The existing road is constructed with a hand-packed stone base and is supported by a drainage infrastructure system designed to manage surface runoff and prevent water accumulation.

The proposed improvement works are designed to enhance the structural integrity, functionality, and safety of the road through the following interventions:

1. Applying an asphalt binder course for surfacing.
2. Installing road signs to improve pedestrian safety.
3. Incorporating public lighting along the roadway.

.

The works shall include but not limited to: -

1. Site clearance as necessary
2. Excavation to remove unsuitable materials where necessary
3. Filling with approved materials as specified and directed.
4. Repairs to existing drainage structures as specified and directed
5. Improvement/construction to the drainage facilities as directed
6. Surfacing the Carriage way with Asphaltic concrete
7. Installation of Public Lighting Infrastructure.
8. Operations ancillary to the main works
9. Maintenance of the works during the construction and maintenance periods specified
10. Traffic Management through the works and from the works
11. Relocation and/or protection of other services including but not limited to water pipes, sewer pipes, street lighting, and KPLC mains electricity and telephone lines.
12. Any other works as instructed by the Engineer and/or as specified in this document

Defects Liability Period shall be 12.0 months.

Any other activity not listed above in either category but deemed to be necessary by the Engineer, shall be subject to the Engineer's formal instructions within the mode of payment stipulated either by day works or on a measured basis.

105 ORDER OF EXECUTION OF WORKS

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

107 TAKING OVER CERTIFICATE

The minimum length of the road for which a certificate will be issued under clause 48 of the conditions of Contract shall be the whole length of the road substantially completed.

109 NOTICE OF OPERATIONS

Add the following sub- Clause. Notification Terms

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

Explosive and Blasting

(a) The requirements of the Laws of Kenya governing explosives and other requirements and regulations of Government of Kenya and other authorities shall be complied with.

(b) No explosives of any kind shall be used without prior written consent of the Engineer.

The Contractor shall be solely responsible for the provision, handling, storage and transporting of all explosives, ancillary materials and all other items of related kind whatsoever required for blasting.

117 HEALTH, SAFETY AND ACCIDENTS

Add the following:

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

120 PROTECTION OF EXISTING WORKS AND SERVICES

The Contractor shall acquaint himself with the position of all existing services such as sewers, water drains, cables for electricity and telephone, lighting and telephone poles, water mains, etc., before commencing any excavation or other work likely to affect the existing services.

The cost of all plant, equipment and materials, labor, technical and professional staff, transport and the like necessary for determining the locations of existing services, including the making good of any damage caused to such services all to the satisfaction of the Engineer, shall be deemed to be included in the tender rates. No other payment shall be made for the costs of such operations, nor for the making good of damage caused thereby to the existing services.

The Contractor shall be held responsible for injury to existing structures, works or services and shall indemnify and keep indemnified the Employer against any claims in this respect (including consequential damages).

121 DIVERSION OF SERVICES

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

123 LIAISON WITH GOVERNMENT AND POLICE OFFICIALS

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

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

Notwithstanding Clause 124 of the Standard Specification all requirements of land for temporary works and construction purposes shall be to the approval of the Engineer but the Contractor will make all necessary arrangements with the property owners concerned and pay all charges arising therefrom. On or before completion of the Contract, the

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

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

128 STORAGE OF MATERIALS

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

129 TEST CERTIFICATES

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

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

131 SIGNBOARDS

The Contractor shall provide and erect two (2) publicity signs on the site as directed. The Engineer shall, as shown in the Drawings, direct the minimum dimensions and thickness of the steel framework and sheet. The framework and sheet shall be prepared and painted black, while the ring at the top of the supporting frames shall be painted white. The wordings and NCC's logo shall be printed on backlit sticker paper resistant to the effects of weather using reflectorized paint or material approved by the Engineer. The sticker shall be placed on both sides of the board. The colors, fonts and heights of the letters shall be as indicated on the typical drawings and as directed by the Engineer.

132 OFFICE FOR THE RESIDENT ENGINEER, SURVEY EQUIPMENT AND FURNITURE

132.1 ENGINEER'S REPRESENTATIVE OFFICE

The contractor, when instructed, shall for the duration of the Contract, furnish and

equip Resident engineer's office located at the NCC's offices. The room to be occupied by the Engineer's Representative and its front office shall be provided with a floor carpet to be approved by the Engineer. The windows shall be fitted with curtains and blinders.

A telephone shall also be provided for the Resident Engineer's office for his exclusive use. All the charges and fees related to the installation 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 telephone 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.

The survey equipment to be provided would include:

1. Engineer's automatic level Wild NAK 2 or similar 2No

2.Total station reading 1'' with tripod and setting on pole with datalogger and survey software to match Total Station Datalogger. Include data transfer program, and plotting modes, setting out calculations and Cogo facilities 1No

3. Levelling staff 5m. with levelling bubble Wild GNLE or similar 4No
4. 50m. steel band measuring tape 2No 5. 30m. linen measuring tape 2No.
6. 3m. aluminum straight edge 2No
7. 1m. stainless steel straight edge 1No
8. 100m. steel band tape 2No.
9. Draughtsman's stool 3No.
10. Complete set of highway curves 1No
11. Programmable scientific calculators FX 880P or equivalent 4No

12. Survey umbrella 2No.
13. Roll of tracing paper 10No
14. Protractor 360 2No
15. Graph paper A3 size 100No 16. Drawing table 2No.
17. Erasing shield 4No.
18. 3m. ranging rods 9No 19. Marker pens 30No.

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

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

Such equipment shall be of approved manufacture, and shall be made available to the
Engineer for the Engineer's exclusive use throughout the Contract, not later than three

(3) weeks after the Engineer's order to supply. All equipment shall be ready to use and complete to perform the tests. The equipment shall revert to the Employer on completion of the Contract.
Any delays to the Contractor or the Contractor's activities caused by the Engineer being unable to perform survey work, field or laboratory tests due to the contractor's failure to supply and/or maintain the said equipment shall be deemed to have been caused entirely by the Contractors own actions, and any consequences of such delays shall be interpreted as such.

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

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

132.3 COMMUNICATION FOR THE ENGINEEER

(a) Mobile phones

The Contractor shall provide, connect and maintain mobile phones for the exclusive use by the Engineer for the duration of the contract. The Contractor shall include for the cost of providing the mobile units complete with charger unit, "hands free" headset for each unit, connection to the network and all service charges applicable all as directed by the Engineer. The Contractor shall provide air-time with each mobile phone which shall be paid for under prime cost sum allowed for in the bills of quantities. The mobile telephones shall be WAP enabled with e-mail capabilities and integrated camera of a minimum of

3.0 mega pixels. Payment for these mobiles and associated costs is included in the Bill of Quantities, and ownership of mobile phones will revert to the Employer after completion of the Works.

(b) Internet and e-mail services

Where directed, the contractor shall provide 24 hours terrestrial or wireless internet connectivity with minimum throughput speed of 128kilobytes per second for the exclusive use by the Engineer, including all accessories and Terminal Equipment and pay for all associated installation, maintenance and usage charges throughout the duration of the contract.

The contractor shall allow for the provision and maintenance of internet connectivity and associated costs as per Appendix to item 1.17 of the Bills of Quantities.

137 ATTENDANCE UPON THE ENGINEER AND HIS STAFF

In addition to the staff stated in Clause 135, the following staff will be provided for the supervision of work: 1No. Artisans, 2No. Laborer's, 1No. Office assistants, 2No. Lab attendants. Additional attendant staff, as required by the Engineer, shall be paid for under Item 01-80-030 of the Bill of Quantities.

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

In addition to provisions of the Clause 138 of the Standard Specification, the Contractor shall when instructed, provide and maintain in good working condition for the exclusive use of the Engineer and his staff throughout the Contract, the following types and numbers of brand-new vehicles or as specified. The Engineer shall approve the type of vehicles and confirm the number of each type to be provided. 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 kilometers travelled in any month.

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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.

(a) <u>Type 1 Vehicles (Double Cabin 4WD Pick up)</u>

Type 1 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, diesel propelled engine maximum 2,500 cc. The starting mileage of the vehicles shall not exceed 60,000km odometer reading. The vehicles should be fitted with other accessories below:

(a) Spare tire and wheel jack;
(b) FM radio and CD player;
(c) Power Windows;
(d) Full Air-conditioning;

(e) Immobilizer and antitheft security system;
(e) Driver and passenger SRS Airbags;
(f) Canvas cover over the carrying deck at the back.

At the end of the contract, all type 1 vehicles shall revert to the Contractor.

(c) Type 2 Vehicles (station wagon/saloon)

Specifications for Type 2 Vehicles shall be station wagon/saloon vehicles; petrol propelled engine maximum 1,800 cc. The starting mileage of the vehicles shall not exceed 60,000km odometer reading. shall in addition be fitted with a fiber glass body or similar and two columns of sitting benches on the carting deck at the back.

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

At the end of the contract, all type 2 vehicles shall revert to the Contractor.

Payment of vehicle shall be per vehicle month in item 01-80-017/18 of the BOQ.

139 MISCELLANEOUS ACCOUNTS

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

142 ENVIRONMENTAL PROTECTION

The Contractor shall comply with the Statutory Regulations in force in Kenya regarding environmental protection and waste disposal, and shall liaise with the National Environmental Management Agency (NEMA).

The Contractor shall ensure so far as is reasonably practicable and to the satisfaction of the Engineer; that the impact of the construction on the environment shall be kept to a minimum and that appropriate measures are taken to mitigate any adverse effects during the construction.

(a) The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the Contractor's construction operations and equipment. All unnecessary destruction, scarring, damage or defacing resulting from the Contractor's operations shall be repaired, replanted, reseeded or otherwise corrected as directed by the Engineer, and at the Contractor's expense.

(b) The Contractor shall ensure that measures are in place to control soil erosion and water pollution, by use of berms, dykes, silt fences, brush barriers, dams, sediment basins, filter mats,

netting, gravel, mulches, grasses, slope drains, contour banks, and other erosion control devices and methods. Temporary erosion control provisions shall be coordinated with permanent erosion control features to assure economical, effective and continuous measures throughout the period of the works. The Contractor's attention is drawn to the requirements of Clause 502, in that works need to be progressively finished so that permanent vegetation can establish quickly to mitigate soil erosion and erosion of drains.

(c) The Contractor shall provide all the labour, equipment, materials, and means required and shall carry out proper and efficient measures wherever and as often as necessary to minimize the dust nuisance.

(d) The Contractor shall comply with all applicable Kenyan laws, orders and regulations concerning the prevention, control and abatement of excessive noise. Blasting, use of jackhammers, pile driving, rock crushing, or any other activities producing high-intensity impact noise may be performed at night only upon approval of the Engineer.

(e) Immediately after extraction of materials, all borrows pits shall be backfilled to the satisfaction of the Engineer. In particular borrow pits near the project road shall be backfilled in such a way that no water collects in them.

(f) Spilling of bitumen fuels Oils and other pollutants shall be cleared up.

(g) The Contractor's attention is drawn to the requirements of the Standard Specification in regard to the environment and in particular to the following clauses:

Clause 115: Construction Generally
Clause 116: Protection from Water
Clause 136: Removal of Camps
Clause 605: Safety and Public Health Requirements Clause
Clause 607: Site Clearance and Removal of Topsoil and Overburden

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

143 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 provisions in the Bills of Quantities.

SECTION 2 - MATERIALS AND TESTING OF MATERIALS

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

SECTION 3 - SETTING OUT & TOLERANCES

301 SETTING OUT

a) In addition to the provisions of clause 3.01(a) if the traverse points to be used for the setting out are close to the existing carriageway and interfere with construction works then the Contractor will have to relocate them to a location where they will not be disturbed. The co-ordinates and heights of all traverse points so located shall be listed and provided to the Engineer for checking

and/or approval. Contractor shall also monument the new centreline every 200m along straight and all salient points along curves by a pin in the concrete beacon before commencement of any works.

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

Commencement of the works shall not be permitted until this basic survey data has been provided and approved by the Engineer for at least 2 Kms of the road.

b) <u>Detailed Setting Out</u>

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

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

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

SECTION 4- SITE CLEARANCE AND TOP SOIL STRIPPING

401 SITE CLEARANCE

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

402 REMOVAL OF TOPSOIL

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

403 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS

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

SECTION 5 - EARTHWORKS

504 PREPARATION PRIOR TO FORMING EMBANKMENT

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

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

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

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

505 CONSTRUCTION OF EMBANKMENTS

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

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

(ii) All material with a swell of more than 3% (such as black cotton soil) (iii) All clay of plasticity index exceeding 50.

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

Subgrade: Shall mean upper 300mm of earthworks either insitu or in fill and subgrade shall be provided for as part of earthworks operation and payment shall be made as "fill". The material for subgrade shall have a CBR of not less than 8% measured after a 4-day soak in a laboratory mix compacted to a dry density of 100% MDD (AASHTO T99) and a swell of less than 1%.

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

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

508 COMPACTIONS OF EARTHWORKS

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

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

Notwithstanding the provision of clause 503 of the standard Specification, Compaction of subgrade material (i.e. material immediately below formation) in cut areas shall not be carried out by the contractor in areas where the formation is formed in

hard material, unless specific instructions to the contrary are issued by the Engineer.

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

511 BORROW PITS

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

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

517 MEASUREMENT AND PAYMENT

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

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

601 GENERALS

Notwithstanding any indications to the contrary in the Standard specification the
Engineer will not make available to the Contractor any land for quarries, borrow pits,

stockpiles and spoil areas, except for those areas in road reserves specifically approved by him.

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

No additional payment will be made to the Contractor to cover costs arising from the requirements for this Clause and the

Contractor must include these costs in the rates inserted into the Bills of Quantities.

602 MATERIAL SITES

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

603 PROVISION OF LAND

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

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

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

605 SAFETY AND PUBLIC HEALTH REQUIREMENTS

In addition to clause 605, the contractor shall allow for professionals to conduct lectures to the workers regarding the spread of HIV/Aids.

SECTION 7 - EXCAVATION AND FILLING FOR STRUCTURES

703 EXCAVATION OF FOUNDATIONS FOR STRUCTURES

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

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

707 BACKFILLING FOR STRUCTURES

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

709 EXCAVATIONS FOR RIVER TRAINING AND NEW WATER COURSES

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

710 STONE PITCHING

Stone pitching to drains, inlets and outlets of culverts to embankments and around structure shall consist of sound unweather rock approved by the Engineer. The stone as dressed shall be roughly cubical in shape with minimum dimensions of 150 x 150mm for normal thickness of stone pitching.

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

In areas where stone pitching has been damaged, the Contractor shall identify such areas and notify the Engineer for his agreement of the extent of the Works required and his approval and instructions to proceed with the Works. Stone Pitching Repair and Reconstruction shall be carried out in accordance with Clause 710 of the Standard Specifications.

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

Contrary to clause 713 of the standard specifications, the rates inserted for stone pitching shall allow for grouting.

711 GABIONS

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

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

The Works shall involve removal of the damaged gabions / rocks, excavation to the correct levels and grades as directed by the Engineer, and in accordance with Clause 711 of the Standard Specifications and reconstruction with new gabions and other necessary materials as necessary. The damaged gabions shall be recovered and transported to the nearest NCC'S Yard or M.O. R &P. W Department depot.

712 RIP-RAP PROTECTION WORK

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

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

714 BACKFILL BELOW STRUCTRURES

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

SECTION 8 - CULVERTS AND DRAINAGE WORKS

801 SCOPE OF SECTION

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

In addition, this Section covers: -

- Extending of existing 450mm, 600mm and 900mm diameter pipes to be compatible with the increased road width or access.
- Desilting and cleaning of existing pipes and outfall drains to make them free flowing.

804 EXCAVATION FOR CULVERTS AND DRAINAGE WORKS

In the Standard Specifications, make the following amendments: -

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

(b) Removal of Existing Pipe Culverts

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

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

The payment of this work shall be per linear metre of pipes removed, and the volume in m^3 of inlet/outlet structure removed. The void left by removal of these pipes shall be carefully preserved in order to accommodate replacement of 450mm, 600mm or 900mm diameter pipe culverts as shall be directed by the
Engineer.

(c) Removal of Other Existing Drainage Structures

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

(d) Excavation for Culverts and Drainage Works

The Contractor shall carry out all excavations for new culverts and drainage works to the lines, levels,

inclinations, and dimensions shown on the drawings or as instructed by the Engineer.

805 EXCAVATION IN HARD MATERIAL

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

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

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

Hard material is material that can be excavated only after blasting with explosives or barring and wedging or the use of a mechanical breaker fitted with a rock point in good condition and operated correctly. Boulders of more than $0.2m^3$ occurring in soft material shall be classified as hard material.

809 BEDDING AND LAYING OF PIPE CULVERTS

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

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

810 JOINTING CONCRETE PIPES

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

812 BACKFILLING OVER PIPE CULVERTS

In the Standard Specifications, clause 812

a) Wherever the expression "dry density of 95% MDD (AASHTO T. 99)" occurs delete and replace with "dry density of 100% MDD (AASHTO T.99)".

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

814 SUBSOIL DRAINS

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

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

815 INVERT BLOCK DRAINS AND HALF ROUND CHANNELS

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

817 REPAIRS TO DRAINS

817.1 Cleaning and Repair of Existing Drains

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

The work shall consist of:

(a) Stripping and removal of any extraneous material to spoil including vegetation and roots in the drains to the satisfaction of the engineer.

(b) Spreading of any spoil to the satisfaction of the Engineer.

Shaping the drains to free-flowing condition as directed by the Engineer.
Removing any broken side slabs for inverted block drains and replacing with a new removing any broken inverted block drains and replacing with a new one well jointed.

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

817.2 Channels

The Engineer may instruct that the Contractor provides open channels in place of existing subdrains where the latter may be damaged or in any other place. The rates entered by the Contractor in the bills of quantities must include for removal

and disposal of any subdrain material, excavation to line and level, backfilling and compaction as directed by the engineer. The channels shall be constructed of precast class 20/20 concrete of minimum 80mm thickness and lengths or widths not exceeding 1000mm. Joints shall be at least 15mm wide filled with 1:2 cement sand mortar.

817.3 Rubble fills for protection work

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

817.4 Stone Pitching

Stone pitching shall be constructed in accordance with clause 710 of the standard
Specification.

817.5 Gabions

Gabions shall be constructed in accordance with clause 711 of the standard Specification.

817.6 Spoil Material

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

818 SCOUR CHECKS

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

819 CLEANING AND MAINTENANCE

819.1 Desilting of Pipe Culverts

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

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

SECTION 9 - PASSAGE OF TRAFFIC

901 SCOPE OF THE SECTION

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

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

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

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

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

903 MAINTENANCE OF EXISTING ROADS

The Contractor shall when instructed, maintain the existing project road ahead of works using compacted asphalt concrete type I in accordance with the provisions in clause 1601B – 1607B of the Special Specifications or gravel material depending on the nature of the wearing course surface.

904 CONSTRUCTION OF DEVIATIONS

(a) <u>General</u>

In addition to requirement of this clause, the Contractor shall when instructed construct and complete deviations to the satisfaction of the Engineer before commencing any permanent work on the existing road. Also, during these works the contractor is supposed to provide a detour of adequate pipe culverts for pedestrian and traffic crossing where there is bridge works.

Subject to the approval by the Employer, the Contractor may maintain and use existing roads for deviation.

Payment for this, made in accordance with clause 912 (a) (i), shall be by the Kilometer used depending on the type of road used, whether bituminous or earth/gravel. The rates shall include for the provision of materials and the works involved.

(b) Geometry

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

(c) Construction

Unless otherwise instructed gravel wearing course for the deviation shall be 150mm compacted thickness complying with section 10 of the Standard

Specification. The Contractor shall allow in his rate for removal of any unsuitable material before placing of gravel wearing course, as this will not be paid for separately.

In addition to provision of this clause, Contractor is required to sprinkle water at least 4 times a day at the rate of1 to 1.4 litres/M^2 in regular interval to minimize the effects of dust. Latest sprinkling time shall be one hour before the sunset.

Where existing neighboring roads are used as deviation, Contractor shall carry out repairs and maintenance in parent materials used for the existing base and surfacing of the road being used.

906 PASSAGE OF TRAFFIC THROUGH THE WORKS

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

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

907 SIGNS, BARRIERS AND LIGHTS

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

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

909 ASSISTANCE TO PUBLIC

In addition to provision of clause 909, Contractor shall maintain close liaison with the relevant authorities to clear any broken down or accident vehicles from the deviations and the main road, in order to maintain smooth and safe flow of the traffic. Further, the Contractor shall provide a traffic management plan to be approved by the Engineer before the commencement of any construction works and execute the same, to the satisfaction of the Engineer, during the entire period of project implementation. A draft traffic management plan shall be submitted with Bid.

912 MEASUREMENT AND PAYMENT

Construct Deviation

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

Where existing neighboring road has been used as deviation, payment shall be by the kilometer rate and shall include the cost of repairs and maintenance of the road carried out in parent base and subbase materials.

Deviation using Pipe Culverts

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

Maintain existing road

Asphalt Concrete or gravel for maintaining the existing road shall be measured by the cubic meter placed and compacted upon the road

Passage of traffic through the works

Payment shall be made on Lump Sum basis.

Assistance to Public

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

SECTION 10 – GRADING AND GRAVELLING

1001 GENERAL

Grading covers the works involved in the reinstatement of the road carriageway to the camber by removing the high points and filling up gullies, corrugations and wheel ruts to restore smooth running surface. Gravelling consists of excavation, loading, hauling, spreading, watering and compaction of gravel or soft stone wearing course material on the formation of the road carriageway.

Ditch and Shoulder grading

The activity consists of cutting of a V – ditch and reinstating or reforming of the shoulders of road using either Towed or Motor grader.

Carriageway grading

(i) Light grading

This consists of trimming of the carriageway to control roughness and corrugations using either a towed grader or a motorized grader.

(ii) Heavy grading

This consists of scarifying the existing carriageway surface, cutting high spots and moving materials to fill potholes, corrugations and wheel ruts and reshaping of the surface to the specified camber, using either a towed grader or a motorized grader. All loose rocks, roots, grasses shall be removed and disposed well clear off the drains.

Heavy grading will be considered if 70% of the road has potholes, corrugations and wheel ruts of over 200mm deep.

The material shall be bladed toward the center of the road starting from both edges until the specified camber is achieved.

1002 MATERIALS

Gravel shall include lateritic gravel, quarzitic gravel, calcareous gravel, decomposed rock, soft stone/quarry waste material, clayey sand and crushed rock.

1003 MATERIAL REQUIREMENTS

Gravel material shall conform to the requirements given below:

GRADING REQUIREMENTS AFTER COMPACTION	
Sieve (mm)	% by weight passing
40	100
28	95 – 100

20	85 – 100
14	65 – 100
10	55 – 100
5	35 – 92
2	23 – 77
1	18 – 62
0.425	14 – 50
0.075	10 - 40

PLASTICITY INDEX REQUIREMENTS PI		
Zone	Min	Max
WET	5	15
DRY	10	25

BEARING STRENGTH REQUIREMENTS		
Traffic Commercial VPD	CBR	DCP Equivalent mm/Blow
Greater than 15	20	11
Less than 15	15	14
CBR at 95% at MDD, Modified AASHTO and 4 days soak		
Lower quality material (CBR 15) may be accepted if no better material can be found		

NB: Wet Zone – mean annual rainfall greater than 500mm
Dry Zone – mean annual rainfall less than 500mm

SECTION 11 – SHOULDERS TO PAVEMENT

1101 GENERAL

Shoulders shall be constructed in accordance with guidelines given in 1102 and as directed by the Engineer.

For sections where shoulders are extremely low and requires fill material before the shoulder is reconstructed, the construction of fill embankment shall be in accordance with Section 5 of this specification.

1102 MATERIAL FOR CONSTRUCTION OF SHOULDERS

The shoulders shall be 1.0m wide both sides and shall be formed of 150mm thick well compacted soft stone material and top soiled with red coffee soil and planted with grass.

Low shoulder shall be reconstructed by cutting benches, filling and compacting approved fill material to form the formation to the shoulders.

Shoulder reconstruction shall be same in all sections including the slip roads.

1105 SURFACE TREATMENT OF SHOULDERS

The shoulders shall be planted with creeping type kikuyu grass.

1106 MEASUREMENT AND PAYMENT

Payment for shoulder construction shall be in accordance with the relevant clauses in sections 11, 12, 14, 15 and 23 of the relevant Specifications. Payment for fill material on shoulder shall be in accordance with Section 5 of this specification.

SECTION 12 - NATURAL MATERIAL SUBBASE AND BASE

1201 GENERAL

Where instructed by the Engineer, the Contractor shall undertake repairs, widening and reprocessing to the existing carriageway and shoulders in accordance with sections 12 and 14 of the Special Specifications.

a) Areas to be scarified and reprocessed

The contractor will scarify, add new material and reprocess sections as determined by the Engineer.

b) Pavement repairs

The Contractor will carry out repairs to base and subbase as directed by the Engineer and according to Specifications given in Sections 12 and 14 of the Standard Specifications.

c) Pavement widening

The Contractor shall, as directed by the Engineer, bench and compact the subgrade to 100% MDD (AASHTO T99), provide lay and compact material for subbase and base as directed by the Engineer and in accordance with Sections 5 and 12 of the Standard Specifications.

1203 MATERIAL REQUIREMENTS

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.

1209 MEASUREMENT AND PAYMENT

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

1210 HAND PACKED STONE

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

a) Material for Hand Packed Stone Base

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

LAA 45 max
ACV 32 max
SSS

12
max
FI

30
max
CR 60 min.

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

b) Laying

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

c) Compaction

This shall be by a steel wheeled roller of at least five tonnes per metre width of roll. It shall consist of four static runs or until there is no movement under the roller. There shall follow vibratory compaction until an average dry density of 85% minimum of specific gravity of stone has been achieved. No result shall be below 82% of specific gravity. The surface of the

compacted layer shall then be levelled by quarry dust (0/6 mm).

The dust shall have the following specifications:

The stone shall be class C
Grading

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

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

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

1211 REPROCESSING EXISTING PAVEMENT LAYERS

(a) General

The existing surfacing and the base shall be reprocessed with additional material and the composite mixture shall be compacted to form the subbase layer.

Before commencement of the work the Contractor shall propose plants and equipment he proposes to use for this activity.

The Contractor after approval of his proposal shall carry out test section in accordance with Section 3 of the Standard Specifications.

(b) The existing surfacing and base course shall be broken up to specified depth and reprocessed in place, where required. The underlying layers shall not be damaged, and material from one layer may normally not be mixed with that of another layer. Where unauthorized mixing occurs or where the material is contaminated in any way by the actions of the Contractor, and the contaminated material does not meet the specified requirements of for the particular layer, he shall remove such

material and replace it with other approved material, all at his own expense.

(c) Any mixture composition of the new layer must not contain more than 30% of the bituminous material by volume. The mixture must not contain pieces of bound bituminous material larger than 37.5mm, and any such material shall be removed at the Contractor's cost.

(d) The requirements for imported material used in the respective pavement layers shall comply with the limitations, norms, sizes and strengths specified in the Standard Specifications clause 1203(b) and (d) and shall be worked as per Section 14 of the Standard Specification.

(e) Material reworked in-situ or that obtained from existing pavement is not expected to comply with the material requirements but the reworking should achieve the specified requirements.

(f) Where the thickness of any existing pavement layer requires to be supplemented within reprocessing and the thickness of the additional material after compaction will be less than 100mm, the existing layer shall be scarified to a depth that will give a layer thickness of at least 100mm after compacting the loosened existing and the additional material.

Controlling the Reworked Depth

The Contractor shall submit a proven method to method to control the depth of excavation, or layer to be reworked, to the Engineer for approval. The Engineer may order a trial section to be reprocessed before any major length of the road is rehabilitated.

Excavations

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

Step construction shall be carried out per layer at the joint when excavating, both longitudinally (if appropriate) and perpendicular to the direction of travel. The step width shall be 500mm perpendicular to the direction of travel, and 150mm long longitudinally, unless otherwise instructed by the Engineer.

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

Measurement and Payment

(a) Item: In-situ reprocessing of existing pavement layers as subbase compacted to specified density (95% MDD AASHTO T180) and thickness.

Unit: M^3

The tendered rate shall include full compensation for breaking up the existing pavement layer to specified depth, breaking down and preparing the material and the spreading and mixing in of any additional material

(b) Item: The addition of extra gravel to subbase.

Unit: M^3

The tendered rate shall include full compensation for procuring and addition of the material to the in-situ scarified layers and the transportation of the material over unlimited free-haul distance. The tendered rates will also include full compensation for prospecting for materials and any payments necessary to acquire the specified quality material.

(c) Excavation of existing bituminous pavement materials including unlimited free-haul.

Unit: M^3

The tendered rates shall include full compensation for excavating the existing bituminous material from the pavement layers and for loading, transporting the material for unlimited free-haul, offloading and disposing of the materials as specified.

(d) Excavation of the existing pavement

Unit: M^3

The tendered rate shall include full compensation for excavating the existing material from the pavement layers and for loading, transporting the material for unlimited free-haul distance, offloading and disposing of the material as specified.

Payment will only be made for breaking up and excavating existing pavement layers to the specified depth if the material is to be removed to spoil.

SECTION 15 - BITUMINOUS SURFACE TREATMENTS

1501B PREPARATION OF SURFACE

In addition to requirements of Clause 1503B of the Standard Specifications, the contractor shall prepare and Repair Cracks, Edges, Potholes and Other Failures as follows: -

a) Cracks 3.0mm or less in width

The entire crack area shall be cleaned by brushing with a wire brush and then blowing with a compressed air jet and the crack sealed with 80/100 cutback bitumen using a pouring pot or

pressure lance and hand squeegee. The surface shall then de dusted with sand or crushed dust.

b) Cracks greater than 3.0mm in width

Before these cracks are filled a steel, wire brush or router shall be used to clean them and then a compressed air jet shall be used to clean and remove any foreign or lose material in the crack until the entire crack area is clean.

When the crack and surrounding area have been thoroughly cleaned, dry sand shall be forced into the crack until it is sealed in the manner specified for cracks less than 3.0mm width.

c) Potholes, edges and other repair areas

Where instructed, the Contractor shall prepare areas for the repair of potholes, road edges and other repair areas by excavating off unsuitable or failed material and debris, trimming off excavated edges, cleaning and compacting the resulting surfaces and applying MC 30 or MC 70 cut-back bitumen prime coat at a rate of 0.8-1.2 litres/m^2, all as directed by the Engineer. Measurement and payment shall be made under the relevant item of Bill No 15. Where the surface repair on potholes and edges are to be carried out, Asphalt Concrete Type I (0/14gradation) shall be used. Bituminous material for repair of failures and other repair areas shall be paid for under the relevant item of Bill No 16

PART B - PRIME COAT

1502B MATERIALS FOR PRIME COAT AND TACK COAT.

For prime coat, the binder shall be a medium-curing cutback MC 70 unless otherwise directed by the Engineer.

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

Prime coat shall be applied to gravel areas that are to receive bituminous mixes as directed by the Engineer.

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

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

1511C MEASUREMENT AND PAYMENT

(a) Seal coat

Seal coats shall be measured by the litre, for each type of bituminous binder for each seal coat, calculated as the product

of the area in square metres sprayed and the rate of application in litres/square metres, corrected to 15.6 ^{o}C

SECTION 16 - BITUMINOUS MIX BASES, BINDER COURSES AND WEARING COURSES

This section covers different types of bituminous mixes for base and surface (wearing and binder courses) and is divided into the following parts: -

Part A General

Part B Asphalt Concrete for carriageway

PART A – GENERAL

1601A SCOPE OF PART A

Part A comprises all the general requirements for bituminous mixes, which apply to Part B as well.

1602A REQUIREMENTS FROM OTHER SECTIONS

The following sections of this Specification apply to Part B of this section and shall be read in conjunction therewith: -

Section 2	Materials and Testing of Materials
Section 3	Setting Out and Tolerances
Section 6	Quarries, Borrow Pits, Stockpile and Spoil Areas
Section 15	Bituminous Surface Treatments and Surface Dressing

1603A CONSTRUCTION PLANT

(a) General

The Contractor shall submit to the Engineer in accordance with Section 1 of its Specification, full details of the construction plant he proposes to use and the procedures he proposes to adopt for carrying out the permanent Works.

The Engineer shall have access at all times to construction plant for the purposes of inspection. The Contractor shall carry out regular calibration checks in the presence of the Engineer and shall correct forthwith any faults that are found.

All construction plant used in the mixing, laying and compacting of bituminous mixes shall be of adequate rated capacity, in good working condition, and shall be acceptable to the Engineer. Obsolete or worn-out plant will not be allowed on the work.

(b) Mixing Plant

Bituminous materials shall be mixed in a plant complying with ASTM Designation D995 and shall be located on the Site unless otherwise agreed by the Engineer. It shall be equipped with at

least three bins for the storage of heated aggregates and a separate bin for filler. All bins shall be covered to prevent the ingress of moisture.

The plant may be either the batch-mix type or the continuous-mix type and shall be capable of regulating the composition of the mixture to within the tolerances specified in Clause 1614A of this Specification.

The bitumen tank shall be capable of maintaining its contents at the specified temperature within a tolerance of 5^0C and a fixed thermometer easily read from outside the tank. Any bitumen that has been heated above 180^0C or has suffered carbonization from prolonged heating shall be removed from the plant and disposed of.

(c) Laying Plant

Bituminous materials shall be laid by a self-propelled spreader finisher equipped with a hopper, delivery augers and a heated adjustable vibrating screed. It shall be capable of laying bituminous materials with no segregation, dragging, burning or other defects and within the specified level and surface regularity tolerance. Delivery augers shall terminate not more than 200mm from the edge plates.

(d) Compaction Plant

The Contractor shall provide sufficient rollers of adequate size and weight to achieve the specified compaction. Prior to commencing the laying of bituminous mixes in the permanent Works the Contractor shall carry out site trials in accordance with Section 2 of this Specification to demonstrate the adequacy of his plant and to determine the optimum method of use and sequence of operation of the rollers.

It is important to achieve as high a density as possible at the time of construction and it is expected that vibrating rollers will be required to produce the best results. However, it is essential that thorough pre-construction trials are carried out to ensure that: -

(a) The roller is set up to have the optimum amplitude and frequency of vibration for the particular material being laid

(b) That the roller does not cause breakdown of the aggregate particles.

(b) That the optimum compaction temperatures are established which allow compaction without causing ripple effects or other distortions of the surfacing.

1604A PREPARATION OF SURFACE

Immediately before placing the bituminous mix in the pavement, the existing surface shall be cleaned of all material and foreign matter with mechanical brooms or by other approved methods. The debris shall be deposited well clear of the surface to be covered.

Any defect of the surface shall be made good and no bituminous mix shall be laid until the Engineer has approved the surface.
A tack coat shall be applied in accordance with Section 15 of this Specification. If the Engineer considers a tack coat is required prior to laying the bituminous mix or between layers of the bituminous mix, due solely to the
Contractor's method of working, then such tack coat shall be at the Contractor's expense.

1605A DESIGN AND WORKING MIXES

At least two months prior to commencing work using a bituminous mix, the Contractor shall, having demonstrated that he can produce aggregates meeting the grading requirements of the Specification, submit samples of each constituent of the mix to the Engineer. The Engineer will then carry out laboratory tests in order to decide upon the proportion of each constituent of the initial design mix or mixes to be used for site trials to be carried out in accordance with Clause 1606A of this Specification.

Should the Engineer conclude from the site trials that the mix proportion or aggregate grading are to be changed, the Contractor shall submit further samples of the constituents and carry out further site trials all as directed by the Engineer.

The Engineer may instruct the alteration of the composition of the -75-micron fraction of the aggregates by the addition or substitution of mineral filler. The Engineer may also instruct the alteration of all or part of the -6.3mm fraction of the aggregates by the addition or substitution of natural sand.

The Contractor shall make the necessary adjustments to his plant to enable the revised mix to be produced.

Following laboratory and site trials the Engineer will determine the proportions of the working mix and the Contractor shall maintain this composition within the tolerances given in Clause 1614A.

Should any changes occur in the nature or source of the constituent materials, the Contractor shall advise the Engineer accordingly. The procedure set out above shall be followed in establishing the new mix design.

1606A SITE TRIALS

Full scale laying and compaction site trials shall be carried out by the Contractor on all asphalt pavement materials proposed for the Works using the construction plant and methods proposed by the Contractor for constructing the Works. The trials shall be carried out with the agreement, and in the presence of the Engineer, at a location approved by the Engineer.

The trials shall be carried out to: -

a) Test materials, designed in the laboratory, so that a workable mix that satisfies the specification requirements can be selected.

b) To enable the Contractor to demonstrate the suitability of his mixing and compaction equipment to provide and compact the material to the specified density and to confirm that the other specified requirements of the completed asphalt pavement layer can be achieved.

Each trial area shall be at least 100 metres long and to the full construction width and depth for the material. It may form part of the Works provided it complies with this Specification. Any areas that do not comply with this Specification shall be removed.

The Contractor shall allow in his programme for conducting site trials and for carrying out the appropriate tests on them. The trial on any pavement layer shall be undertaken at least 21 days ahead of the Contractor proposing to commence full-scale work on that layer.

The Contractor shall compact each section of trial over the range of compactive effort the Contractor is proposing and the following data shall be recorded for each level of compactive effort at each site trial: -

i. The composition and grading of the material including the bitumen content and type and grade of bitumen used.
ii. The moisture content of aggregate in the asphalt plant hot bins.
iii. The temperature of the bitumen and aggregate immediately prior to entering the mixer, the temperature of the mix on discharge from the mixer and the temperature of the mix on commencement of laying, on commencement of compaction and on completion of compaction. The temperature of the mixture is to be measured in accordance with BS 598, Part 3, Appendix A.

iv. The type, size, mass, width of roll, number of wheels, wheel load, tire pressures, frequency of vibration and the number of passes of the compaction equipment, as appropriate for the type of roller.

v. The target voids and other target properties of the mix together with the results of the laboratory tests on the mix.

vi. The density and voids achieved. vii. The compacted thickness of the layer. viii. Any other relevant information as directed by the Engineer.

At least eight sets of tests shall be made by the Contractor and the Engineer on each 100 metres of trial for each level of compactive effort and provided all eight sets of results over the range of compactive effort proposed by the Contractor meet the specified requirements for the material then the site trial shall be deemed successful. The above data recorded in the trial shall become the agreed basis on which the particular material shall be provided and processed to achieve the specified requirements.

1607A MIXING OF AGGREGATES AND BITUMEN

The bitumen shall be heated so that it can be distributed uniformly and care shall be taken not to overheat it. The temperature shall never exceed 170^0 C for 80/100penetration grade bitumen.

The aggregates shall be dried and heated so that they are mixed at the following temperatures: -

$125\text{-}165^0$C when 80/100 bitumen is used

The dried aggregates shall be combined in the mixer in the amount of each fraction instructed by the Engineer and the bitumen shall then be introduced into the mixer in the amount specified. The materials shall then be mixed until a complete and uniform coating of the aggregate is obtained.

The mixing time shall be the shortest required to obtain a uniform mix and thorough coating. The wet mixing time shall be determined by the Contractor and agreed by the Engineer for each plant and for each type of aggregate used. It shall normally not exceed 60 seconds.

1608A TRANSPORTING THE MIXTURE

The bituminous mix shall be kept free of contamination and segregation during transportation. Each load shall be covered with canvas or similar covering to protect it from the weather and dust.

1609A LAYING THE MIXTURE

Immediately after the surface has been prepared and approved, the mixture shall be spread to line and level by the laying plant without segregation and dragging.

The mixture shall be placed in widths of one traffic lane at a time, unless otherwise agreed by the Engineer. The compacted thickness of any layer shall be at least 2.5 times the maximum size of the aggregate for wearing course and at least 2 times for binder course. The minimum thickness shall be 25mm.

Only on areas where irregularities or unavoidable obstacles make the use of mechanical laying impracticable, may the mixture be spread and compacted by hand.

1610A COMPACTION

Immediately after the bituminous mixture has been spread, it shall be thoroughly and uniformly compacted by rolling.

The layer shall be rolled when the mixture is in such a condition that rolling does not cause undue displacement or shoving.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction while the mixture is in a workable condition. The sequence of rolling operations shall be as agreed with the Engineer and proved during site trials.

Initial rolling

with steel tandem or three-wheeled roller shall follow the laying plant as closely as possible. The rollers shall be operated with the drive roll nearest the laying plant, at a slow and uniform speed (not exceeding 5 Km/Hr.).

Rolling shall normally commence from the outer edge and proceed longitudinally parallel to the centreline, each trip overlapping one half of the roller width. On super elevated curves, rolling shall begin at the low side and progress to the high side. Where laying is carried out in lanes care must be taken to prevent water entrapment.

Intermediate rolling with a pneumatic-tyred or vibratory roller shall follow immediately. Final rolling with a steel-wheeled roller shall be used to eliminate marks from previous rolling.

To prevent adhesion of the mixture to the rollers, the wheels shall be kept lightly moistened with water.

In areas too small for the roller, a vibrating plate compactor or a hand tamper shall be used to achieve the specified compaction.

1611A FINISHING, JOINTS AND EDGES

Any mixture that becomes loose and broken, mixed with dirt or foreign matter or is in any way defective, shall be removed and replaced with fresh hot mixture, which shall be compacted to conform to the surrounding area.

Spreading of the mixture shall be as continuous as possible. Transverse joints shall be formed by cutting neatly in a straight line across the previous run to expose the full depth of the course. The vertical face so formed shall be painted lightly with hot 80/100 penetration grade bitumen just before the additional mixture is placed against it. Longitudinal joints shall be rolled directly behind the paving operation. The first lane shall be placed true to line and level and have an approximately vertical face. The mixture placed in the abutting lane shall then be tightly crowded against the face of the previously placed lane. The paver shall be positioned to spread material overlapping the joint face by 20-30mm. Before rolling, the excess mixture shall be raked off and discarded.
When the abutting lane is not placed in the same day, or the joint is destroyed by traffic, the edge of the lane shall be cut back as necessary, trimmed to line and painted lightly with hot 80/100 penetration grade bitumen just before the abutting lane is placed.

Any fresh mixture spread accidentally on the existing work at a joint shall be carefully removed by brooming it back on to uncompacted work, so as to avoid formation of irregularities at the joint. The finish at joints shall comply with the surface requirements and shall present the same uniformity of finish, texture and density as other sections of the work.

The edges of the course shall be rolled concurrently with or immediately after the longitudinal joint. In rolling the edges, roller wheels shall extend 50 to 100mm beyond the edge.

1612A SAMPLING AND TESTING OF BITUMINOUS MIXTURES

The sampling of bituminous mixtures shall be carried out in accordance with AASHTO T168 (ASTM Designation D979).

1613A QUALITY CONTROL TESTING

During mixing and laying of bituminous mixtures, control tests on the constituents and on the mixed material shall be carried out in accordance with Clause 1612A and Section 2 of this Specification.

If the results of any tests show that any of the constituent materials fail to comply with this Specification, the Contractor shall carry out whatever changes may be necessary to the materials or the source of supply to ensure compliance.

If the results of more than one test in ten on the mixed material show that the material fails to comply with this Specification, laying shall forthwith cease until the reason for the failure has been found and corrected. The Contractor shall remove any faulty material laid and replace it with material complying with this Specification all at his own expense.

1614A TOLERANCES

Surfacing courses and base shall be constructed within the geometric tolerances specified in Section 3 of this Specification.

The Contractor shall maintain the composition of the mixture as determined from the laboratory and site trials within the following tolerances, per single test: -

Bitumen Content	0.3% (by total weight of total mix)

Passing 10mm sieve 6% (by total weight of dry aggregate and larger sieves including mineral filler)

Passing sieves between 4% (by total weight of dry aggregate 10mm and 1.0mm sieves including mineral filler)

Passing sieves between 3% (by total weight of dry aggregate 1.0mm and 0.075mm sieve including mineral filler)

Passing 0.075mm sieve	2% (by total weight of dry aggregate including mineral filler)

The average amount of bitumen in any length of any layer, calculated as the product of the bitumen contents obtained from single tests and the weight of mixture represented by each test, shall not be less than the amount ordered.

The average amount of bitumen for each day's production calculated from the checked weights of mixes shall not be less than the amount ordered.

The average amount of bitumen in any length of any layer, calculated as the product of the bitumen contents obtained from single tests and the weight of mixture represented by each test, shall not be less than the amount ordered.

The average amount of bitumen for each day's production calculated from the checked weights of mixes shall not be less than the amount ordered.

The final average overall width of the upper surface of a bituminous mix layer measured at six equidistant points over a length of 100m shall be at least equal to the width specified. At no point shall the distance between the centreline of the road and the edge of the upper surface of a bituminous mix layer be narrower than that specified by more than 13mm.

1615A MEASUREMENT AND PAYMENT

No separate measurement and payment shall be made for complying with the requirements of Clauses 1601A to 1614A inclusive and the Contractor shall be deemed to have allowed in his rates in Parts B and C of Section 16 of this Specification for the costs of complying with the requirements of Part A of Section 16 of this Specification

PART B - ASPHALT CONCRETE FOR SURFACING

1601B DEFINITION

Asphalt concrete means a thoroughly controlled, hot-mixed, hot-laid, plant mixture of well-graded dried aggregate and penetration grade bitumen, which, when compacted forms a dense material.

A distinction is drawn between asphalt concrete Type I (High Stability) and asphalt concrete Type II (Flexible). The asphalt concrete type to be used will be Type I.

1602B MATERIALS FOR ASPHALT CONCRETE TYPE 1

a) Type of bituminous material

The type of material to be used on severe sites will be of the continuously graded type similar to Asphaltic Concrete or Close Graded Macadam. It is essential that these materials are sealed with a single or double surface dressing or a Cape seal.

b) Penetration Grade Bitumen

Bitumen shall be 80/100 penetration grade since material is being laid at an altitude of more than 2,500m.

c) Aggregate

Coarse aggregate (retained on a 6.3mm sieve) shall consist of crushed stone free from clay, silt, organic matter and other deleterious substances. The aggregate class will be specified in the Special Specification and it shall comply with the requirements given in Table 16B-1(b). The grading for 0/20 mm for carriageway and 0/14mm for shoulders for binder course is as specified below:

Sieve size	0/20	0/14
28	100	-
20	90-100	100
14	75-95	90-100
10	60-82	70-90
6.3	47-68	52-75
4	37-57	40-60
2	25-43	30-45
1	18-32	20-35
0.425	11-22	12-24
0.300	9-17	10-20
0.150	5-12	6-14
0.075	3-7	4-8

TABLE 16B-1(b) - REQUIREMENTS FOR COARSE AGGREGATE

Coarse Aggregate (Retained on a 6.3mm Sieve)

Test	Maximum Value
LAA ACV SSS FI	30 25 12 25

Fine aggregate (passing a 6.3mm sieve) shall be free from clay, silt, organic and other deleterious matter and shall be non-plastic. Unless otherwise specified in the Special Specification it shall consist of entirely crushed rock produced from stone having a Los Angeles Abrasion of not more than 40. The Sand Equivalent of the fine aggregate shall not be less than 40 and the SSS not more than 12.

b) Mineral Filler

Mineral Filler shall consist of ordinary Portland Cement 42.5 Grade

1603B GRADING REQUIREMENTS

The grading of the mixture of coarse and fine aggregate shall be within and approximately parallel to the grading envelopes given in Table 16B-1(b), for 0/14mm as specified for binder course, as described below.

GRADING REQUIREMENTS

To arrive at a suitable design, it is necessary to investigate a number of gradings so that a workable mix, which also retains a minimum of 3 % voids at refusal density, is identified.

The largest particle size used should not be more than 25mm so that the requirements of the Marshall test method can be complied with.

Although the complete range of nominal maximum particle sizes is shown in the Tables, the total thickness of material laid should not be more than 75mm.

1604B REQUIREMENTS FOR ASPHALT CONCRETE TYPE 1

The mixture shall comply with the requirements given in Table 16B-2 as specified in the Specification. In addition, minimum Marshall Stability for 2 x 75 blows shall be 9 KN and maximum 18 KN and at compaction to refusal shall have 3% VIM.
The proportion, by weight of total mixture, of bitumen shall be 5.0 – 6.5 % for 0/14 mm and 4.5 – 6.5 % for 0/20mm. This shall be termed the nominal binder content. The binder content of the working mix will be instructed by the Engineer following laboratory and site trials.

In order to determine the suitability of a coarse aggregate source a Marshall test programme shall be carried out. It will be advantageous to use a crushed rock which is known from past experience to give good results in this test procedure. A grading conforming to the Type I Binder Course detailed in Table 16B-1(a) 0/20 of this Specification should be tested (but with 100% passing the 25mm sieve) and it shall meet the requirements of Table 16B-2 of this Specification.

Having established the suitability of the aggregate source several grading 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 the procedure described in BS 598 (Part 104: 1989), with one revision.

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

From the bitumen content-VIM relationship it will be possible to identify a bitumen content which corresponds to a VIM of 3 - 7%. If it is considered that the workability of the mix may be difficult then compaction trials should be undertaken. It is advisable to establish two or more gradings for compaction trials.

The mixes identified for compaction trials should be manufactured to the laboratory design bitumen content and to two other bitumen contents of +0.5% and +1% additional bitumen. Cores will be cut to determine the density of the compacted material, having completed this the core will then be reheated to 145+/-5 □C in the appropriate mould and compacted to refusal in the vibrating hammer test. To be acceptable the cores cut from the compaction trial must have a density equivalent to at least 95% of refusal density.

The compaction trials will identify a workable mix which can be made to a bitumen content which gives 3% VIM at refusal

1605B MIXING AND LAYING HEAVY DUTY ASPHALT

The temperature of the bitumen and aggregates when mixed shall be 110+/-3 above the softening point (R&B) of the bitumen.

Compaction should 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 90^0C.

The minimum thickness of individual layers should be as follows: -

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

1606B COMPACTION

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

1607B MEASUREMENT AND PAYMENT

density. □C

a) Item : Asphalt Concrete

Unit : m^3 of Asphalt Concrete Used

Asphalt concrete shall be measured by the cubic metre compacted on the road calculated as the product of the length instructed to be laid the compacted cross-sectional area shown on the Drawings or instructed by the Engineer.

The rate for asphalt concrete shall include for the cost of providing, transporting, laying and compacting the mix with the nominal binder content and complying with the requirements of Parts A and B of Section 16 of this Specification.

SECTION 17 - CONCRETE WORKS

1703 MATERIALS FOR CONCRETE

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

(a) Materials

Selected rock: The selected rock builders to be placed for this work shall be hard, sound, durable quarry stones as approved by the Engineer. Samples of the stone to be used shall be submitted to and approved by the Engineer before any stone is placed.
The maximum size of the stone boulders shall be 300mm.

(b) Construction Method

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

(c) Measurement and payment

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

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

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

FORM WORKS

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

(a) Materials for Levelling Concrete

Requirement for the concrete class 15/20 is specified as follows: Design compressive strength (28) days: 15N/mm^2

Maximum size of coarse aggregate : 20mm
Maximum cement content : 300 kg/m^3.

Maximum water/cement ration of 50% with slump of 80mm.

(b) Construction Method

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

1.2 (c) Measurement and payment

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

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

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

1703 (C) FORMWORK FOR CULVERT WALLS

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

(a) Materials

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

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

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

(b) Construction Method

(i) Formworks

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

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

1703(D) CONCRETE WORKS (CLASS 25/20) OF CULVERT 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 and shall conform to the requirements of BS 12 or equivalent.

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

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

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

(b) Aggregates

Fine and coarse aggregates must be clean, hard, strong and durable, and free from absorbed chemicals, clay coating, or materials in amounts that could affect hydration, bonding, strength and durability of concrete.
Grading of aggregates shall conform to the following requirements:

(i) Grading of Fine Aggregates

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

(ii) Grading of Coarse Aggregates

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

Other requirements for aggregates are as follows:

(iii) Fine Aggregates

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

(iv) Coarse Aggregate

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

Thin and elongated Pieces, AASHTO M80 : Max. 15%

(v) Water

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

(vi) Admixture

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

The contractor shall not exclude the admixture from concrete proportions.

Concrete class 20/20

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 : 20mm

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

(d) Proportioning Concrete

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

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

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

(e) Concrete Work

(ii) Batching

Batching shall be done by weight with accuracy of:

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

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

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

(iii) Mixing and delivery

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

(iv) Concrete in hot weather

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

(v) Concreting at night

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

(vi) Placing

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

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

(f) Measurement and Payment

Measurements for the Concrete Works Class 20/20 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 20/20) of culvert walls and slabs shall be the full compensation for furnishing all materials of the concrete mixing, delivering, placing and curing the concrete, equipment and tools, labour and other incidental necessary for the completion of the work in accordance with the Drawings and these Specifications and as directed by the Engineer.

SECTION 20 - ROAD FURNITURE

2001 ROAD RESERVE BOUNDARY POSTS

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

2003 EDGE MARKER POST

Edge marker post shall be provided as directed by the Engineer and in compliance with Standard Specification clause 2003

2004 PERMANENT ROAD SIGNS

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

2004B EXISTING ROAD SIGNS

Where directed by the Engineer, the Contractor shall take down road signs including all posts, nuts, bolts and fittings, and remove and dispose of the concrete foundation and backfill the post holes. The signs shall be stored as directed by the Engineer.

Measurement and payment for taking down road signs shall be made by the number of signs of any type and size taken down, cleaned and stored as directed.

2005 ROAD MARKING

Paint for road marking shall be internally reflectorized hot applied thermoplastic material in accordance with Clause 219 of the Standard Specification.

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

2005A RAISED PAVEMENT MARKERS – ROAD STUDS

MATERIAL

Road studs are moulded of acrylonitrile butadiene styrene (ABS) conforming to ASTM Specification D1788 – 68, class 5-2-2 shell filled with inert, thermosetting compound and filler. The lens portion of the marker of the marker is of optical menthly methacrylic.

CONSTRUCTION

The road studs shall be constructed of high impact ABS containing a multi-biconvex glass lens reflector system. It shall be of monolithic construction, and not less than 98.5. m^2. The height of the marker

shall not exceed 17mm and the underside shall contain a nonhoneycombed base (flat).

REQUIREMENTS

The markers shall conform to the following requirements

Color

Shall be white, yellow or red as specified and the Retro – reflectance values should conform to the testing procedures of ASTME 809.

Impact Resistance

The market shall not crack or break when tested using a 1000-gram weight from a height of 1 metre. (ASTM D 2444) or BS 3900 Part E3.

Resistance to Water Penetration

Shall not have water penetration behind the lens after submerged in a water bath at 70 + 50 oF for 10 minutes. And it should still meet the reflectance Requirement. BS 998.

Heat Resistance

Shall comply with the initial brightness as per BS 873 Part IV of 1978

Night Visibility

The marker shall be bright as per BS 873 Part IV of 1978

Compression Resistance

There shall be no cracking sound at a pressure lower than 25 tones as per BS 873 Part IV of 1978.

Corrosion Resistance

After immersing a sample of Road stud in a solution containing 30g/1 of sodium chloride for 30 days, there shall not be any signs of corrosion -(BS998).

NOTE: These markers are intended for application directly to pavement surfaces and are compatible with raised pavement makers. These adhesives should be of high quality and tested for conformance to customer requirements.

ADHESIVES

They shall be of Resin Type–Epoxy of 2 different components part 1 and 2 i.e Adhesive and Reactor without any volatile solvents in both.

Pot life:	not less than 20 minutes at 20 ^{o}C
Rotational cure time:	between 20 and 30 minutes at 20 ^{o}C
Hard cure:	Between 40 and 60 minutes at 20 ^{o}C

APPLICATION INSTRUCTION

Preparation of Pavements

Make sure that the road surface is absolutely dry and free of oil and grease.

Mixing of Adhesive

Pour component B into the container of component A. Stir mixture by hand with a wooden or metal stick until uniform Grey Tint without a stria is obtained.

Installation

Pour the mixture on to the underside of the road stud. Then place the road stud firmly on the road surface. Adhesive should stand out for about 5mm to 10 mm over the edges of the stud.

Protection from the Traffic

Protect studs from traffic for 2 hours until the adhesive has properly hardened. Try by touching the adhesive.

NUMBER OF STUDS NEEDED FOR LABORATORY TESTS.

In order to approve a particular type of road stud, 4 sample road studs of each colour shall be submitted.

2006 GUARDRAILS

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

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

2007 KERBS

a) Vertical Joints

Vertical joints between adjacent Kerbs shall not be greater than 5 mm in width and shall be filled with a mortar consisting of 1:3 cement: sand by volume.

b) Transition between flush and raised kerbs

The transition between flush and raised kerbs (e.g. at bus bays) shall be termed as ramped kerbs. The transition between flush and raised kerbs shall occur within a length of 2.0 m.

2008 KILOMETRE MARKER POSTS

Kilometer marker posts shall be provided as directed by the Engineer and in compliance with Standard Specification clause 2008.

2009 RUMBLE STRIPS

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

2011 MEASUREMENT AND PAYMENT

Road reserve boundary posts

Road reserve boundary posts shall be measured by the number erected

Permanent road signs

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

Road marking

Road markings in yellow or white material shall be measured in square metres calculated as the

plan area painted.

Road Studs

Road studs shall be measured by the number of each particular size erected.

Guardrail

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

Kerbs

Kerbs shall be measured by the meter as the length of kerbs constructed

SECTION 22-DAYWORKS

2202 MEASUREMENTS AND PAYMENT

(a) Plant

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

SECTION 23: CONCRETE PAVING BLOCKS

This works shall consist of providing, laying and fixing of concrete paving blocks and concrete paving slabs on a sand base on the driveway and walkways and other areas as directed by the Engineer. a. Concrete Paving Blocks

The paving blocks shall be of type S of any shape fitting within a 295 mm square coordinating space and a work size thickness of at least 30 mm. The blocks shall confirm to the requirements of BS 6717: Pt. 1:1986 or Kenya standard equivalent.

The laying shall be broken at intervals of 50 m by concrete ribs of class 25 concrete.

The blocks shall be laid on a 40 mm minimum sand base whose specifications are as in section (b) of this specification.

b. Sand for Sand Base

Sand used as bedding for paving blocks and slabs shall be natural sand either pit or river sand. The grading shall conform and be parallel as much as possible to KS02 – 95 Parts 1 &2: 1984 for zones 1,2 or 3. The other requirements shall be as specified in section 1703 (c) of Standard Specifications.

c. Measurement and Payment

Payment for paving blocks and paving slabs shall be by square metre laid. The rate quoted would include the cost of haulage to site of the blocks, slabs and sand, as no extra payment shall be made for haulage

SECTION VII- BILLS OF QUANTITIES

1. Objectives

The objectives of the Bill of Quantities are:

a) to provide sufficient information on the quantities of Works to be performed to enable tenders to be prepared efficiently and accurately; and

b) when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and contents of the Bill of Quantities should be as simple and brief as possible.

2. Day work Schedule

A Day work Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Procuring Entity of the realism of rates quoted by the Tenderers, the Day work Schedule should normally comprise the following:

a) A list of the various classes of labor, materials, and Constructional Plant for which basic day work rates or prices are to be inserted by the Tenderer, together with a statement of the conditions under which the Contractor shall be paid for work executed on a day work basis.

b) Nominal quantities for each item of day work, to be priced by each Tenderer at day work rates as Tender. The rate to be entered by the Tenderer against each basic day work item should include the Contractor's profit, overheads, supervision, and other charges.

3. Provisional Sums

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary priced Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the Special Conditions of Contract should state the manner in which they shall be used, and under whose authority (usually the Engineer's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Procuring Entity to select such specialized contractors. To

provide an element of competition among the Tenderers in respect of any facilities, amenities, attendance, etc., to be provided by the successful Tenderer as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Tenderer to quote a sum for such amenities, facilities, attendance, etc.

These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the tendering document. They should not be included in the final tendering document.

4. The Bills of Quantities

The Bills of Quantities should be divided generally into the following sections: a) Preambles

b) Preliminary items
c) Work Items
c) Day work Schedule; and
d) Provisional items
e) Summary.

SECTION 5A: GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

Standard Specifications refers to the Standard Specifications for Electrical Installation as per IEE Wiring Regulations17thEdition, Kenya Bureau of Standards code of practice (No. KS IEC 60598-2-3:2011) and with the Regulations of the Local Supply Authority.

Where the two sets of regulations appear to conflict, they shall be clarified by the Engineer. All materials used shall comply with relevant Kenya Bureau of Standards Specifications.

GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

1. General
2. Standard of Materials
3. Workmanship
4. Procurement of Materials
5. Shop Drawings
6. Record Drawings
7. Regulations and Standards
8. Setting out Works
9. Position of Electrical Plant and Apparatus
10. M.C.B Distribution Panels and Consumer Units
11. Fused Switchgear and Isolators
12. Conduits and Conduit Runs
13. Conduit Boxes and Accessories
14. Labels
15. Earthing
16. Cables and Flexible Cords
17. Armored PVC Insulated and Sheathed Cables
18. Cable Supports; Markers and Tiles
19. PVC Insulated Cables
20. Heat Resisting Cables
21. Flexible Cords
22. Cable Ends and phase Colours
23. Cable Insulation Colours
24. Sub-circuit Wiring
25. Space Factor

26. Insulation
27. Lighting Switches
28. Sockets and Switched sockets
29. Fused Spur Boxes
30. Cooker Outlets
31. Connectors
32. Lamp holders
33. Lamps
34. Lighting Fittings Street Lighting Lanterns
35. Position of Points and Switches
36. Street/Security Lighting Columns
37. Timing Control Switch
38. Wiring System for Street Lighting
39. Metal control Pillar
40. Current Operated Earth leakage circuit breaker
41. MV Switchboard
42. Steel Conduits and Steel Trunking
43. Testing on Site

1. GENERAL

This specification is to be read in conjunction with the drawings which are issued with it. Bills of quantities shall be the basis of all additions and omissions during the progress of the works.

2. STANDARD OF MATERIALS

Where the material and equipment are specifically described and named in the Specification followed by approved equal, they are so named or described for the purpose of establishing a standard to which the sub-contractor shall adhere.

Should the Sub-contractor install any material not specified herein before receiving approval from the proper authorities, the Engineer shall direct the Sub-contractor to remove the material in question immediately. The fact that this material has been installed shall have no bearing or influence on the decision by the Engineer.

All materials condemned by the Engineer as not approved for use, are to be removed from the premises and suitable materials delivered and installed in their place at the expense of the Sub-contractor. All materials required for the works shall be new and the best of the respective kind and shall be of a uniform pattern.

3. WORKMANSHIP

The workmanship and method of installation shall conform to the best standard practice. All work shall be performed by a skilled tradesman and to the satisfaction of the Engineer. Helpers shall have qualified supervision.

Any work that does not in the opinion of the Engineer conform to the best standard practice will be removed and reinstated at the Sub-contractor's expense.

Permits, Certificates or Licenses must be held by all tradesmen for the type of work; in which they are involved where such permits, certificates or licenses exist under Government legislation.

4. PROCUREMENT OF MATERIALS

The sub-contractor is advised that no assistance can be given in the procurement or allotment of any materials or products to be used in and necessary for the construction and completion of the work.

Sub-contractors are warned that they must make their own arrangements for the supply of materials and/or products specified or required.

5. SHOP DRAWINGS

Before manufacture or Fabrication is commenced the sub-contractor shall submit Two copies of detailed drawings of all control pillars, meter cubicles, medium voltage switchboards including their components showing all pertinent information including sizes, capacities, construction details, etc., as may be required to determine the suitability of the equipment for the approval of the Engineer. Approval of the detailed drawings shall not relieve the sub-contractor of the full responsibility of errors or the necessity of checking the drawings himself or of furnishing the materials and equipment and performing the work required by the plans and specifications.

6. RECORD DRAWINGS

These diagrams and drawings shall show the completed installation including sizes, runs and arrangements of the installation. The drawings shall be to scale not less than 1:50 and shall include plan views and section.

The drawings shall include all the details which may be useful in the operation, maintenance or subsequent modifications or extensions to the installation.

Three sets of diagrams and drawings shall be provided, all to the approval of the Engineer.

One colored set of line diagrams relating to operating and maintenance instructions shall be framed and, mounted in a suitable location.

7. REGULATIONS AND STANDARDS

All work executed by the Sub-contractor shall comply with the current edition of the "Regulations" for the Electrical Equipment of Buildings, issued by the Institution of Electrical Engineers, and with the Regulations of the Local Electricity Authority.

Where the two sets of regulations appear to conflict, they shall be clarified with the Engineers. All materials used shall comply with relevant Kenya Bureau of Standards Specification.

8. SETTING OUT WORK

The sub-contractor at his own expenses; is to set out works and take all measurements and dimensions required for the erection of his materials on site; making any modifications in details as may be found necessary during the progress of the works, submitting any such modifications or alterations in detail to the Engineer before proceeding and must allow in his Tender for all such modifications and for the provision of any such sketches or drawings related thereto.

9. POSITIONS OF ELECTRICAL PLANT AND APPARATUS

The routes of cables and approximate positions of switchboards etc, as shown on the drawings shall be assumed to be correct for purpose of Tendering, but exact positions of all electrical Equipment and routes of cables must be agreed on site with the Engineer before any work is carried out.

10. MCB DISTRIBUTION PANELS AND CONSUMER UNITS

All cases of MCB Panels and consumer units shall be constructed in heavy gauge sheet with hinged covers.

Removable undrilled gland plates shall be provided on the top and bottom of the cases.

Miniature circuit breakers shall be enclosed in moulded plastic with the tripping mechanism and arc chambers separated and sealed from the cable terminals.

The operating dolly shall be trip free with a positive movement in both make and break position. Clear indication of the position of the handle shall be incorporated.

The tripping mechanism shall be on inverse characteristic to prevent tripping in temporary overloads and shall not be affected by normal variation in ambient temperature.
A locking plate shall be provided for each size of breaker; A complete list of circuit details on typed cartridge paper glued to stiff cardboards and covered with a sheet of Perspex, and held in position with four suitable fixings, shall be fitted to the inner face of the lids of each distribution panel. The appropriate MCB ratings shall be stated on the circuit chart against each circuit in use: Ivorine labels shall be secured to the insulation barriers in such a manner as to indicate the number of the circuits shown on the circuit chart.
Insulated barriers shall be fitted between phases, and neutrals in all boards, and to shroud live parts.
Neutral cables shall be connected to the neutral bar in the same sequence as the phase cables are connected to the MCB's. This shall also apply to earth bars when installed.

11. FUSED SWITCHGEAR AND ISOLATORS

All fused switchgear and isolators whether mounted on machinery, walls or industrial panels shall conform to the requirements of KS 04 – 226 PART: 1: 1985.
All contacts are to be fully shrouded and are to have a breaking capacity on manual operations as required by KS 04 – 182: 1980.
Fuse links for fused switches are to be of high rupturing capacity cartridge type, conforming to KS 04 – 183: 1978.
Isolators shall be load breaking/fault making isolators.
Fused switches and isolators are to have separate metal enclosures. Mechanical interlocks are to be provided between the door and main switch operating mechanism so arranged that the door may not be opened with the switch in the 'ON' position. Similarly; it shall not be possible to close the switch with the door open except that provision to defeat the mechanical interlock and close the switch with the door in the open position for test purposes. The 'ON' and 'OFF' positions of all switches and isolators shall be clearly indicated by a mechanical flag indicator or similar device. In T.P & N fused switch units, bolted neutral links are to be fitted.

12. CONDUITS AND CONDUIT RUNS

Conduit systems are to be installed so as to allow the loop-in system of wiring:
All conduits shall be black rigid super high impact heavy gauge class 'A' PVC in accordance with KS 04 – 179: 1988 and IEE Regulations. No conduit less than 20mm in diameter shall be used anywhere in this installation.
Conduit shall be installed buried in plaster work and floor screed except when run on wooden or metal surface when they will be installed surface supported with saddles every 600mm. Conduit run in chases shall be firmly held in position by means of substantial pipe hooks driven into wooden plugs.

The Sub-contractor's attention is drawn to the necessity of keeping all conduits entirely separate from other piping services such as water and no circuit connections will be permitted between conduits and such pipes.
All conduits systems shall be arranged wherever possible to be self-draining to switch boxes and conduit outlet points for fittings:
The systems, when installed and before wiring shall be kept plugged with well-fitting plugs and when short conduit pieces are used as plugs, they shall be doubled over and tied firmly together with steel wire; before wiring all conduit systems shall be carried out until the particular section of the conduit installation is complete in every respect.
The sets and bends in conduit runs are to be formed on site using appropriate size bending springs and all radii of bends must not be less than 2.5 times the outside diameter of the conduit. No solid or inspection bends, tees or elbows will be used.
Conduit connections shall either be by a demountable (screwed up) assembly or adhesive fixed and water tight by solution. The tube and fittings must be clean and free of all grease before applying the adhesive. When connections are made between the conduit and switch boxes, circular or non-screwed boxes, care shall be taken that no rough edges of conduit stick out into the boxes.
Runs between draw in boxes are not to have more than two right angle bends or their equivalent. The sub-contractor may be required to demonstrate to the Engineers that wiring in any particular run is easily withdrawable and the sub-contractor may, at no extra cost to the contract; be required to install additional draw-in boxes required. If conduit is installed in straight runs in excess of 6000mm, expansion couplings as manufactured by E.gatube shall be used at intervals of 6000mm.
Where conduit runs are to be concealed in pillars and beams, the approval of the Structural Engineer, shall be obtained. The sub-contractor shall be responsible for marking the accurate position of all holes chases etc, on site, or if the Engineer so directs, shall provide the Main Contractor with dimensional drawings to enable him to mark out and form all holes and chases. Should the sub-contractor fail to inform the main contractor of any inaccuracies in this respect they shall be rectified at the sub-contractor's expense.
It will be the Sub-contractor's responsibility to ascertain from site, the details of reinforced concrete or structural steelwork and check from the builder's drawings the positions of walls, structural concrete and finishes. No reinforced concrete or steelwork may be drilled without first obtaining the written permission of the Structural Engineer.
The drawings provided with these specifications indicate the appropriate positions only of points and switches, and it shall be the Sub-Contractors responsibility to mark out and centre on site the accurate positions where necessary in consultation with the Architect and the Engineer. The sub-contractor alone shall be responsible for the accuracy of the final position.

13. CONDUIT BOXES AND ACCESSORIES

All conduit outlets and junction boxes are to be either malleable iron and of standard circular pattern of the appropriate type to suit saddles being used or super high impact PVC manufactured to KS 04 – 179 : 1983.

Small circular pattern boxes are to be used with conduits up to and including 25mm outside diameter. Rectangular pattern adaptable boxes are to be used for conduits of 32mm outside diameter and larger. For drawing in of cables in exposed runs of conduit, standard pattern through boxes are to be used:
Boxes are to be not less than 50mm deep and of such dimensions as will enable the largest appropriate number of cables for the conduit sizes to be drawn in without excessive bending.
Outlet boxes for lighting fittings are to be of the loop-in type where conduit installation is concealed and the sub-contractor shall allow one such box per fitting, except where fluorescent fittings are specified when two such boxes per fitting shall be fitted flush with ceiling and if necessary, fitted with break joint rings. Pattresses shall be fitted where required to outlets on surface conduit runs.
Adaptable boxes are two of PVC or mild steel (of not less than 12swg) and black enameled or galvanized finish according to location. They shall be of square or oblong shape location. They shall be of square or oblong shape complete with lids secured by four 2 BA brass roundhead screws; No adaptable box shall be less than 75mm x 75mm x 50mm or larger than 300mm x 300mm x 75mm and shall be adequate in depth in relation to the size of conduit entering it. Conduits shall only enter boxes by means of conduit bushes.

14. LABELS

Labels fitted to switches and fuse boards; -

(i) Shall be Ivorine engraved black on white.

(ii) Shall be secured by R.H brass screws of same manufacturing throughout.

(iii) Shall be indicated on switches: -

a) Reference number of switches

b) Special current rating

c) Item of equipment controlled

(iv) Shall indicate on MCB panels

a) Reference number

b) Type of board, i.e.; lighting, sockets, etc.

c) Size of cable supplying panel

d) where to isolate feeder cable

(v) Shall be generally not less than 75mm x 50mm.

15. EARTHING

The earthing of the installation shall comply with the following requirements; -

(i) It shall be carried out in accordance with the appropriate sections of the current edition of the Regulations, for the Electrical Equipment of Buildings issued by Institute of Electrical Engineers of Great Britain.

(ii) At all main distribution panels and main service positions a 25mm x 3mm minimum cross sectional area Copper tape shall be provided and all equipment including the lead sheath and armoring of cables, distribution boards and metal frames shall be bonded thereto.

(iii) The earth tape in Sub-clause (ii) shall be connected by means of a copper tape or cable of suitable cross sectional area to an earth electrode which shall be a copper earth rod (see later sub-clause).

(iv) All tapes to be soft high conductivity copper, untinned except where otherwise specified and where run underground on or through walls, floors, etc., it shall be served with corrosion resisting tape or coated with corrosion compound and braided

(v) Where the earth electrode is located outside the building a removable test link shall be provided inside the building as near as possible to the point of entry to the tape, for isolating the earth electrode for testing purposes.

(vi) Earthing of sub-main equipment shall be deemed to be satisfactory where the sub-main cables are M.I.C.S. or conduit with separate earth wire, and installation is carried out in accordance with the figures stated in the current edition of the I.E.E Regulations.

(vii) Where an earth rod is specified (see Sub-clause (iii) it shall be proprietary manufacture, solid hand drawn copper of 15mm diameter driven into the ground to a minimum depth of 3.6M. It shall be made up to 1.2m sections with internal screw and socket joints and fitted with hardened steel tip and driving cap.

(viii) Earth plates will not be permitted

(ix) Where an earth rod is used the earth resistance shall be tested in the manner described in the current edition of the IEE Regulations, by the Sub-Contractor in the presence of the Engineer and the Sub-Contractor shall be responsible for the supply of all test equipment.

(x) Where copper tape is fixed to the building structure it shall be by means of purpose made non-ferrous saddles which space the conductor away from the structure a minimum distance of 20mm. Fixings, shall be made using purpose made plugs; No fixings requiring holes to be drilled through the tape will be accepted.

(xi) Joints in copper tape shall be tinned before assembly riveted with a minimum of two copper rivets and seated solid.

(xii) Where holes are drilled in the earth tape for connection to items of equipment the effective cross sectional area must not be less than required to comply with the IEE regulations.

(xiii) Bolts, nuts and washers for any fixing to the earth tape must be of non-ferrous material.

(xiv) Attention is drawn to the need for the earthing metal parts of lighting fittings and for bonding ball joint suspension in lighting fittings.

16. CABLES AND FLEXIBLE CORDS

All cables used in this Sub-Contract shall be manufactured in accordance with the current appropriate Kenya standard Specification which are as follows:-

P.V.C. Insulated Cables and Flexible Cords --- Ks 04-92:1988

P.V.C Insulated Armoured Cables --- Ks 04-94:1990

Armouring of Electric cables --- Ks 04-90:1987

The successful Sub-Contractor will, at the Engineers discretion be required to submit samples of cables for the Engineers approval; the Engineer reserves the right to call for the cables of an alternative manufacture without any extra cost being incurred.

P.V.C. insulated cables shall be 500/1000 volt grade. No cables smaller than 1.5mm^2 shall be used unless otherwise specified. The installation and the finish of cables shall be as detailed in later clauses. The colour of cables shall conform to the details stated in the "Cable Braid and insulation Colours" Clause.

17. ARMOURED P.V.C. INSULATED AND SHEATHED CABLES:

Shall be 600/1000 volt grade manufactured to Ks 04-194:1988 and Ks 04-187/188 with copper stranded conductors.

The wire armour of the cable shall be used wholly as an earth continuity conductor and the resistance of the wire armour shall have a resistance not more than twice of the largest current carrying conductor of the cable.

P.V.C./S.W.A./P.V.C. cables shall be terminated using "Telecom" "B" type or approved equal or approved equal glands and a P.V.C. tapered sleeve shall be provided to shroud each gland.

18. CABLE SUPPORTS, MARKERS AND TILES

All PVC/SWA/PVC cables run inside the building shall be fixed in rising ducts or on ceilings by means of die cast cable hooks or clamps, of appropriate size to suit cables, fixed by studs and back nuts to their channel sections.

Alternatively, fixing shall be by BICC claw type cleating system with die-cast cleats and galvanised mild steel back straps or similar approved equal method. For one or two cables run together the cleats shall be fixed a special channel section supports or backstraps described above which shall in turn be secured to walls or ceilings of ducts by rawbolts.

In excessively damp or corrosive atmospheric conditions special finishes may be required and the Sub-contractor shall apply to the Engineer for further instructions before ordering cleats and channels for such areas.

The above type of hooks and clamps and channels or cleats and blackstraps shall also be used for securing cables in vertical ducts.

Cables supports shall be fixed at 600mm maximum intervals, the supports being supplied and erected under this Sub-contract. Saddles shall not be used for supporting cables nor any other type of fixing other than one of the two methods described above or other system which has received prior approval of the Engineer;

Cables are to be kept clear of all pipe work and the Sub-contractor shall work in close liaison with other services Sub-contractors.

The Sub-Contractor shall include for the provision of fixing of approved type coloured slip on cables end markers to indicate permanently the correct phase and neutral colours on all ends.

Provision shall be made for supplying and fixing approved non-corrosive metal cable markers to be attached to the outside of all PVC/SWA/PVC cables at 15mm intervals indicating cable size and distinction.

Where PVC/SWA/PVC cables are outside the building they shall be laid underground

750mm deep with protecting concrete interlocking cover tiles laid over which shall be provided and laid under this Sub-contract.
All necessary excavations and reinstatement of ground including sanding or trenches will be carried out by the Sub-Contractor, unless otherwise stated.

19. PVC INSULATED CABLES

Shall be of non-braided type as CMA reference 6491 x 600/1000/1000-volt grade cables, or equal approved.
PVC cables shall conform to the details of the "Cables and Flexible cords" and "Cable Braid and Insulation Colours" clauses.

20. HEAT RESISTING CABLES

Final connections to cookers, water heaters, etc., shall be made using butyl rubber insulated cable as CMA reference 610 butyl (Single core 600/1000 Volt).
This type of cable shall be used in all instances where a temperature exceeding 100°F, but not exceeding 150°F is likely to be experienced. Final connections to all lighting fittings (and other equipment where a temperature in excess of 150°c likely to be experienced) shall be made using silicon rubber insulated cable or equal and approved.

21. FLEXIBLE CORDS

Shall be in accordance with the "Cable and Flexible Cords" clause. No cord shall be less than 24/0.2mm in size unless otherwise specified.
Circular white twin TRS flex shall be used for plain pendant fittings up to 100 watts.
For all other types of lighting fittings, the flexible cable shall be silicone rubber insulated.
No polythene insulated flexible cable shall be used in any lighting fitting or other appliance (see "Heat Resisting Cables" Clause 30).

22. CABLE ENDS AND PHASE COLOURS

All cable ends connected up in switchgear, MCB panels etc, shall have the insulation carefully cut back and the ends sealed with Hellerman rubber slip on cable end markers.
The markers shall be of appropriate phase colour for switch and all other live feeds to the details of the "Cable Insulation Colours" clause. Black cable with black end markers shall only be used for neutral cables.

23. CABLE INSULATION COLOURS

Unless otherwise stated in later clauses the insulation colours shall be in accordance with the following table.
Where other systems are installed the cable colours shall be in accordance with the details stated in the appropriate clause.

SYSTEM	INSULATION COLOUR	CABLE END MARKER
1) **Main and Sub-Main**		
a) Phase	Red	Red
b) Neutral	Black	Black
2) **Sub-Circuits Single Phase**		

a) Phase	Red	Red
b) Neutral	Black	Black

24. SUB-CIRCUIT WIRING

For all lighting and sockets wiring shall be carried out in the "looping in" system and there shall be no joints whatsoever. No lighting circuits shall comprise more than 20 points when protected by 10A MCB. Cables with different cross-section area of copper shall not be used in combination.

Lighting circuits P.V.C. cable.

(i) $1.5mm^2$ for all lighting circuits indicated on the drawing. Power circuits P.V.C cable (minimum sizes).

(ii) $2.5mm^2$ for one, two or three 5Amp sockets wired in parallel.

(iii) $2.5mm^2$ for one 15Amp socket.

(iv) $2.5mm^2$ for maximum of ten switched 13 Amp sockets wired from 30 Amp MCB.

The wiring sizes for lighting circuits and sockets are shown on the drawings. In such cases, the sizes shown on the drawings shall prevail over the sizes specified.

Wiring sizes for other appliances shall be shown on the drawing or specified in later clauses of this specification.

25. SPACE FACTOR

The maximum number of cables that may be accommodated in a given size of conduit or trunking or duct is not to exceed the number in Tables B.5 and B.6 or as stated in Regulation B.91, B.117 and B.118 of the I.E.E Regulations whichever is appropriate.

26. INSULATION

The insulation resistance to earth and between poles of the whole wiring system, fittings and lumps, shall not be less than the requirements of the latest edition of the I.E.E Regulations. Complete tests shall be made on all circuits by the Sub-contractor before the installations are handed over.

A report of all tests shall be furnished by the Sub-Contractor to the Engineer. The Engineer will then check test with his own instruments if necessary.

27. LIGHTING SWITCHES

These shall be mounted flush with the walls, shall be contained in steel or alloy boxes and shall be of the gangs' ratings and type shown in the drawings. They shall be as manufactured by M.K. Electrical Ltd., or other equal and approved to KS 04 – 247: 1988

28. SOCKETS AND SWITCHED SOCKETS

These shall be flush pattern in steel/pvc box and shall be of the gangs and type specified in the drawings.

They shall be 13- Amp, 3-pin, shuttered, switched and as manufactured by "M.K. Electrical Co. Ltd.", or other approved equal to KS 04 – 246: 1987

29. FUSED SPUR BOXES

These shall be flush, D.P switched as in steel/pvc box and of type and make specified in the drawings complete with pilot light and as manufactured by "M. K. Electrical Company Ltd", or other approved equal. KS 04 – 247: 1988

30. COOKER OUTLETS

These shall be flush mounted with 13-A switched socket outlet and neon indicator Lamp.

The cooker control units shall be as manufactured by "M.K. Electrical Company Ltd", or other approved equal KS 04 – 247: 1988

31. CONNECTORS

Shall be specified in the drawings and appropriate rating. These shall be fitted at all conduit box lighting point outlets for jointing of looped P.V.C cables with flexible cables of specified quality.

32. LAMPHOLDERS

Shall be of extra heavy H.O skirted and shall be provided for every specified lighting fitting and shall be B.C;, E.S;, or G.E.S as required. All E.S. and G.E.S. holders shall be heavy brass type (except for plain pendants where the reinforced bakelite type shall be used). The screwed cap of the E.S and G.E.S. holders shall be connected to the neutral.

Where lampholders are supported by flexible cable, the holders shall have "cord grip" arrangements and in the case of metal shades earthing screws shall be provided on each of the holders.

The Sub-Contractor must order the appropriate type of holder when ordering lighting fittings, to ensure that the correct types of holders are provided irrespective of the type normally supplied by the manufacturers.

33. LAMPS

All lamps shall be suitable for normal stated supply voltage and the number and sizes of lamps detailed on the drawings shall be supplied and fixed. The Sub-Contractor must verify the actual supply voltage with the supply authority before ordering the lamps.

Tungsten filament lamps shall be manufactured in accordance with KS 04 – 112:1978 for general service lamps and KS 04 – 307:1985 for lamps other than general services.

Tubular fluorescent lamps shall comply with KS 04 – 464:1982

Pearl lamps shall be used in all fittings unless otherwise specified.

34. LIGHTING FITTINGS AND STREET LIGHTING LANTERNS

This Sub-Contract shall include for the provision, handling charges, taking the delivery, safe storage, wiring (including internal wiring) assembling and erecting of all lighting fittings shown on the drawings.

All fittings and pendants shall be fixed to the conduit boxes with brass R/H screws. These to be in line with metal finish of fittings. The lighting fittings are detailed for the purpose of establishing a high standard of finish and under no circumstances will substitute fittings be permitted.

In case of rectangular shaped ceiling fittings, the extreme ends of the fittings shall be secured to suitable support in addition to the central conduit box fittings. Supports shall be provided and fixed by the Sub-Contractor.

The whole of the metal work of each lighting fittings shall be effectively bonded to earth. In the case of ball and/or knuckle joints short lengths of flexible cable shall be

provided, bonded to the metal work on either side of the joints. If the above provisions are not made by the manufacturers -, the Sub-contractor shall include cost of additional work necessary in his tender. See "Flexible Cords" clause for details of internal wiring of lighting fittings.
Minimum size of internal wiring shall be 20/0.20mm (23/0067). Each lighting fitting shall be provided with number type and size of lamps as detailed on the drawings. It is to be noted that some fittings are suspended as shown on the drawings.
Where two or more points are shown adjacent to each other on the drawings, e.g. socket outlet and telephone outlet, they shall be lined up vertically or horizontally on the centre lines of the units concerned.
Normally, the units shall be lined up on vertical centre lines, but where it is necessary to mount units at low level they shall be lined up horizontally.

35. POSITIONS OF POINTS AND SWITCHES

Although the approximate positions of all points are shown on the drawings, enquiry shall be made as to the exact positions of all M.C.B panels, lighting points, socket outlets etc, before work is actually commenced. The Sub-contractor must approach the Architect with regard to the final layout of all lights on the ceiling and walls.
The Sub-contractor must consult with the Engineer in liaison with the Clerk of Works, or the General Foreman on site regarding the positions of all points before fixing any conduit etc. The Sub-Contractor shall be responsible for all alterations made necessary by the non-compliance with the clause.

36. ANTIQUE STREET/SECURITY OUTDOOR LIGHTING COLUMNS:

The column shall be at a minimum of 225mm in the ground on 75mm thick concrete foundations and the pole up to 150mm shall be surrounded with concrete. The top bracket and plain section of the columns shall be common to and interchangeable with all brackets with maximum mismatching tolerance of 3mm between any pole and bracket. After manufacture and before erection the columns shall be treated with an approved mordant solution which shall be washed off and the whole allowed to dry. Thereafter, the columns shall be painted with one undercoat and two coats of gloss paint to an approved colour. All columns shall be complete with fused cut-outs. The column design shall be approved first before installation.

37. TIMING CONTROL SWITCH

These shall be installed where shown on the drawings. Photocell timing control circuits which will operate 'on' with a specified level of darkness and 'off' with a given level of light. The initial adjustment will be done with approval of the Electrical Engineer.

38. WIRING SYSTEM FOR STREET LIGHTING

Cables shall be as indicated on the drawings, and shall be laid in a cable trench 450mm deep along the road sides and 600mm deep across the roads and 900mm away from the road kerbs or 1500mm away from the edges of the road. 'Loop-in' and 'Loop-out' arrangement shall be used at every pole. Wiring to the lanterns on each pole shall be with 1.5mm^2 PVC twin insulated and sheathed cable with earth wire shall be laid at least 600mm below the finished road level on a compact bed of murram at least 50mm thick and covered with a concrete surrounded 150mm thick.

39. METAL CONTROL PILLAR

These shall be metal clad and fabricated as per contract drawings and specification.

The Sub-Contractor shall supply, install, test and commission control pillars including supplying, fixing connecting switchgears as detailed on the appropriate drawings.

40. CURRENT OPERATED EARTH LEAKAGE CIRCUIT BREAKER

Current operated earth leakage circuit breaker shall conform to B.S.S. 4293:68 rated at 240 volts D.P. 50 cycles A.C. Mains.

The breaker shall be provided with test switch and fitted in weather proof enclosure for surface mounting. The rated load current and earth fault operating current shall be as specified in the drawings. These shall be as manufactured by Crabtree, Siemens or other equal and approved.

41. M.V. SWITCHBOARD AND SWITCHGEAR

The switchboard shall be manufactured in accordance with KS04-226 which co-ordinates the requirements for electrical power switchgear and associated apparatus. It is not intended that this K.S. should cover the requirements for specified apparatus for which separate Kenyan Standard exist. All equipment and material used in the switchboard shall be in accordance with the appropriate Kenya Standard.

The switchboard shall comprise the equipment shown on the drawings together with all current transformers, auxiliary fuses, labels, small wiring and interconnections necessary for the satisfactory operation of the switchboard.

The Switchboard shall be of the flush fronted, enclosed, metal clad type with full front or rear access as called for in the particular specifications, suitable for indoor use, sectionalized as necessary to facilitate transport and erection. The maximum height of the switchboard is to be approximately 2.0 metres. A suitable connection chamber containing all field terminals shall be provided at the top or bottom of the switchboard as appropriate.

Before manufacture, the Sub-Contractor shall submit to the consulting Engineer for approval of detailed drawings showing the layout, construction and connection of the switchboard.

All bus-bars and bus-bar connections shall consist of high conductivity copper and be provided in accordance with KS 04-226: 1985. The bus-bars shall be clearly marked with the appropriate phase and neutral Colours which should be red, yellow, blue for the phases and black for neutral. The bus-bars shall be so arranged in the switchboard that the extensions to the left and right may be made in the future with ease should the need arise.

Small wiring, which will be neatly arranged and cleated, shall be executed in accordance with B.S. 158 and the insulation of the wiring shall be colored according to the phase or neutral connection.

Switches and fuse switches, shall be in strict accordance with KS04-183:1978 Class 2 switches. Means of locking the switch in the "OFF" position shall be provided.

All fuse switches shall comply with KS04-183:1978, PARTS 2 and 3 a fault rating at least equal to the fault rating of the switchboard in which they are installed. Cartridge fuse links to KS 04-183:1978 category A.C. 46, class Q1 and fusing factor not exceeding 1.5 shall be supplied with each fused switch.

Mounting arrangements shall be such that individual complete fuse switches may be disconnected and withdrawn when necessary without extensive dismantling work.

When switches are arranged in their formation all necessary horizontal and vertical barriers shall be provided to ensure segregation from adjacent units. Means of locking the switch in the "OFF" position shall be provided.

42. STEEL CONDUITS AND STEEL TRUNKING

Conduits shall be of heavy gauge class "B" welded to Standard specification KS 04-

180:1985. In no case will conduit smaller than 20mm diameter be used on the works. Conduits installed within buildings shall be black enameled finish except where specified otherwise. Where installed externally or in damp conditions they shall be galvanized. Conduit fittings, accessories or equipment used in conjunction with galvanized conduits shall also be galvanized or otherwise as approved by the service engineer.

Metal trunking shall be fabricated from mild steel of not less than 18 swg. All sections of trunking shall be rigidly fixed together and attached to the framework or fabric or the building at intervals of not less than 1.2m. Joint trunking shall not overhang fixing points by more than 0.5m.

All trunking shall be made electrically continuous by means of 25 x 3mm copper links across each joint and where the trunking is galvanized, the links shall be made by galvanized flat iron strips.

All trunking fittings (i.e. Bends, tees, etc) shall leave the main through completely clear of obstructions and continuously open except through walls and floors at which points suitable fire resisting barriers shall be provided as may be necessary. The inner edge of bends and tees shall be chamfered where cables larger than $35mm^2$ are employed.

Where trunking passes through ceilings and walls the cover shall be solidly fixed to 150mm either side of ceilings and floors and 50mm either side of walls.

Screws and bolts securing covers to trunking or sections of covers together shall be arranged so that damage to cables cannot occur either when fixing covers or when installing cables in the trough.

Where trunking is used to connect switchgear of fuseboards, such connections shall be made by trunking fittings manufactured for this purpose and not by multiple conduit couplings.

Where vertical sections of trunking are used which exceed 4.5m in length, staggered tie off points shall be provided at 4.5m intervals to support the weight of cables.

Unless otherwise stated, all trunking systems shall be painted as for conduit.

Where a wiring system incorporates galvanized conduit and trunking, the trunking shall be deemed to be galvanised unless specified otherwise.

The number of cables to be installed in trunking shall be such as to permit easy drawing in without damage to the cables, and shall in no circumstances be such that a space factor of 45% is exceeded.

Conduit and trunking shall be mechanically and electrically continuous. Conduit shall be tightly screwed between the various lengths so that they butt at the socketed joints. The internal edges of conduit and all fittings shall be smooth, free from burrs and other defects.

Oil and any other insulating substance shall be removed from the screw threads; where conduits terminate in fuse-gear, distribution boards, adaptable boxes, non-spouted switchboxes, etc., they shall, unless otherwise stated, be connected thereto by means of smooth bore male brass bushes, compression washers and sockets. All exposed threads and abrasions shall be painted using an oil paint for black enameled tubing and galvanizing paint for galvanized tubing immediately after the conduits are erected. All bends and sets shall be made cold without altering the section of the conduit.

The inner radius of the bed shall not be less than four (4) times the outside diameter of the conduit. Not more than two right angle bends will be permitted without the inter-position of a draw-in-box. Where straight runs of conduit are installed, draw-in-boxes shall be provided at distances not exceeding 15mm. No tees, elbows, sleeves, either of inspection or solid type, will be permitted.

Conduit shall be swabbed out prior to drawing in cables, and they shall be laid so as to drain of all condensed moisture without injury to end connections.

Conduits and trunking shall be run at least 150mm clear of hot water and steam pipes, and at least 75mm clear of cold water and other services unless otherwise approved by the services engineer.
All boxes shall conform to KS 04 – 668: 1986, to be of malleable iron, and black enamelled or galvanized according to the type of conduit specified. All accessory boxes shall have threaded brass inserts.
Box lids where required shall be heavy gauge metal, secured by means of zinc plated or cadmium plated steel screws.
All adaptable boxes and lids of the same size shall be interchangeable.
Boxes used on surface work are to be tapped or drilled to line up with the conduit fixed in distance type saddles allowing clearance between the conduit and wall without the need for setting the conduit.
Where used in conjunction with mineral insulated copper sheathed cable, galvanized boxes shall be used and painted after erection.
Draw-in boxes in the floors are generally to be avoided but where they are essential they must be grouped in positions approved by the services engineer and covered and by the suitable floor traps, with non-ferrous trays and covers.
The floor trap covers are to be recessed and filled in with a material to match the floor surface.
The Sub-contractor must take full responsibility for the filling in of all covers, but the filling in material will be supplied and the filling carried out by the main building contractor.
Where buried in the ground outside the building the whole of the buried conduit is to be painted with two coats of approved bitumastic composition before covering up.
Where run on the surface, unpainted fittings and joints shall be painted with two coats of oil bound enamel applied to rust and grease free metalwork.

43. TESTING ON SITE

The Sub-contractor shall conduct during and at the completion of the installation and, if required, again at the expiration of the maintenance period, tests in accordance with the relevant section of the current edition of the Regulations for the electrical equipment of buildings issued by the I.E.E of Great Britain, the Government Electrical Specification and the Electric Supply Company's By-Laws.

(a) Tests shall be carried out to prove that all single pole switches are installed in the 'live' conductor.

(c) Tests shall be carried out to prove that all socket outlets and switched socket outlets are connected to the 'live' conductor in the terminal marked as such, and that each earth pin is effectively bonded to the earth continuity system. Tests shall be carried out to verify the continuity of all conductors of each 'ring' circuit.

(d) Phase tests shall be carried out on completion of the installation to ensure that correct phase sequence is maintained throughout the installation. Triplicate copies of the results of the above tests shall be provided within 14 days of the witnessed tests and the Sub-contractor will be required to issue to the service engineer the requisite certificate upon completion as required by the regulations referred to above.

(e) Any faults, defects or omissions or faulty workmanship, incorrectly positioned or installed parts of the installation made apparently by such inspections or tests shall be rectified by the Sub-contractor at his own expense.

(f) The Sub-contractor shall provide accurate instruments and apparatus and all labour required to carry out the above tests. The instruments and apparatus shall be made available to the services engineer to enable him to carry out such tests as he may require.

(g) The Sub-contractor shall generally attend on other contractors employed on the project and carry out such electrical tests as may be necessary.

(h) The Sub-contractor shall test to the services engineer's approval and as specified elsewhere in this specification or in standards and regulations already referred to, all equipment, plant and apparatus forming part of the works and before connecting to any power or other supply and setting to work.

(i) Where such equipment, etc., forms part of or is connected to a system whether primarily or of an electrical nature or otherwise (e.g. air conditioning system) the Sub-contractor shall attend on and assist in balancing, regulating testing and commissioning, or if primarily an electrical or other system forming part of works, shall balance, regulate, test and commission the system to the service engineer's approval.

5B: SPECIAL SPECIFICATIONS

5B: SPECIAL SPECIFICATIONS

SECTION 1 – GENERAL

101 SPECIAL SPECIFICATIONS

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

102 LOCATION OF CONTRACT.

The site shall be in Clay City Ward within the jurisdiction of the Nairobi City County. The specific areas/streets are within Clay city Ward.

103 EXTENT OF CONTRACT

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

The works shall include but not limited to: -

- Site clearance as necessary
- Marking of installation positions
- Application, payment and supply of electricity
- Digging of pole pits/ civil works to prepare foundation and pole bases.
- Fabrication of antique poles, electrical control boxes, publicity sign boards
- Erection of poles, publicity sign boards
- Engraving of lanterns and poles with the contract number.
- Numbering of poles and electrical control boxes
- Installation of lanterns
- Cabling, automation, earthing and energizing the lights

Any other activity not listed above in either category but deemed to be necessary by the Engineer, shall be subject to the Engineer's formal instructions within the mode of payment stipulated either by day works or on a measured basis.

- Maintenance of works after substantial completion/ Defect Liability Period shall be 6 months.

Any other activity not listed above in either category but deemed to be necessary by the Engineer, shall be subject to the Engineer's formal instructions within the mode of payment stipulated either by day works or on a measured basis.

104 PROGRAMMES OF EXECUTION OF THE WORKS

The contractor shall provide the works programme, required under clause 14.1 of the Conditions of Contract, within 14 days of receipt of the Engineer's Order to commence work.

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

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

necessary to fulfil his obligations.

105 ORDER OF EXECUTION OF WORKS

In addition to Clause 104 of the Standard Specification the Contractor shall carry out the Works such that a continuous and consecutive output of fully completed work is achieved.

106 TAKING OVER CERTIFICATE

The minimum number of floodlights for which a certificate will be issued under clause 60 of the conditions of Contract shall be all floodlights substantially completed.

107 NOTICE OF OPERATIONS

Add the following sub- Clause.

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

108 PROTECTION OF EXISTING WORKS AND SERVICES

The Contractor shall acquaint himself with the position of all existing services such as sewers, water drains, cables for electricity and telephone, lighting and telephone poles, water mains, etc., before commencing any excavation or other work likely to affect the existing services.

The cost of all plant, equipment and materials, labour, technical and professional staff, transport and the like necessary for determining the locations of existing services, including the making good of any damage caused to such services all to the satisfaction of the Engineer, shall be deemed to be included in the tender rates. No other payment shall be made for the costs of such operations, nor for the making good of damage caused thereby to the existing services.

The Contractor shall be held responsible for injury to existing structures, works or services and shall indemnify and keep indemnified the Employer against any claims in this respect (including consequential damages).

109 DIVERSION OF SERVICES

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

110 LIAISONS WITH GOVERNMENT AND POLICE OFFICIALS

The Contractor shall keep in close touch with the Police and the other Government officials of the area regarding their requirements in the control of traffic or other matters, and shall provide all assistance or

facilities, which may be required by such officials in the execution of their duties.

111 STORAGE OF MATERIALS

All materials shall be stored on Site in a manner approved by the Engineer and the Contractor shall provide security to works and materials at his own cost.

113 TEST CERTIFICATES

When instructed by the Engineer the Contractor shall submit certificates of test from Kenya Bureau of Standards of materials and goods required in connection with the works as the Engineer may require.
Such certificates shall certify that the materials or goods concerned have been tested in accordance with the requirements of the specifications and shall give the results of all the tests carried out. The Contractor shall provide adequate means of identifying the materials and goods delivered to the site with the corresponding certificates.

114 SIGNBOARDS

a) For public lighting installations

The Contractor shall provide and mount a publicity sign board on each floodlight/high mast column erected on site. The publicity sign board shall be a metal sheet measuring 450mm x 300mm x 3mm to be welded onto the column at a height of 8000mm above the ground level. The signboard shall bear the logos of the Nairobi City County & the National government, contract number and column number.
The color of the paint to be used for writings should be distinct. The individual number sizes should be 50mm in height and 35mm in width.

b) For signboards for antique street lighting installations

The Engineer shall, as shown in the Drawings, direct the minimum dimensions and thickness of the steel framework and sheet. The framework and sheet shall be prepared and painted black, while the ring at the top of the supporting frames shall be painted white. The wordings and NAIROBI CITY COUNTY's logo shall be printed on backlit sticker paper resistant to the effects of weather using reflectorized paint or material approved by the Engineer. The colours, fonts and heights of the letters shall be as indicated on the attached drawings and as directed by the Engineer.

115 ENVIRONMENTAL PROTECTION

The Contractor shall comply with the Statutory Regulations in force in Kenya regarding environmental protection and waste disposal, and shall liaise with the National Environmental Management Agency (NEMA).

Within four (4) weeks of the order to commence work, the Contractor shall prepare and submit a specific Environmental Management Plan for the project and his operations, relating to the approved Environmental Impact Assessment. The Environmental Management Plan shall outline potential environmental hazards and risks, and provide an action plan to deal with the hazards, minimize the risks, and mitigate adverse environmental impacts, and include a general decommissioning plan covering all relevant aspects of the project. The Environmental Management Plan shall identify monitoring indicators and reporting requirements.

The Contractor shall be required to submit environmental progress reports to the Engineer every two (2) months.

The Contractor shall ensure so far as is reasonably practicable and to the satisfaction of the Engineer; that the impact of the construction on the environment shall be kept to a minimum and that appropriate measures are taken to mitigate any adverse effects during the construction.

(a) The Contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the Contractor's construction operations and equipment. All unnecessary destruction, scarring, damage or defacing resulting from the Contractor's operations shall be repaired, replanted, reseeded or otherwise corrected as directed by the Engineer, and at the Contractor's expense.

(b) The Contractor shall provide all the labour, equipment, materials, and means required and shall carry out proper and efficient measures wherever and as often as necessary to minimize the dust nuisance.

(c) The Contractor's attention is drawn to the requirements of the Standard Specification in regard to the environment and in particular to the following clauses:
Clause 115: Construction Generally
Clause 116: Protection from Water
Clause 136: Removal of Camps
Clause 605: Safety and Public Health Requirements Clause
Clause 607: Site Clearance and Removal of Topsoil and Overburden

(d) Payment in respect of this Clause 142 is included as a Lump Sum in the Bill of Quantities. Payment of the Lump Sum will be by equal monthly installments over the period of the Contract excluding the Period of Maintenance. The total sum of the installments shall not exceed the Lump Sum, and payment of the monthly installment will only be made for that month if the Engineer is satisfied that the Contractor has fully complied with the requirements of Clause 142, otherwise the Contractor shall forfeit such installment.

116 ENGINEER'SREPRESENTATIVEOFFICE

The contractor, when instructed, shall for the duration of the Contract, furnish and equip Resident Engineer's office located at the Main City Hall offices. The room to be occupied by the Engineer's Representative and its front office shall be provided with a floor carpet to be approved by the Engineer. The windows shall be fitted with curtains and blinds.

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 telephone 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

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116.1 COMMUNICATIONFORTHEENGINEEER

a) Mobile phones

The Contractor shall provide, connect, and maintain mobile phones for the exclusive use by the Engineer for the duration of the contract. The Contractor shall include the cost of providing the mobile units complete with charger unit, "hands-free" headset for each unit, connection to the network, and all service charges applicable as directed by the Engineer. The Contractor shall provide air-time with each mobile phone which shall be paid for under the prime cost sum allowed for in the bills of quantities. The mobile telephones shall be WAP enabled with e-mail capabilities and an integrated camera of a minimum of 3.0 mega pixels. Payment for these mobiles and associated costs is included in the Bill of Quantities, and ownership of mobile phones will revert to the Employer after completion of the Works.

b) Iinternet and e-mail services

Where directed, the contractor shall provide 24-hour terrestrial or wireless internet connectivity with a minimum throughput speed of 128 kilobytes per second for the exclusive use by the Engineer, including all accessories and Terminal Equipment, and pay for all associated installation, maintenance, and usage charges throughout the duration of the contract.

The contractor shall allow for the provision and maintenance of internet connectivity and associated costs as per Appendix to item 1.17 of the Bills of Quantities

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117 ATTENDANCEUPONTHEENGINEERANDHISSTAFF

In addition to the staff stated in Clause 135, the following staff will be provided for the supervision of work: 1 No. Artisans, 2 No. Labourers, 1 No. Office assistants, 2 No. Lab attendants. Additional attendant staff, as required by the Engineer, shall be paid for under Item 01-80-030 of the Bill of Quantities.

118 VEHICLESANDDRIVERSFORTHEENGINEERANDHISSTAFFANDMETHODOFPAYMENT

In addition to the provisions of Clause 138 of the Standard Specification, the Contractor shall, when instructed, provide and maintain in good working condition for the exclusive use of the Engineer and his staff throughout the Contract, the following types and numbers of brand-new vehicles or as specified. The Engineer shall approve the type of vehicles and confirm the number of each type to be provided. 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 vehicles 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 time as the original vehicle is repaired to the satisfaction of the Engineer and returned for use

a) Type 1 Vehicles (Double Cabin 4WD Pickup)

Type 1 Vehicles should be Four Wheel Drive (4WD), with power-assisted steering, double wishbone independent suspension at the front axle and rigid axle with leaf springs at the rear, diesel propelled engine maximum 2,500cc. The starting mileage of the vehicles shall not exceed 60,000 km odometer reading. The vehicles should be fitted with other accessories below:

(a) Spare tire and wheel jack; (b) FM radio and CD player; (c) Power Windows; (d) Full Air-conditioning; (e) Immobilizer and anti-theft security system; (f) Driver and passenger SRS Airbags; (g) Canvas cover over the carrying deck at the back.

At the end of the contract, all type 1 vehicles shall revert to the Contractor.

(c) Type 2 Vehicles (station wagon/saloon)

Specifications for Type 2 Vehicles shall be station wagon/saloon vehicles; petrol propelled engine maximum 1,800cc. The starting mileage of the vehicles shall not exceed 60,000 km odometer reading. Shall in addition be fitted with a fiberglass body or similar and two columns of sitting benches on the carrying deck at the back.

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

At the end of the contract, all type 2 vehicles shall revert to the Contractor. Payment of vehicles shall be per vehicle month in item 01-80-017/18 of the BOQ.

116 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.

SECTION 2 - MATERIALS AND TESTING OF MATERIALS

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

SECTION 3- SITE CLEARANCE AND TOP SOIL STRIPPING

301 SITE CLEARANCE

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

302 TRENCHING

Trenching shall be 600mm deep below the ground level after removing over burden soil.

303 REMOVAL OF STRUCTURES, FENCES AND OBSTRUCTIONS

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

304 MATERIAL SITES

Tenderers are advised to conduct their own investigation on possible material sites as the employer shall not be responsible to provide such and shall not be held responsible for either loss or damage of materials on site.

The contractor will be entirely responsible for locating suitable sources of materials complying with the Standard and Special Specifications, and for the procurement, Wining, haulage to site of these materials and all costs involved therein.

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

305 SAFETY AND PUBLIC HEALTH REQUIREMENTS

The contractor shall allow be responsible to ensure safety of all people and properties on site during the execution of the works.

SECTION 4 - EXCAVATION AND FILLING FOR STRUCTURES

401 EXCAVATION OF FOUNDATIONS FOR STRUCTURES

During the excavation for foundations all debris shall be ferried away or spread out to leave the site good as may be directed by the Engineer

SECTION 5 – DUCTING AND MICRO TUNNELLING

All ducting shall be done using heavy gauge UPVC pipes of minimum diameter 150mm and nominal wall thickness of 3.2mm with concrete surround. The minimum diameter for micro tunneling shall be 150mm.During ducting, the contractor shall make good the surface finishing as it was before commencement. The Contractor shall carry out all excavations for new culverts and drainage works to the lines, levels, inclinations, and dimensions shown on the drawings or as instructed by the Engineer.

501 JOINTING OF U/G CABLES

The underground cables between a Pole to control pillar, and between Control pillar to K.P.L.C. supply shall be installed without joints, but when un avoidable, the joint shall be made using splitting kits of the size directed by the Engineers

502 BACKFILLING OF TRENCHES

All excavations shall be covered to achieve the original status as much as possible.

Wherever trenching is done across an entrance, the original status shall be reinstated to Engineer's satisfaction be in concrete blocks, murram asphaltic concrete or any other surface finishing it may be

1612A SAMPLING AND TESTING OF FITTINGS AND CONTROL GADGETS

The sampling of fittings and control gadgets shall be carried out on request from the Engineer and samples may be taken for testing to establish durability and capacity/specifications.

A. Scope of Works

This section of the specification covers the supply, installation, connection, testing and commissioning of the 10M high masts in accordance with specifications and bills of quantities. However, other specifications shall be as stipulated in the Main contract. These shall be manufactured from Class B galvanized steel pipes as per Nairobi City County drawing number F45F and shall be complete with doors and brackets. The columns shall be of 10m mounting height from ground level and shall be installed at 1000mm depth on a thick reinforced concrete foundation using class 20/20 concrete. Space for mounting cutouts and hole for cable entry shall be provided as indicated on the drawing.

The Contractor shall include for all apparatus and appliances not particularly called for in this Specification but which are necessary for the completion and satisfactory functioning of the Works.

It is deemed that if, in the opinion of the Contractor at the time of quoting, there was a discrepancy between the Specification and the actual work, that *the Contractor clarified this difference with the Employer before quoting.*

B. Specification

The work shall be executed and completed, unless expressly directed otherwise, in accordance with the following:-

i) The specifications
ii) The current edition of the Institution of Electrical Engineers (I.E.E.E) regulations
iii) The Energy Act of Kenya, 2006
iv) The Kenya Power By laws
v) The IEC or Kenya Bureau of Standard specification and applicable IEC code of practice.
vi) Local legislations governing the Nairobi City County government

C. Ordering the contractor shall order materials from the quantities taken from his own approved working drawings and to supplement the quantities shown on in the Specification.

Submission of materials and defective work

All materials to be installed must be new and the best of their respective kinds. The contractor must examine carefully any materials and /or apparatus submitted to him for installation and/or connection. Any defects detected must be communicated to the Engineer.

Samples and defective work

All materials to be used in the installation work must be made available for inspection and approval and samples must be submitted upon request to the Engineer.

If the Contractor wishes to install or use other types of materials different from those specified in the Contract

document, then the manufacturers technical and any other relevant pamphlets must be submitted to the

Engineer for consideration and approval.

The right is expressly reserved to order at the Contractors expense the removal from site of all materials not conforming to the specifications and the dismantling and re-execution of all works which by reason of inclusion of improper, specified or defective materials and /or poor class or defective workmanship are a contravention of any clause in the specification.

F. Ratings

Unless specified otherwise stated or where it does not apply all the materials shall be capable of being used on 240 volts 50 Hz. AC single phase and neutral supply.

G. Inspection

All components of the poles should be inspected and approved by the client representative to ensure that the manufacturer fulfills all the requirements of the client's specifications.

Visual Inspection

Structural components and welds should be visually inspected to determine conformity to drawings, procedures, overall workmanship, weld contour, weld size, and other pertinent items.

Dimensional inspection

Structural components should be inspected for dimensional compliance to detailed drawings and established tolerances.

Surface coatings

Surface coating should be measured to ensure full compliance to the required coating thickness as mentioned in the approved drawings.

Transportation to site

After completeness of the production process and galvanization, the lighting poles should be arranged in bundles in proper manner to protect the poles from any kind of damage until the bundles are loaded in the trucks and transferred to the site.

Shipment method should be submitted to the approval of the client.

The client shall visit the manufacturer's plant to ensure that the product will be fabricated as per the specifications. The supplier shall facilitate and meet the cost of the visit.

Flood Lighting Columns

These shall be manufactured from Class B galvanized steel pipes as per Nairobi City County drawing number F45F and shall be complete with doors and brackets. The columns shall be of 10m mounting height from ground level and shall be installed at 1500mm depth on a thick concrete foundation. Space for mounting cutouts and hole for cable entry shall be provided as indicated on the drawing. The cover for access window to cutouts shall be made of the same cut-off material from Class B galvanized steel pipe. A border metal sheet strip 25mm wide and 3.2mm thick shall be welded round onto the cover to flash with the column surface. The cover shall be fastened on to the column using a secured GI Bolt No.13x 1'' and Nut.

Street Lighting Columns

The street lighting columns shall be designed by the contractor and approved by the engineer before installation.

H. Street lighting Lanterns

HIGH EFFECIENCY – LED STREETLIGHT LANTERNS, Operating voltage 120 – 300Vac, Frequency 45-55HZ, Power factor ≥0.95, THD: <15 %, Operating hours ≥50000hrs), ≥140 Lumens per watt ≥ 5 year warranty, inbuilt surge protection, ≥IP66, LM5 grade powder coated aluminum casing adjustable mounting bracket, marked with hard to erase markings including a unique serial no , as per sample, and anti-theft features e.g. special screw, special design, tracker etc.(indicate make and also make of driver,)

J. Numbering and engraving of street lighting and public lighting columns

All the above columns shall be engraved with the project contract Number. The individual number sizes should be 50mm in height and 35mm in width. Two engravings shall be done at a height 1500mm and 4000mm above the ground level respectively. All columns to be installed must be numbered. The color of the paint to be used for numbering should be distinct.

Floodlighting lanterns

HIGH EFFECIENCY – LED FLOODLIGHTS, Operating voltage 120 – 300Vac, Frequency 45-55HZ, Power factor ≥0.95, THD: <15 %, Operating hours ≥50000hrs), ≥140 Lumens per watt ≥ 5 year warranty, inbuilt surge protection, ≥IP66, LM5 grade powder coated aluminum casing adjustable mounting bracket, marked with hard to erase markings including a unique serial no , as per sample, and anti-theft features e.g. special screw, special design, tracker etc..(Indicate make and also make of driver)

L. System of Wiring

Wiring to poles shall be in PVC/SWA/PVC cables installed in 600mm deep cable trench as per cable size and routes. A layer of soft sand underneath and above the cable laid in trench shall be provided by the Contractor. Fused cut-outs shall be used to loop the cables in pole at lower level and wiring from cut-out to floodlight shall be in 1.5mm^2 twin core PVC insulated sheathed cable with earth. Copper earth clips shall be used on galvanized armoring while looping in poles and earth wire to lantern shall be connected from there by using copper connectors. "DANGER/HATARI" cable tiles shall be supplied and installed throughout the length of the trench to protect the cables except for the road crossing and plot entrances where cables shall be passed through duct of heavy gauge UPVC pipe of minimum diameter 150mm and nominal wall thickness of 3.2mm with concrete surround. The minimum diameter for micro tunneling shall be 150mm.

M. Earthing

All poles, lanterns and other metal parts shall be properly earthed. Electrical and Mechanical continuity shall be preserved throughout the whole system from the Consumer unit to the remotest pole and the earth resistance must not exceed 0.5 Ohms. Every pole shall be efficiently earthed through earth electrode by means of substantial copper clamps secured by non-rusting bolts. The lead must be visible and adequately protected. No earthing lead shall be less than 6mm^2 in size except for the one used for earthing floodlights where 2.5mm^2 twin with earth wire shall be used.

Cable glands shall be used at every underground cable termination to bond the Cable armour onto the steel parts of the column and control pillar. The 2.5mm^{2}copper wire of the twin and earth cable shall be used to provide the earth terminal continuity from the lantern to the columns earth terminal.

Control Pillar

This shall be a metal pillar manufactured from mild steel to BS 15 as per Nairobi City County drawing number F41B. The gauge of the MS shall be gauge 14 (3.2mm) thick. The control pillar shall be installed on a 300mm thick concrete plinth made of concrete mixture class 25 and above The control pillar shall be with all

switchgear, interconnections, labels and earthing as approved by the Engineer. The control of the street lighting/public lighting shall be through photocells mounted on the column brackets.

P Electrical Control Box/ Panel

This shall be a metal control panel manufactured from mild steel to BS 15 as instructed by Engineer. The control box shall be 400mm x 400mm x 150mm (Height x Width x Depth). The gauge of the MS shall be gauge 14 (3.2mm) thick. The control box shall be mounted onto floodlight column at a height of 9m above the ground level and shall be with all switchgear, interconnections, labels and earthing as approved by the Engineer. The control of the street lighting/public lighting shall be through photocells mounted on the column brackets. The control box shall be equipped with 2No DIN rails, Neutral bar, Earth bar, 4No20mm diameter cable entries fitted with cable glands, 40mmx40mm perforated cable trunking and suitable mounting assembly for fitting the control box onto the floodlight column.

Q. Testing of the Installation

The Contractor shall carry out tests of the completed installation, copies of the test results shall be provided to the Engineer.

(a) Insulation Resistance

The insulation resistance between line (phase) and neutral, the line (phase) and earth and the neutral and earth shall not be less than one mega ohms when tested with 500 volts direct circuit (D.C.) supply.

(b) Earth Continuity

The resistance measured from every earth electrode to the farthest point of the installation shall not exceed 0.5 ohms.

(c) Earth Electrode Resistance

Test for earth electrode resistance shall not exceed 3 ohms using a null balance tester

(d) Polarity Check

Checks shall be carried out to verify that the neutral is correctly connected and that all fuses and switching (control) devices are connected to the phase("LIVE") conductors only.

The Contractor shall be expected to test and inspect the installation particularly those parts that are to be

concealed, during the erection, as he shall be held responsible for and shall rectify at his own expense all faults, defects, omissions, faulty workmanship, incorrectly positioned or installed parts of the installation revealed by such inspection and tests.

The Contractor shall provide accurate instruments and/or apparatus and the labour to carry out the above tests independently of any tests made by the Engineer or Kenya Power & Lighting Co. The instruments and apparatus shall be made available to the Engineer for him to carry out the tests as he may require.

The Contractor shall give a seven days' notice of his intention to carry cut the test so as to enable the Engineer to witness the tests if he so wishes.

R. Guarantee of the Installation

The Contractor shall guarantee the whole installation for a period of 6 months from the date of final completion. During this period all defects arising out of faulty materials or workmanship shall be made good free of cost – fair wear and tear expected.

Any contravention of the clauses and conditions of the specifications discovered during the guaranteed period must be corrected free of charge. The submission of the completed Test Form cannot be offered by the Contractor as a final discharge of his responsibilities in respect of the soundness of the installation neither must it be inferred that the readings will necessary be made accepted.

The acceptance of the Form shall in no manner vitiate claims that may subsequently be made under the terms of the guarantee.

S. Clearing of Site and damages

The Contractor must include for the clearing away from site immediately, after completion, all the unused materials and any rubbish or litter as may have been caused by his works.

T. Compliance with specification

All materials, plant, labour and workmanship in and connected with the execution of the works shall be the best of their respective kinds without regard to any trade terms and the Contractor shall comply in these and all other respects with the following clauses and shall carry out the Contract in a proper and workmanlike manner and in strict accordance with the specifications and the Engineer's instructions.

(i) Test certificates

When the Contractor instructed by the Engineer shall submit certificates of Test from the suppliers of materials and goods to be used for Contract to the Engineer.

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

(ii) Approval of suppliers

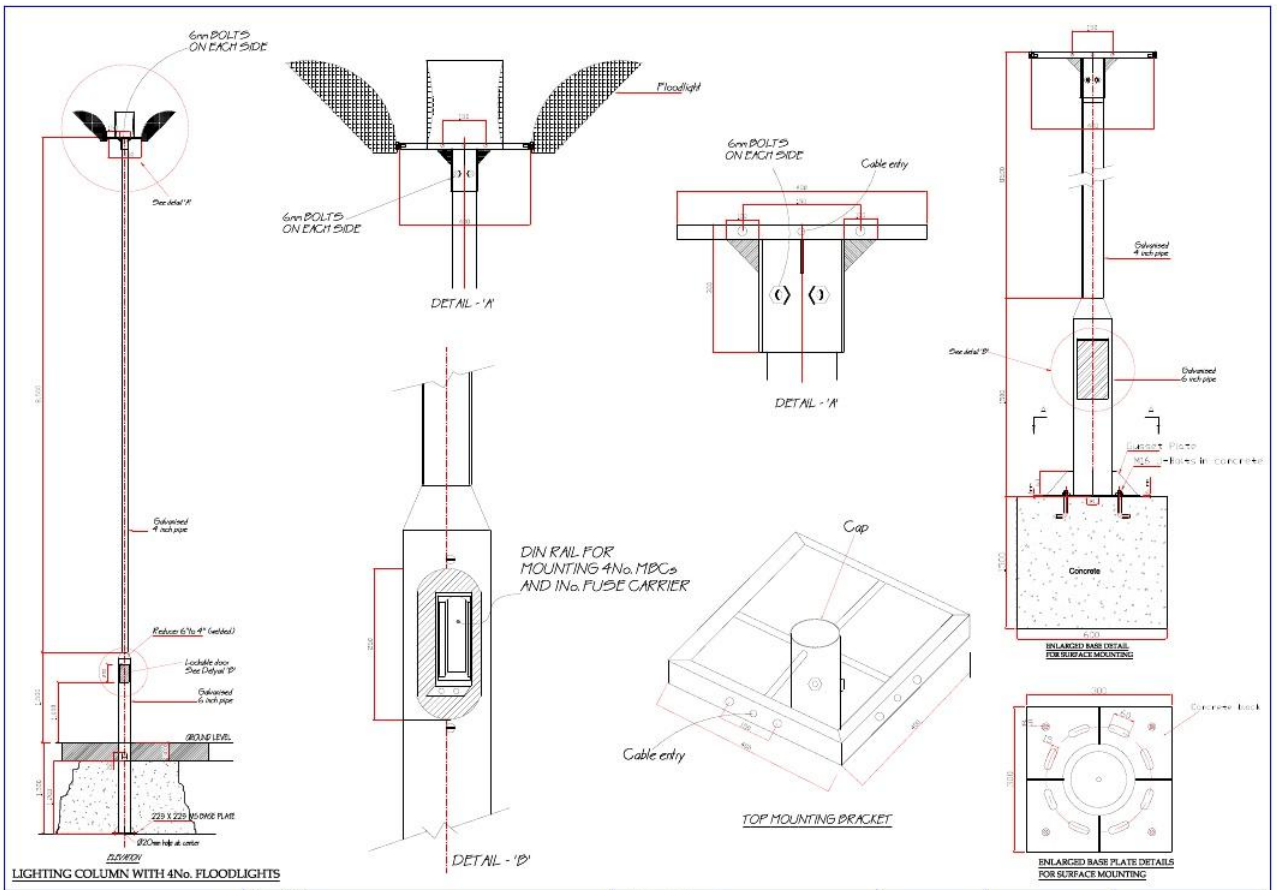
The Contractor's attention is drawn to his obligations with regard to quality and delivery schedule of materials and goods obtained from his suppliers. Should the Engineer at any time be dissatisfied with any goods and materials intended for delivery to the Employer he shall be empowered to reject such goods and materials and shall order that others of acceptable quality replace them. The cost of removal and the new suppliesshall all be borne by the Contractor.

SECTION 6:DRAWINGS

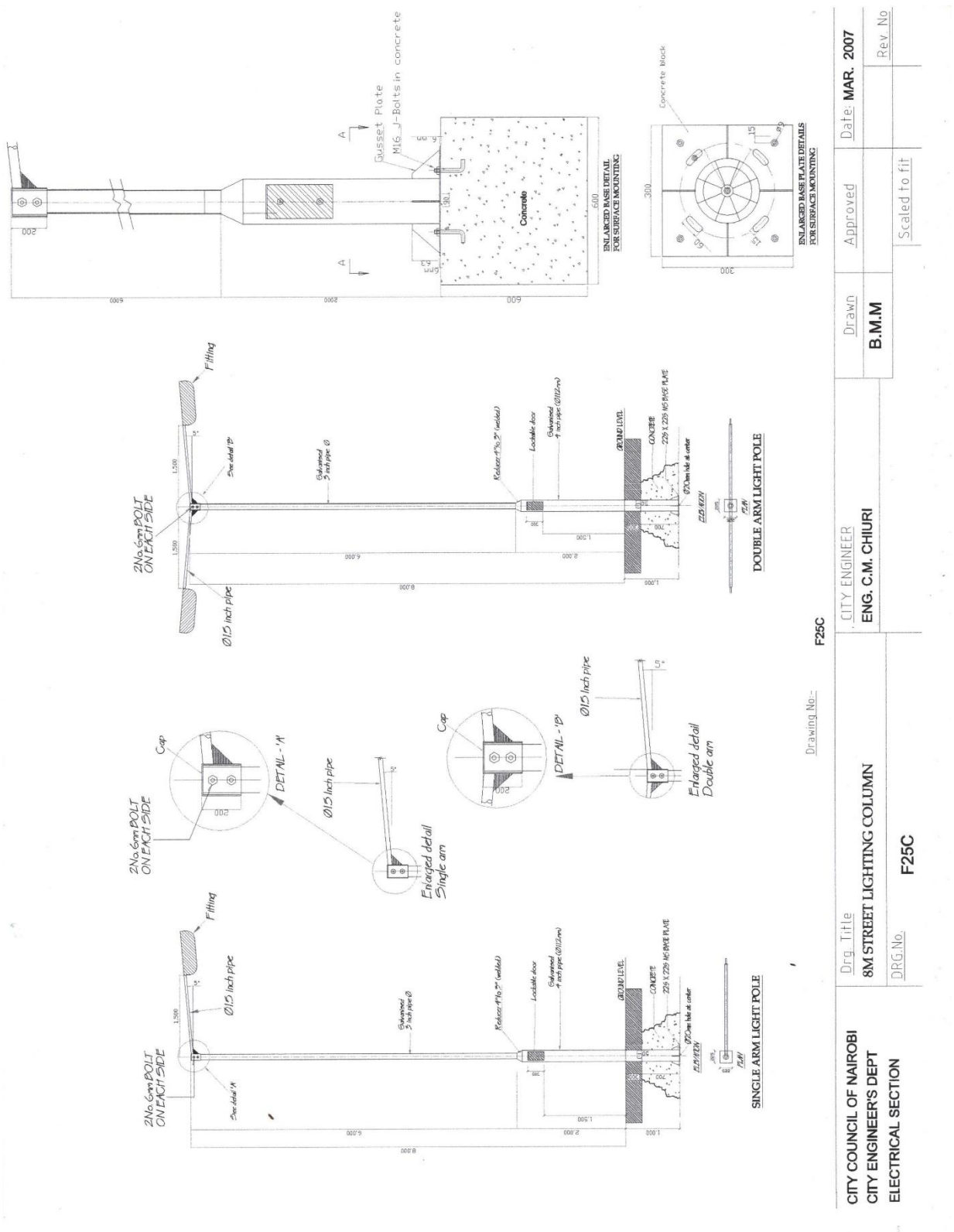
SECTION 6: DRAWINGS

Drg No. F45F Standard Details for 10m public lighting column
Drg No. F25C Standard Details for 8m Street lighting column

Drg No. F45F Standard Details for 10m public lighting column



CITY COUNCIL OF NAIROBI CITY ENGINEER'S DEPT ELECTRICAL SECTION	Drg. Title 10M METERS STREET LIGHTING COLUMN	CITY ENGINEER ENG. C.M. CHIURI	Drawn B.M.M	Approved	Date MAR. 2007
	DRG. No. F45F			Scaled to fit	Rev. No



Drg No. F25C Standard Details for 8m Street lighting column

SECTION 7: BILLS OF QUANTITIES

PREAMBLE TO BILL OF QUANTITIES

1. The Bills of Quantities forms part of the Contract Documents and are to be read in conjunction with the Instructions to Tenderers, Conditions of Contract Parts I and II, Specifications and Drawings.

2. The brief description of the items in the Bills of Quantities is purely for the purpose of identification, and in no way modifies or supersedes the detailed descriptions given in the conditions of Contract and Specifications for the full direction and description of work and materials.

3. The Quantities set forth in the Bills of Quantities are estimated, representing substantially the work to be carried out, and are given to provide a common basis for bidding and comparing of Bids. There is no guarantee to the Contractor that he will be required to carry out all the quantities of work indicated under any one particular item or group of items in the Bill of Quantities. The basis of payment shall be the Contractor's rates and the quantities of work actually done in fulfillment of his obligation under the Contract.

4. The prices and rates inserted in the Bills of Quantities will be used for valuing the work executed, and the Engineer will only measure the whole of the works executed in accordance with this Contract.

5. A price or rate shall be entered in ink against every item in the Bills of Quantities with the exception of items that already have Provisional sums affixed thereto. The tenderers are reminded that no “nil” or “included” rates or “lump-sum” discounts will be accepted. The rates for various items should include discounts if any. Tenderers who fail to comply will be disqualified.

6. Provisional sums (including Day works) in the Bills of Quantities shall be expended in whole or in part at the discretion of the Engineer.

7. The price and rates entered in the Bills of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Constructional plant to be used, labour, insurance, supervision, compliance testing, materials, erection, maintenance of works, overheads and profits, taxes and duties together with all general risks, liabilities and obligations set out or implied in the Contract, transport, electricity and telephones, water, use and replenishment of all consumables, including those required under the contract by the Engineer and his staff.

8. There shall be no correction of material arithmetic errors in unit price and total price

BILLS OF QUANTITIES

BoQ FOR TARMACKING OF MUIRIGO CENTRE ROAD IN CLAY CITY WARD					
BILL NO. 1 - GENERAL					
ITEM	**DESCRIPTION**	**UNIT**	**QTY**	**RATE (KSHS)**	**AMOUNT (KSHS)**
	BILL NO. 1 - GENERAL				
1.01	Allow a provisional sum of Kenya Shillings One Hundred Thousand (Kshs. 100,000/=) for testing of materials to be expended as directed by the Engineer.	**PC Sum**		100,000.00	100,000.00
1.02	E.O Item 1.01 above for Attendance, overheads and profit			10%	
1.03	Provide and erect publicity sign boards as directed by the Engineer in accordance with drawings	**No.**	2.00		
1.04	Allow a provisional sum of Kenya Shillings Three Hundred Thousand (Kshs. 300,000/-) for relocation and maintenance of utility Services.	**PC SUM**	1.00	300,000.00	300,000.00
1.05	E.O Item 1.04 above for Attendance, overheads and profit			10%	
1.06	Allow a provisional sum of Kenya Shillings Two Hundred Thousand (KShs.200,000/-) for Resident Engineer's Miscellaneous Account	**PC Sum**	1.00	200,000.00	200,000.00
1.07	E.O Item 1.06 above for Attendance, overheads and profit			10%	
1.08	Allow a provisional sum of Kenya Shillings One Hundred Thousand (KShs.100,000/-) for Engineer's Miscellaneous Account (Director Roads Office)	**PC Sum**	1.00	100,000.00	100,000.00
1.09	E.O Item 1.08 above for Attendance, overheads and profit			10%	
1.10	Allow a provisional sum of Kenya Shillings One Hundred Thousand (KShs.100,000/-) for Employer's Representative Miscellaneous Account (CEO- WDP Office)	**PC Sum**	1.00	100,000.00	100,000.00
1.11	E.O Item 1.10 above for Attendance, overheads and profit			10%	
1.12	Provide2No. Executive Office Filling Cabinets made of Cold-rolled steel and glass with drawers with the following specifications Size: *900x400x1850mm.r	**PC Sum**	2.00		
1.13	E.O Item 1.12 above for Attendance, overheads and profit			10%	

1.14	Provide one (1 No.) Type 2 Vehicles (Station wagon/saloon vehicles), petrol propelled engine maximum 2,000 cc. for exclusive use by the Resident Engineer. The rate to include provision of a driver, fuel, operating & maintenance cost for mileage not exceeding 3,000km per vehicle month and comprehensive insurance. The vehicle to revert to the contractor on completion of the project.	**Vehicle/ Month**	6.00		
1.15	Allow a provisional sum of Kenya Shillings one Hundred thousand (Kshs. 100,000/-) to carry out Topographical Survey and produce as built drawings as directed by the Engineer.	**PC Sum**	1.00	100,000.00	100,000.00
1.16	E.O Item 1.15 above for Attendance, overheads and profit			10%	
	Total Carried Forward to Summary Sheet.				
	BILL NO. 8 - CULVERTS AND DRAINAGE WO				
8.01	Clean/desilt inlets, outfalls, side and mitre drains to free-flowing condition including cart to spoil any excess grass, debris and soil	**m3**	300.00		
8.02	Clean blocked closed drains to free flow conditions and to the satisfaction of the Engineer.	**m**	400.00		
8.03	Excavate, provide all materials and construct standard manholes with polyresin circular frame and cover for closed stormwater drain as directed by the Engineer	**No.**	8.00		
8.05	Provide all materials, excavate, prepare to raise or lower manholes to finished road/footpath level as directed by the Engineer. Rate to include breaking concrete as necessary and carting away unwanted materials to spoil.	**No.**	15.00		
	Total Carried Forward to Summary Sheet.				
	BILL NO. 9 - PASSAGE OF TRAFFIC				
9.01	Allow a sum of passage for traffic through the works including provision of signs, barriers etc. in accordance with section 907 of the standard specifications.	**Km**	1.00		
	Total Carried Forward to Summary Sheet.				

	BILL NO. 12 - QUARRY FILL STONE FOR SUB-BASE AND QUARRY CHIPS FOR BASE				
12.01	Allow for the re-use of stored fill materials back to the excavated area and compact to the satisfaction of the Engineer.	**m3**	400.00		
	Total Carried Forward to Summary Sheet.				
	BILL NO. 16 - BITUMINEOUS MIX BASES, BINDER COURSES AND WEARING COURSES				
16.01	Provide and apply to base MC70 as prime coat at a rate of 0.8 - 1.2 litres per square metre to area of carriageway and walkway as directed by the Engineer. The rate to include preparation of surface to get rid of the foreign material by way of sweeping or blowing off or any method and carting way to spoil waste materials	**m2**	5,600.00		
16.02	Provide, transport, lay and compact Asphaltic Concrete Binder course type 1 0/20 to a consolidated thickness of 50mm as directed by the Engineer Rate to include cleaning of the carriageway to get rid of the foreign method and carting way to spoil waste materials. Also included is the provision and spraying of KI-60 bitumen emulsion as tack coat at a rate of 0.5 to 0.8 lt/m2	**m3**	298.00		
16.03	Provide place and compact hot asphaltic concrete type I as directed by the Engineer for repairs to carriageway in form of patchwork, regulation and bumps. Also included is the provision and spraying of KI-60 bitumen emulsion as tack coat at a rate of 0.5 to 0.8 lt/m2	**m3**	30.00		
	Total Carried Forward to Summary Sheet.				
	BILL NO. 20 - ROAD FURNITURE				
20.01	Provide and deliver thermoplastic approved white paint (reflectorized) for road marking, paint and mark the road with a coat as directed by the Engineer.	**m2**	30.00		
20.02	As item 20.01 but for approved yellow paint.	**m2**	15.00		
20.03	Provide and erect permanent road signs where instructed by the Resident Engineer and in accordance with the special specification Clause 2004 as follows: -				
	(a) Warning signs	**No.**			

			4.00		
	(c) Standard informatory signs including road names at different places	**No.**	4.00		
	Total Carried Forward to Summary Sheet.				

SUMMARY OF BILLS OF QUANTITIES (Carried Forward to Summary Page)				
BILL NO	**ITEM DESCRIPTION**	**Contract Amount**		
1	BILL NO. 1 - GENERAL			
8	BILL NO. 8 - CULVERTS AND DRAINAGE WORKS			
9	BILL NO. 9 - PASSAGE OF TRAFFIC			
12	BILL NO. 12 - QUARRY FILL STONE FOR SUB-BASE AND QUARRY CHIPS FOR BASE			
16	BILL NO. 16 - BITUMINEOUS MIX BASES, BINDER COURSES AND WEARING COURSES			
20	BILL NO. 20 - ROAD FURNITURE			
	SUB - TOTAL 1			

	BOQ FOR SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF STREETLIGHTING ALONG CLAY CITY WARD					
	BILL OF QUANTITIES: NO 1 (GENERAL)					
S/ No.	**Description**	**Make/ Model**	**Qty**	**Unit**	**Rate (Kshs.)**	**Total (Kshs.)**
1	Allow a provisional sum for contingencies to be expended in part or whole as directed by the Engineer. The whole or part not expended will be deducted from the bid sum.		1	Item	100,000	100,000
2	Allow a provisional sum for project team airtime as per schedule 2		1	Item		
3	Allow for provisional sum for Kenya Power service line charges		1	Item	120,000	120,000
4	Attendance to item 10 above			%		
	Total for Bill No. 1 (General)		**Item**	**Item**	**Item**	
	Total carried forward to summary		**Item**	**Item**	**Item**	
	ITEM NO.9 ABOVE Schedule 2 (Airtime)					
Item No.	**Description**		**Unit**	**Qty**	**Unit price (Kshs.)**	**Total (Kshs.)**
	Supply and deliver the following: -					
1	Safaricom airtime voucher		No.	8	1,000	8,000
2	Safaricom airtime voucher		No.	10	500	5,000
3	Safaricom airtime voucher		No.	8	250	2,000
4	Airtel airtime voucher		No.	8	1,000	8,000
5	Airtel airtime voucher		No.	10	500	5,000
6	Airtel airtime voucher		No.	8	250	2,000
	Total		**Item**	**Item**	**Item**	**30,000**
	BILL OF QUANTITIES: NO.1 (8m streetlights)					
S/ No.	**Description**	**Make/ Model**	**Qty**	**Unit**	**Rate (Kshs.)**	**Total (Kshs.)**
	Supply, deliver, install and set to work the following: -					
1	8m streetlighting column made from Class "B"steel galvanized bronze coated pipe complete with a single arm bracket to carry 140w lantern complete with DIN Rail and lockable cover as per the specifications.		30	No.		
2	Site clearance, excavation of pole pit 300mm*300mm*1000mm (L*W*D), concrete mix Ratio 1:2:4 (Class 20/20), transport of installation materials to site, erection of pole, compacting, curing and reinstating the ground to original state.		30	No.		

3	140w streetlighting lantern. Operating voltage 120 – 300Vac, Frequency 45-55HZ, Power factor ≥0.95, THD: <15 %, Operating hours ≥50000hrs), ≥140 Lumens per watt ≥ 5-year warranty, inbuilt surge protector device, ≥IP66, LM5 grade powder coated aluminium casing adjustable mounting bracket, marked with hard to erase markings including a unique serial no, as per sample, and anti-theft features. (Indicate make and also make of driver). Engrave the lantern with the Contract No. and ward.		30	No.		
4	Electrical metal control box fabricated as per specifications with DIN rail and mounting assembly.		2	No.		
5	Multilock padlock with set of keys for item No. 3 above		2	No.		
6	63Amp MCB with enclosure.		2	No.		
7	Photocell kit, photocell, socket and bracket to be installed on the column brackets.		2	No.		
8	40Amp contactor.		2	No.		
9	3x2.5mm2 SC-PVC-CU cables for automation		90	m		
10	1.5mm^2 twin with earth PVC insulated copper cable.		100	m		
11	1x16 sq.mm XLPE +1x16 sq.mm PVC aluminium round stranded compressed ABC conductor		1000	m		
12	1.5mm2 3-core PVC/SWA/PVC copper cable for terminating for terminating item No. 6 above.		100	m		
13	Surge protector.		2	No.		
14	10Amp MCB's for item No. 3 above.		4	No.		
15	40A current operated earth leakage circuit breaker with rated leakage current of 0.5A.		2	No.		
16	Earthing comprising of a 10m length 6mm2 earth lead and 1800mm long by 15mm diameter copper earth electrode with a driving tip and clamp.		10	No.		
17	Galvanised D bracket made from 38x4mm thickness mild steel flat with hole diameter 175mm for 16mm diameter bolts. The bracket should be complete with shackle reel Porcelain insulator bolts and nuts		30	No.		
18	Excavate 40mm*400mm*1500mm (L*W*D) pole pit		30	No.		
19	Concrete Mix Ratio 1:2:4 (Class 20/20)		30	Item		
20	Numbering for item No.1. The individual number sizes shall be 50mm in height and 35mm in width written in paint with distinct colour.		30	No.		
21	Engrave items Nos.2 with the Contract No., followed by the words "CLAY CITY WARD". **Note:** printed sticker shall not be accepted.		30	No.		
22	MS plate measuring 600mmx300mmx1.5mm, branded with the logo of the Nairobi City County Government, the contract number of the project written in distinct colour and Governor's & MCA's photos. The plate shall be arc welded or mounted onto item Nos.1 or 2 at a height of 8m above the ground level.		30	No.		
23	Provide for as-built drawing complete with GPS coordinates.		30	No.		

	Sub - Total 3		**Item**	**Item**		
	Total carried forward to summary		**Item**	**Item**		

	SUMMARY (Carried Forward to Summary page)			**QTY**		
Item No.	**DESCRIPTION**		**UNIT**	**Item**	**RATE (KSHS.)**	**TOTAL (KSHS.)**
1	Total carried forward from Bill No. 1 (General)		**Item**	**Item**	**1**	
2	Total carried forward from Bill No. 2 (8M Streetlights)		**Item**	**Item**	**1**	
	Sub-Total		**Item**	**Item**	**1**	

SUMMARY OF BILLS OF QUANTITIES - TARMACKING OF MUIRIGO CENTRE ROAD		
BILL NO	**ITEM DESCRIPTION**	
1	BILL NO. 1 - GENERAL	
8	BILL NO. 8 - CULVERTS AND DRAINAGE WORKS	
9	BILL NO. 9 - PASSAGE OF TRAFFIC	
12	BILL NO. 12 - QUARRY FILL STONE FOR SUB-BASE AND QUARRY CHIPS FOR BASE	
16	BILL NO. 16 - BITUMINEOUS MIX BASES, BINDER COURSES AND WEARING COURSES	
20	BILL NO. 20 - ROAD FURNITURE	
	SUB - TOTAL 1	

SUMMARY OF BoQ; - SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF STREETLIGHTING ALONG CLAY CITY WARD		
Item No.	**DESCRIPTION**	
1	Total carried forward from Bill No. 1 (General)	
2	Total carried forward from Bill No. 2 (8M Streetlights)	
	SUB-TOTAL 2	
	Sub Total 1 (Tarmacking Muirigo Centre Road)	
	Sub Total 2 (Lighting Within Clay City Ward)	
	Sub-Total 3 = (1+2)	
	Add 0.03% Capacity Building Training LEVY	
	Sub Total 4	
	Add 16% VAT	
	Grand Total	

PART III - CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION VIII - GENERAL CONDITIONS OF CONTRACT

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

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

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

General Conditions of Contract

A. General

1. De**fi**nitions

1.1 Bold face type is used to identify defined terms.

a) The Accepted Contract Amount means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

b) The Activity Schedule is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.

c) The Adjudicator is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.

d) Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.

e) Compensation Events are those defined in GCC Clause 42 hereunder.

f) The Completion Date is the date of completion of the Works as certified by the Engineer, in accordance with GCC Sub-Clause 53.1.

g) The Contract is the Contract between the Procuring Entity and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.

h) The Contractor is the party whose Bid to carry out the Works has been accepted by the Procuring
Entity.

i) The Contractor's Bid is the completed bidding document submitted by the Contractor to the Procuring Entity.

j) The Contract Price is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.

k) Days are calendar days; months are calendar months.

l) Day works are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.

m) A Defect is any part of the Works not completed in accordance with the Contract.

n) The Defects Liability Certificate is the certificate issued by Engineer upon correction of defects by the Contractor.

o) The Defects Liability Period is the period named in the SCC pursuant to Sub-Clause 34.1 and calculated from the Completion Date.

p) Drawings means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Procuring Entity in accordance with the Contract, include calculations and other information provided or approved by the Engineer for the execution of the Contract.

q) The Procuring Entity is the party who employs the Contractor to carry out the Works, as specified in the SCC, who is also the Procuring Entity.

r) Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

s) "In writing" or "written" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

t) The Initial Contract Price is the Contract Price listed in the Procuring Entity's Letter of Acceptance.

u) The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the SCC. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time or an acceleration order.

v) Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.

w) Plant is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

x) The Engineer is the person named in the SCC (or any other competent person appointed by the Procuring Entity and notified to the Contractor, to act in replacement of the Engineer) who is responsible for supervising the execution of the Works and administering the Contract.

y) SCC means Special Conditions of Contract.

z) The Site is the area of the works as defined as such in the SCC.

aa) Site Investigation Reports are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.

ab) Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.

ac) The Start Date is given in the SCC. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

ad) A Subcontractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.

ae) Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

af) A Variation is an instruction given by the Engineer which varies the Works.

ag) The Works are what the Contract requires the Contractor to construct, install, and turn over to the Procuring Entity, as defined in the SCC.

2. Interpretation

2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer shall provide instructions clarifying queries about these GCC.

2.2 If sectional completion is specified in the SCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

2.3 The documents forming the Contract shall be interpreted in the following order of priority: a) Agreement,

b) Letter of Acceptance,

c) Contractor's Bid,

d) Special Conditions of Contract,

e) General Conditions of Contract, including Appendices,

f) Specifications,

g) Drawings,

h) Bill of Quantities[6], and

i) Any other document listed in the SCC as forming part of the Contract.

[6] *In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."*

3. Language and Law

3.1 The language of the Contract is English Language and the law governing the Contract are the Laws of Kenya.

3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Procuring Entity's Country when

a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country; or

b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

4. Engineer's Decisions

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

5. Delegation

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

6. Communications

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

7. Subcontracting

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

8. Other Contractors

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

9. Personnel and Equipment

9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Engineer. The Engineer shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.

9.2 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

9.3 If the Procuring Entity, Engineer or Contractor determines, that any employee of the Contractor be determined to have engaged in Fraud and Corruption during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.

10. Procuring Entity's and Contractor's Risks

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

11. Procuring Entity's Risks

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

a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant,

Materials, and Equipment), which are due to

i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or

ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.

b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

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

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

12. Contractor's Risks

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

13. Insurance

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

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

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide

for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

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

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

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

14. Site Data

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

15. Contractor to Construct the Works

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

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

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

17. Approval by the Engineer

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

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

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

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

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

18. Safety

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

19. Discoveries

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

20. Possession of the Site

20.1 The Procuring Entity shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the SCC, the Procuring Entity shall be

deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

21. Access to the Site

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

22. Instructions, Inspections and Audits

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

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

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

23. Appointment of the Adjudicator

23.1 The Adjudicator shall be appointed jointly by the Procuring Entity and the Contractor, at the time of the Procuring Entity's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Procuring Entity does not agree on the appointment of the Adjudicator, the Procuring Entity will request the Appointing Authority designated in the SCC, to appoint the Adjudicator within 14 days of receipt of such request.

23.2 Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within14 days of receipt of such request.

24. Settlement of Claims and Disputes

24.1 Contractor's Claims

24.1.1 If the Contractor considers itself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give Notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.

24.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional

payment, and the Procuring Entity shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub- Clause shall apply.

24.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.

24.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Procuring Entity's liability, the Engineer may, after receiving any notice under this Sub Clause, monitor the record- keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Engineer to inspect all these records, and shall (if instructed) submit copies to the Engineer.

24.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

a) this fully detailed claim shall be considered as interim;
b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Engineer may reasonably require; and
c) the Contractor shall send a final claim within 30 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.

24.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time

period.

24.1.7 Within the above defined period of 42 days, the Engineer shall proceed in accordance with Subclause

24.1.8 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

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

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

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

24.2 Amicable Settlement

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

24.3 Matters that may be referred to arbitration

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

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

24.4 Arbitration

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

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

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

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

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

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

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

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

24.4.9 The terms of the remuneration of each or all the members of Arbitration shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

24.5 Arbitration with National Contractors

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

i) Architectural Association of Kenya

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

24. 5.2 The institution written to first by the aggrieved party shall take precedence over all other institutions.

24.6 Alternative Arbitration Proceedings

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

24.7 Failure to Comply with Arbitrator's Decision

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

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

24.8 Contract operations to continue

24.8.1 Notwithstanding any reference to arbitration herein,

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

25. Fraud and Corruption

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

25.2 The Procuring Entity requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the

name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

B. Time Control

26. Program

26.1 Within the time stated in the SCC, after the date of the Letter of Acceptance, the Contractor shall submit to the Engineer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.

26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

26.3 The Contractor shall submit to the Engineer for approval an updated Program at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program within this period, the Engineer may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Engineer.

26.4 The Engineer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Engineer again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date

27.1 The Engineer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

27.2 The Engineer shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

28. Acceleration

28.1 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Engineer shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.

28.2 If the Contractor's priced proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

29. Delays ordered by the Engineer

29.1 The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works.

30. Management Meetings

30.1 Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

30.2 The Engineer shall record the business of management meetings and provide copies of the

record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

31. Early Warning

31.1 The Contractor shall warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Engineer may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

31.2 The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

C. Quality Control

32. Identifying Defects

32.1 The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.

33. Tests

33.1 If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

34. Correction of Defects

34.1 The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Engineer's notice.

35. Uncorrected Defects

35.1 If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

36. Contract Price[7]

36.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.

37. Changes in the Contract Price[8]

37.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Engineer shall adjust the rate to allow for the change. The Engineer shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Procuring Entity.

37.2 If requested by the Engineer, the Contractor shall provide the Engineer with a

detailed cost breakdown of any rate in the Bill of Quantities.

38. Variations

38.1 All Variations shall be included in updated Programs9 produced by the Contractor.

38.2 The Contractor shall provide the Engineer with a quotation for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Engineer and before the Variation is ordered.

38.3 If the Contractor's quotation is unreasonable, the Engineer may order the Variation and make a change to the Contract Price, which shall be based on the Engineer's own forecast of the effects of the Variation on the Contractor's costs.

38.4 If the Engineer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

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[7] *In lump sum contracts, replace GCC Sub-Clauses 36.1 as follows:*

36.1 The Contractor shall provide updated Activity Schedules within 14 days of being instructed to by the Engineer. The Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for materials on site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity

Schedule.[8] *In lump sum contracts, replace entire GCC Clause 37 with new GCC Sub-Clause 37.1, as follows:*

The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

[9] *In lump sum contracts, add "and Activity Schedules" after "Programs."* [10] *In lump sum contracts, delete this paragraph.*

38.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning

38.6 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Engineer, the quantity of work above the limit stated in Sub-Clause 39.1or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work

38.7 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

a) the proposed change(s), and a description of the difference to the existing contract requirements;
b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Procuring Entity may incur in implementing the value engineering proposal; and
c) a description of any effect(s) of the change on performance/functionality.

38.8 The Procuring Entity may accept the value engineering proposal if the proposal demonstrates benefits that:

a) accelerate the contract completion period; or
b) reduce the Contract Price or the life cycle costs to the Procuring Entity; or
c) improve the quality, efficiency, safety or sustainability of the Facilities; or
d) yield any other benefits to the Procuring Entity, without compromising the functionality of the Works.

38.9 If the value engineering proposal is approved by the Procuring Entity and results in:

a) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the percentage specified in the SCC of the reduction in the Contract Price; or
b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in
(a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

39. Cash Flow Forecasts

39.1 When the Program[11], is updated, the Contractor shall provide the Engineer with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

40. Payment Certificates

40.1 The Contractor shall submit to the Engineer monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

40.2 The Engineer shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

40.3 The value of work executed shall be determined by the Engineer.

40.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed12.

40.5 The value of work executed shall include the valuation of Variations and Compensation Events.

40.6 The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

40.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (which would be the tender price), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows: *(corrected tender price –tender price)/tender price X100*.

41. Payments

41.1 Payments shall be adjusted for deductions for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Engineer within 30 days of the date of each certificate. If the Procuring Entity makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.

41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

41.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.

41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

42. Compensation Events

42.1 The following shall be Compensation Events:

d) The Procuring Entity does not give access to a part of the Site by the Site Possession Date pursuant
to GCC Sub-Clause 20.1.

e) The Procuring Entity modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.

f) The Engineer orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.

g) The Engineer instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.

h) The Engineer unreasonably does not approve a subcontract to be let.

i) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.

j) The Engineer gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons.

k) Other contractors, public authorities, utilities, or the Procuring Entity does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.

l) The advance payment is delayed.

m) The effects on the Contractor of any of the Procuring Entity's Risks.

n) The Engineer unreasonably delays issuing a Certificate of Completion.

42.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Engineer shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

42.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Engineer, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Engineer shall adjust the Contract Price based on the Engineer's own forecast. The Engineer shall assume that the Contractor shall react competently and promptly to the event.

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[11] *In lump sum contracts, add "or Activity Schedule" after "Program."*

[12] *In lump sum contracts, replace this paragraph with the following: "The value of work executed shall comprise the value of completed activities in the Activity Schedule."*

42.4 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Engineer.

43. Tax

43.1 The Engineer shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44.

44. Currency y of Payment

44.1 All payments under the contract shall be made in Kenya Shillings

45. Price Adjustment

45.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the SCC. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies:

$P = A + B\ Im/Io$

where:P is the adjustment factor for the portion of the Contract Price payable.

A and B are coefficients[13] specified in the SCC, representing the non-adjustable and adjustable portions, respectively, of the Contract Price payable and Im is the index prevailing at the end of the month being invoiced and IOC is the index prevailing 30 days before Bid opening for inputs payable.

45.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

46. Retention

46.1 The Procuring Entity shall retain from each payment due to the Contractor the proportion stated in the SCC until Completion of the whole of the Works.

46.2 Upon the issue of a Certificate of Completion of the Works by the Engineer, in accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the
Defects Liability Period has passed and the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.

47. Liquidated Damages

47.1 The Contractor shall pay liquidated damages to the Procuring Entity at the rate per day stated in the SCC for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 41.1.

48. Bonus

48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day stated in the SCC for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Engineer shall certify that the Works are

complete, although they may not be due to be complete.

49. Advance Payment

49.1 The Procuring Entity shall make advance payment to the Contractor of the amounts stated in the SCC by the date stated in the SCC, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Procuring Entity in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

49.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Engineer.

49.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

50. Securities

50.1 The Performance Security shall be provided to the Procuring Entity no later than the date specified in the Letter of Acceptance and shall be issued in an amount specified in the SCC, by a bank or surety acceptable to the Procuring Entity, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 day from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

51. Day works

51.1 If applicable, the Day works rates in the Contractor's Bid shall be used only when the Engineer has given written instructions in advance for additional work to be paid for in that way.

51.2 All work to be paid for as Day works shall be recorded by the Contractor on forms approved by the Engineer. Each completed form shall be verified and signed by the Engineer within two days of the work being done.

51.3 The Contractor shall be paid for Day works subject to obtaining signed Day works forms.

52. Cost of Repairs

52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

53. Completion

53.1 The Contractor shall request the Engineer to issue a Certificate of Completion of the Works, and the Engineer shall do so upon deciding that the whole of the Works is completed.

54. Taking Over

54.1 The Procuring Entity shall take over the Site and the Works within seven days of the Engineer's issuing a certificate of Completion.

55. Fina account

55.1 The Contractor shall supply the Engineer with a detailed account of the total amount that the
Contractor considers payable under the Contract before the end of the Defects Liability Period. The
Engineer shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope

of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate.

[13] *The sum of the two coefficients A and B should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other non-adjustable components. The sum of the adjustments for each currency are added to the Contract Price.*

56. Operating and Maintenance Manuals

56.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the SCC.

56.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the SCC pursuant to GCC Sub-Clause 56.1, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the SCC from payments due to the Contractor.

57. Termination

57.1 The Procuring Entity or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

57.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage have not been authorized by the Engineer;
b) the Engineer instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
c) the Procuring Entity or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
d) a payment certified by the Engineer is not paid by the Procuring Entity to the Contractor within
84 days of the date of the Engineer's certificate;
e) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
f) the Contractor does not maintain a Security, which is required;
g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as de**fi**ned in the SCC; or
h) if the Contractor, in the judgment of the Procuring Entity has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Procuring Entity may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

57.3 Notwithstanding the above, the Procuring Entity may terminate the Contract for convenience.

57.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

57.5 When either party to the Contract gives notice of a breach of Contract to the Engineer fora cause other than those listed under GCC Sub-Clause 56.2 above, the Engineer shall decide whether the breach is fundamental or not.

58. Payment upon Termination

58.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.

58.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Engineer shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

59. Property

59.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Procuring Entity if the Contract is terminated because of the Contractor's default.

60. Release from Performance

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

Except where otherwise specified, all Special *Conditions of Contract should be filled in by the Procuring Entity prior to issuance of the bidding document. Schedules and reports to be provided by the Procuring Entityshould be annexed.*

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	A. General
GCC 1.1 (f)	Replace the text of Sub-clause 1 (f) with the following: "The Completion Date" means the time for completing the execution of and passing the Tests on Completion of the Works or any Section or part thereof as stated in the Contract (or as extended under Clause 44) calculated from the Commencement Date
GCC 1.1 (h)	Add at the end of sub-clause the following "and the legal successors in title to such person, but not (except with the consent of the Employer) any assignee of such person."
GCC 1.1 (q)	The Procuring Entity is the NAIROBI CITY COUNTY, represented by the County Secretary and Head of County Public Service – Nairobi City County, P.O. BOX 30075 – 00100 Nairobi.
GCC 1.1 (c)	Replace the text of Sub-clause 1 (l) with the following: "Equipment means all appliances and things of whatsoever nature (other than Temporary Works) required for the execution and completion of the Works and the remedying of any defects therein, but does not include Plant, materials or other things intended to form or forming part of the Permanent Works"
GCC 1.1 (u)	The Intended Completion Date for the whole of the Works shall be "the time for completing the execution of and passing the Tests on Completion of the Works or any Section or part thereof as stated in the Contract (or as extended under Clause 44) calculated from the Commencement Date."
GCC 1.1 (x)	The Engineer is the Director of Roads-Works P.O. BOX 30075 – 00100 NAIROBI who shall be referred to as "The Engineer".
GCC 1.1 (z)	The Site means the places provided by the Procuring Entity where the Works are to be executed and any other places as may be specifically designated in the Contract as forming part of the Site.
GCC 1.1 (cc)	The Start Date shall be the date upon which the Contractor receives the notice to commence issued by the Engineer.
GCC 1.1 (dd)	Replace the text of Sub-clause 1 (dd) with the following: "A Sub-contractor means any person named in the Contract as a Subcontractor for a part of the Works or any person to whom a part of the Works has been subcontracted with the consent of the Engineer and the legal successors in title to such person, but not any assignee of any such person."
GCC 1.1 (gg)	The Works consist of means the Permanent Works and the Temporary Works or either of them as appropriate and as described in the Special Specifications.
GCC 2	Add at the end of clause the following "Wherever in the Contract provision is made for the giving or issue of any notice,

	consent, approval, certificate or determination by any person, unless otherwise specified

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	such notice, consent, approval, certificate or determination shall be in writing and the words "notify", "certify" or "determine" shall be construed accordingly. Any such consent, approval, certificate or determination shall not unreasonably be withheld or delayed.'
GCC 2.2	Sectional Completions are: NOT APPLICABLE
GCC 2.3	Delete the documents listed a-I and substitute: a) The Contract Agreement (if completed) b) The Letter of Acceptance; c) The Bid and Appendix to Bid; d) The Conditions of Contract Part II; e) The Conditions of Contract Part I; f) The Special Specifications; g) The Standard Specification for Road and Bridge Construction, 1986; h) The Drawings; i) The priced Bills of Quantities j) Other documents as listed in the Appendix to form of Bid
GCC 5.1	The Engineer *may* delegate any of his duties and responsibilities to appointed representatives. Add "The Engineer's Representative shall be appointed by and be responsible to the Engineer and shall carry out such duties and exercise such authority as may be delegated to him by the Engineer. The Engineer may from time-to-time delegate to the Engineer's Representative any of the duties and authorities vested in the Engineer and he may at any time revoke such delegation. Any such delegation or revocation shall be in writing and shall not take effect until a copy thereof has been delivered to the Procuring Entity and the Contractor. Any communication given by the Engineer's Representative to the Contractor in accordance with such delegation shall have the same effect as though it had been given by the Engineer."
GCC 7.1	Add at the end of sub-clause the following "The Contractor shall not subcontract the whole of the Works."
GCC 8.1	Schedule of other contractors: NOT APPLICABLE

GCC 9.1	Key Personnel GCC 9.1 is replaced with the following: "The Contractor's superintending staff shall meet the following minimum qualifications: Should have a working knowledge of English or Kiswahili. Should any of the superintending staff not be able to meet this condition, the Contractor shall propose to the Engineer arrangements for provision of a sufficient number of interpreters of approved qualifications. The Engineer, at his discretion, may amend, approve or reject such arrangements or reject deployment of superintending staff not meeting the language requirements. The Engineer may at any time during the duration of the Contract amend any approved arrangements made for interpreters, which shall be implemented at the Contractors expense. The key staff listed below must have academic qualifications from government recognized institutions or equivalent institutions of the levels set out in Section 5, Part 6. The key staff listed below must have minimum experience set out in Section III;

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	Evaluation and Qualification Criteria: • H/Q Staff • Site Agent Site Surveyor • Foremen Qualifications as above shall be subject to verification and approval on site by the Engineer or his representative on site before commencement of the said works." [insert the name/s of each Key Personnel agreed by the Procuring Entity prior to Contract signature.]
GCC 11.1 (b)	Add at the end of sub-clause the following "Other than any part of the design provided by the Contractor or for which the Contractor is responsible."
GCC 12.1	Add at the end of sub-clause the following 'If any loss or damage happens to the Works, or any part thereof, or materials or Plant for incorporation therein, during the period for which the Contractor is responsible for the care thereof, from any cause whatsoever, other than the risks defined in Sub-Clause 20.4, the Contractor shall, at his own cost, rectify such loss or damage so that the Permanent Works conform in every respect with the provisions of the Contract to the satisfaction of the Engineer. The Contractor shall also be liable for any loss or damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations under Clause 34 of the GCC."
GCC 13.1	Delete words "from the Start Date" and substitute the words "for the period prior to commencement of the Works" The minimum insurance amounts and deductibles shall be as stated in the Appendix to Form of Tender.
GCC 14.1	Site Data shall be deemed to include data listed elsewhere in the Contract as open for inspection at the address stipulated in the Appendix to Bid.

GCC 15.1	Add at the end of sub-clause the following "The Engineer shall have authority to issue to the Contractor, from time to time, such supplementary Drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and completion of the Works and the remedying of any defects therein. The Contractor shall carry out and be bound by the same."
GCC 18.1	Add at the end of sub-clause the following 'The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.'
GCC 20.1	Delete sub-clause 20.1 and substitute with; "Save insofar as the Contract may prescribe: (a) the extent of portions of the Site of which the Contractor is to be given possession from time to time, (b) the order in which such portions shall be made available to the Contractor, and, subject to any requirement in the Contract as to the order in which the Works shall be executed, the Employer will, with the Engineer's notice to commence the Works, give to the Contractor possession of (c) so much of the Site, and (d) such access as. In accordance with the Contract, is to be provided by the Employer

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	as may be required to enable the Contractor to commence and proceed with the execution of the Works in accordance with the programme referred to in Clause 26, if any, and otherwise in accordance with such reasonable proposals as the Contractor shall, by notice to the Engineer with a copy to the Employer, make. The Employer will, from time to time as the Works proceed, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due dispatch in accordance with such programme or proposals, as the case may be."
GCC 22.1	Add at the end of sub-clause the following "Instructions given by the Engineer shall be in writing, provided that if for any reason the Engineer considers it necessary to give any such instruction orally, the Contractor shall comply with such instruction. Confirmation in writing of such oral instruction given by the Engineer, whether before or after the carrying out of the instruction, shall be deemed to be an instruction within the meaning of this Sub-Clause. Provided further that if the Contractor, within 7 days, confirms in writing to the Engineer any oral instruction of the Engineer and such confirmation is not contradicted in writing within 7 days by the Engineer, it shall be deemed to be an instruction of the Engineer. The provisions of this Sub-Clause shall equally apply to instructions given by the Engineer's Representative and any assistants of the Engineer or the Engineer's Representative appointed pursuant to Sub-Clause 5.1."
GCC 23	Delete entire clause

GCC 24.3.1 (a)	Delete sub-clause 24.3.1 (a)
GCC 24.5.1	Appointer of the Arbitrator is as stated in the Appendix to Form of Tender.
GCC 24.5.2	Delete sub-clause 24.5.2
B. Time Control	
GCC 26.1	The Contractor shall submit to the Engineer for approval a Program for the Works within 14 days from the issuance of order to commence, in such form and detail as the Engineer shall reasonably prescribe, for the execution of the Works. The cash flow estimates shall be submitted together with the works programme.
GCC 26.3	The period between Program updates is *[insert number]* days. The amount to be withheld for late submission of an updated Program is *[insert amount]*.
C. Quality Control	
GCC 34.1	The Defects Liability Period is as stated in the Appendix to Form of Tender
GCC 35.1	Substitute sub-clause 35.1 with; "In case of default on the part of the Contractor in carrying out such instruction within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and if such work is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	Contractor accordingly, with a copy" to the Employer.
D. Cost Control	
GCC 37.1	Amend Sub-Clause 37.1 as follows: - Substitute "provided the change exceeds 1 percent of the Initial Contract Price" with "provided the change does not exceed 15 percent of the Initial Contract Price"
GCC 38.9	If the value engineering proposal is approved by the Procuring Entity the amount to be paid to the Contractor shall be _% *(insert appropriate percentage. The percentage is normally up to 50%)* of the reduction in the Contract Price. NOT APPLICABLE.

GCC 41.1	Amend Sub-Clause 41.1 as follows: Delete the words "within 30 days of the date of each certificate" in the first sentence and replace with "within the period stated in the Appendix to Tender"
GCC 41.2	Amend Sub-Clause 41.2 as follows: - Delete the last statement and substitute with: - "Interest shall be calculated from the date upon which the increased amount would have been paid if the payment was certified without delay in the absence of dispute".
GCC 44.1	The currency of the Procuring Entity's Country is Kenya Shillings
GCC 45.1	Price Adjustment: NOT APPLICABLE
GCC 46.1	The proportion of payments retained is as stated in the Appendix to Form of Tender.
GCC 46.2	Amend Sub-Clause 46.2 as follows: Delete the words "on demand" in the first sentence and replace with "unconditional"
GCC 47.1	The liquidated damages for the whole of the Works shall be as stated in the Appendix to Form of Tender
GCC 48.1	Delete clause
GCC 49.1	The Advance Payments shall not apply.
GCC 50.1	The Performance Security form and amount shall be as stated in the Appendix to Form of Tender.
GCC 53.1	In addition to the clause, Add 'Time for Completion' shall be as stated in the Appendix to Form of Tender.
E. Finishing the Contract	
GCC 55.1	Amend Sub-Clause 55.1 as follows: Delete the words "within 56 days of the date of each certificate" in the first sentence and replace with "within the period stated in the Appendix to Tender"
GCC 56.1	The date by which operating and maintenance manuals are required shall be as stated in the Appendix to Form of Tender. The date by which "as built" drawings are required shall be as stated in the Appendix to Form of Bid.

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
GCC 56.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required in GCC 58.1 shall be as stated in the Appendix to Form of Tender
GCC 57.2 (g)	The maximum number of days is as stated in the Appendix to Form of Tender

GCC 58.1	The percentage to apply to the value of the work not completed, representing the Procuring Entity's additional cost for completing the Works, is as stated in the Appendix to Form of Tender.

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				

(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 OFACCEPTANCE

[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 of Procuring Entity"), of the one part, and

AGREEMENT made the day of, 20, between (hereinafter "the 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]

Bene**fi**ciary: _____ *[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*),[5] 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……[6], 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.

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[5] *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[6] *Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Procuring Entity should note that in the event of an extension of this date for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

FORM No. 6 - PERFORMANCE SECURITY

[Option 2– Performance Bond]

[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank
Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[insert name and Address of* Procuring Entity*]* Date: _____ *[Insert date of issue]*.

PERFORMANCE BOND No.: _____

Guarantor: [*Insert name and address of place of issue, unless indicated in the letterhead]*

1. By this Bond as Principal (hereinafter called "the Contractor") and _____] as Surety (hereinafter called "the Surety"), are held and firmly bound unto] as Obligee (hereinafter called "the Procuring Entity") in the amount of for _____
the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS the Contractor has entered into a written Agreement with the Procuring Entity dated the
_____day of_____, 20, for_____ in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Procuring Entity to be, in default under the Contract, the Procuring Entity having performed the Procuring Entity's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:
   1) complete the Contract in accordance with its terms and conditions; or
   2) obtain a tender or tenders from qualified tenderers for submission to the Procuring Entity for completing the Contract in accordance with its terms and conditions, and upon determination by the Procuring Entity and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Procuring Entity and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Procuring Entity to Contractor under the Contract, less the amount properly paid by Procuring Entity to Contractor; or

3) pay the Procuring Entity the amount required by Procuring Entity to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Procuring Entity named herein or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.

6. In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day of 20.

SIGNED ON _____ on

behalf _____ of By _____ in the capacity of

In the presence of _____

SIGNED ON _____ on behalf of By

_____ in the capacity of In

the presence of _____

FORM NO. 7 - ADVANCE PAYMENT SECURITY

[Demand Bank Guarantee]

[Guarantor letterhead]

Beneficiary: _____ *[Insert name and Address of* Procuring Entity*]*

Date: *[Insert date of issue]*

ADVANCE PAYMENTGUARANTEE 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, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

6. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months] [one year],* in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

[Name of Authorized Official, signature(s) and seals/stamps]

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

[1] *The 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.*

[2] *Insert the expected expiration date of the Time for Completion. The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

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 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 **fi**nal product.*

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[1]*The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.*

[2]*Insert 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.*