COUNTY GOVERNMENT OF MERU

DEPARTMENT OF ELECTRICAL, TRANSPORT AND ENERGY

(COUNTY WARD FUND)

TENDER NUMBER: CGM/ONT/120/17-18

TENDER NAME: FLOODLIGHT INSTALLATION

MARKET NAME

1. **TIGANIA WEST**
   -Kianjai-main mkt
   -Cow mkt
   -National bank
   -Barrier

BID DOCUMENT

- **INVITATION FOR TENDERS**
- **INSTRUCTIONS TO BIDDERS**
- **QUALIFICATION CRITERIA**
- **CONDITIONS OF CONTRACT**
- **APPENDIX TO FORM OF TENDER**
- **STANDARD FORMS**
- **BILLS OF QUANTITIES**

The Engineer	**The Employer**
CHIEF OFFICER **ELECTRICAL, TRANSPORT AND ENERGY** **COUNTY GOVERNMENT OF MERU** **P.O. BOX 120 - 60200,** **MERU.**	**THE GOVERNOR,** **COUNTY GOVERNMENT OF MERU** **P.O. BOX 120 - 60200,** **MERU.**

STANDARD TENDER DOCUMENT

FOR

- COUNTY WARD FUND

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SECTION I: INVITATION FOR TENDERS

INVITATION TO TENDER NOTICE

COUNTY GOVERNMENT OF MERU

ELECTRICAL, TRANSPORT AND ENERGY

P.O. Box 120-60200 Meru

Feb. 2018

(COUNTY WARD FUND)

The County Government of Meru (Electrical, Transport and Energy Department) is a Government established under the Kenya Constitution 2010 and County Government Acts 2012 with the responsibility for management, development, rehabilitation, and maintenance of county Electrical. The Department wishes to invite quotations from competent eligible pre-qualified firms for Road Works as listed in the table below.

SUB COUNTY- TIGANIA WEST					NCA
1	Tender No. CGM/ONT/120/17-18	Tender Name: Floodlight installation in KIANJAI		Citizen	8 and above

A complete set of Tender documents and more detailed information may be downloaded free of charge from the County Government of Meru tender portal **website: www.meru.go.ke**

There will be **Mandatory pretender site visit** as per schedule below:

Market	**Date and time**	Venue
-Kianjai-main **-Cow mkt** **-National bank** **-Barrier**	**22nd Feb 2018 at 9:00am**	Market KIANJAI MRKT

MANDATORY REQUIREMENTS

1. Certified Copy of certificates of incorporation.
2. Bid security BID - Unconditional guarantee, in the format and conditions provided must be valid for 120days`
3. Eligibility - Copy of National ID or passport for all Directors
4. Pin /VAT Certificate
5. Trading license/Single Business permit
6. Certified Copy of valid Tax compliance certificate
7. Certified license with National Construction Authority (NCA 8 and above)
8. Certificate of registration in target group issued by the national treasury (for the special groups only)
9. Proof of financial soundness: financial statements.
10. Proof of attending mandatory pre-tender site visit for the works.
11. Properly and dully filled tender securing declaration forms ; stamped and/or sealed; signed with some authorized to do so.(for the special groups only)
12. All documents must be bound for each bid submitted. All forms filled appropriately
13. Meet eligibility criteria on : Preliminary ,Technical and Financial as per the tender document and instruction to bidders

Bidders must ensure that their completed tender documents are enclosed in plain sealed envelopes marked with Tender name and reference number and deposited in the Tender Box situated at the County Headquarters ground floor **opposite Huduma Centre Meru** addressed to:

The County Secretary
County Government of Meru,
County Headquarter Office,
P.O. Box 120-60200, MERU

To be received on or before the date provided below. Opening will take place immediately thereafter. Bidders or their representatives wishing to witness the opening may attend.

Sub county	**Date and closing time & opening**	Venue
TIGANIA WEST	**5th March, 2018 at 10.00am**	County Headquarter Office

CHIEF OFFICER
ELECTRICAL, TRANSPORT AND ENERGY

SECTION II: INSTRUCTIONS TO TENDERERS

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INSTRUCTIONS TO TENDERERS.

1. General

1.1 The Employer as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The successful Tenderer will be expected to complete the Works by the Intended Completion Date specified in the said Appendix.

1.2 Tenderers shall include the following information and documents with their tenders, unless otherwise stated:

(a) All documents must be bound for each bid submitted. All forms filled appropriately

(b) Copies of certificates of registration, and principal place of business;
(c) Total monetary value of construction work performed for each of the last three years;
(d) Experience in works of a similar nature and size for each of the last five years, and clients who may be contacted for further information on these contracts;
(e) Major items of construction equipment owned;
(f) Qualifications and experience of key site management and technical personnel proposed for the Contract;
(g) Reports on the financial standing of the Tenderer, such as profit and loss statements and auditor's reports for the last three years;
(h) Authority to seek references from the Tenderer's bankers.
(i) Registration with National Construction Authority for the applicable class valid at the date of tender of submission
(j) Certificate of Incorporation
(k) Valid current Tax compliance certificate
(l) PIN registration certificate
(m) Current litigation information
(n) Bid security- Unconditional guarantee, in the format and conditions provided and must be valid for 120days
(o) Eligibility - Copy of National ID or passport for all Directors

1.3 The Tenderer shall bear all costs associated with the preparation and submission of his tender, and the Employer will in no case be responsible or liable for those costs.

1.4 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.

1.5 The procurement entity's employees, committee members and their relative (spouse and children) are not eligible to participate in the tender.

1.6 The estimated budget for these works is **Kshs one Million, nine hundred ninety eight thousand, seven hundred twenty two shillings only(Kshs. 1,998,722)**

2. Tender Documents

2.1 The complete set of tender documents comprises the documents listed here below and any addenda issued in accordance with clause 2.4 here below:-

(a) The instructions to Tenderers
(b) Form of Tender
(c) Conditions of Contract and Appendix to Form of Agreement
(d) Specifications
(e) Drawings
(f) Bills of Quantities
(g) Other materials required to be filled and submitted in accordance with these Instructions and Conditions

2.2 The Tenderer shall examine all instructions, forms and specifications in the tender documents. Failure to furnish all information required by the tender documents may result in rejection of his tender.

2.3 A prospective Tenderer making inquiry of the tendering documents may notify the Employer in writing or by cable, telex or facsimile at the address indicated in the letter of invitation to tender. The Employer will respond to any request for clarification received earlier than seven [7] days prior to the deadline for submission of tenders. Copies of the Employer's response will be forwarded to all persons issued with tendering documents, including a description of the inquiry, but without identifying its source.

2.4 Before the deadline for submission of tenders, the Employer may modify the tendering documents by issuing addenda. Any addendum thus issued shall be part of the tendering documents and shall be communicated in writing or by cable, telex or facsimile to all Tenderers. Prospective Tenderers shall acknowledge receipt of each addendum in writing to the Employer.

2.5 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their tenders, the Employer shall extend, as necessary, the deadline for submission of tenders in accordance with clause 4.2 here below.

3. Preparation of Tenders

3.1 All documents relating to the tender and any correspondence shall be in English Language.

3.2 The tender submitted by the Tenderer shall comprise the following:-

(a) The Tender;

(b) Tender Security;

(c) Priced Bill of Quantities for lump-sum Contracts

(d) Any other materials required to be completed and submitted by Tenderers.

3.3 The Tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items for which no rate or price is entered by the Tenderer will not be paid for when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities. All duties, taxes and other levies payable by the Contractor under the Contract, as of 30 days prior to the deadline for submission of tenders, shall be included in the tender price submitted by the Tenderer.

3.4 The rates and prices quoted by the Tenderer shall not be subject to any adjustment during the performance of the Contract.

3.5 The unit rates and prices shall be in Kenya Shillings.

3.6 Tenders shall remain valid for a period of **One Twenty (120**) days from the date of submission. However in exceptional circumstances, the Employer may request that the Tenderers extend the period of validity for a specified additional period. The request and the Tenderers' responses shall be made in writing.

3.7 The Tenderer shall prepare one original of the documents comprising the tender documents as described in these Instructions to Tenderers.

3.8 The original shall be typed or written in indelible ink and shall be signed by a person or persons duly authorised to sign on behalf of the Tenderer. All pages of the tender where alterations or additions have been made shall be initialed by the person or persons signing the tender.

3.9 Clarification of tenders shall be requested by the tenderer to be received by the procuring entity not later than 7 days prior to the deadline for submission of tenders.

3.10 The procuring entity shall reply to any clarifications sought by the tenderer within **7 days** of receiving the request to enable the tenderer to make timely submission of its tender.

4. Submission of Tenders

4.1 The tender duly filled and sealed in an envelope shall;-

(a) be addressed to the Employer at the address provided in the invitation to tender;

[b] bear the name and identification number of the Contract as defined in the invitation to tender; and

[c] provide a warning not to open before the specified time and date for tender opening.

4.2 Tenders shall be delivered to the Employer at the address specified above not later than the time and date specified in the invitation to tender.

4.3 The tenderer shall not submit any alternative offers unless they are specifically required in the tender documents.

Only one tender may be submitted by each tenderer. Any tenderer who fails to comply with this requirement will be disqualified.

4.4 Any tender received after the deadline for opening tenders will be returned to the tenderer un-opened.

4.5 The Employer may extend the deadline for submission of tenders by issuing an amendment in accordance with sub-clause 2.5 in which case all rights and obligations of the Employer and the Tenderers previously subject to the original deadline will then be subject to the new deadline.

5. Tender Opening and Evaluation

5.1 The tenders will be opened in the presence of the Tenderers' representatives who choose to attend at the time and in the place specified in the invitation to tender.

5.2 The Tenderers' names, the total amount of each tender including any modification and number of pages submitted, will be announced at the opening by the Employer. Minutes of the tender opening, including the information disclosed to those present will also be prepared by the Employer.

5.3 Information relating to the examination, clarification, evaluation and comparison of tenders and recommendations for the award of the Contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced.

Any effort by a Tenderer to Influence the Employer's officials, processing of tenders or award decisions may result in the rejection of his tender

.

5.4 Tenders determined to be substantially responsive will not be checked for errors and shall not be affected by:

(a) Minor deviation that does not materially depart from the requirements set out in the tender document.

(b) Errors or oversight that can be corrected without affecting the substance of the tender

(c) 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.

5.5 The tender evaluation committee shall evaluate the tender within 30 days of the validity period from the date of opening the tender.

5.6 Contract price variations shall not be allowed for contracts not exceeding one year (12 months)

5.7 Where contract price variation is allowed, the valuation shall not exceed 25% of the original contract price.

5.8 Price variation requests shall be processed by the procuring entity within 30 days of receiving the request

5.9 To assist in the examination, evaluation, and comparison of tenders, the Employer at his discretion, may request [in writing] any Tenderer for clarification of the tender, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, telex or facsimile but no change in the tender price or substance of the tender shall be sought, offered or permitted.

5.10 The Tenderer shall not influence the Employer on any matter relating to his tender from the time of the tender opening to the time the Contract is awarded. Any effort by the Tenderer to influence the Employer or his employees in his decision on tender evaluation, tender comparison or Contract award may result in the rejection of the tender.

6. Award of Contract

6.1 The award of the Contract will be made to the Tenderer who has offered **the most responsive evaluated tender.**

6.2 Notwithstanding the provisions of clause 6.1 above, the Employer reserves the right to accept or reject any tender and to cancel the tendering process and reject all tenders at any time prior to the award of Contract without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the grounds for the action.

6.3 The Tenderer whose tender has been accepted will be notified of the award prior to expiration of the tender validity period in writing or by cable, telex or facsimile. This notification (hereinafter and in all Contract documents called the "Notification of award") will state the sum [hereinafter and in all Contract documents called the "Contract Price" which the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract. The contract shall be formed on the parties signing the contract. At the same time the other tenderers shall be informed that their tenders have not been successful.

The Contract Agreement will incorporate all agreements between the Employer and the successful Tenderer. It will be signed by the Employer and sent to the successful Tenderer, within 30 days following the notification of award. Within 21 days of receipt, the successful Tenderer will sign the Agreement and return it to the Employer. 6.5 Within 21 days after receipt of the Letter of Acceptance, the successful Tenderer shall deliver to the Employer a Performance Security amount stipulated in the Appendix to Conditions of Contract.

6.6 The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.

6.7 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.

6.8 The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.

7. Corrupt and fraudulent practices

7.1 The procuring entity requires that the tenderer observes the highest standard of ethics during the procurement process and execution of the contract. A tenderer shall sign a declaration that he has not and will not be involved in corrupt and fraudulent practices.

7.2 The procuring entity will reject a tender if it determines that the tenderer recommended for award has engaged in corrupt and fraudulent practices in competing for the contract in question.

7.3 Further a tenderer who is found to have indulged in corrupt and fraudulent practices risks being debarred from participating in public procurement in Kenya.

SECTION III: QUALIFICATION CRITERIA

1.0 Preliminary examination			
	Criteria		
1	Certificate of Incorporation/Registration	**Mandatory**	
2	Pin /VAT Certificate	**Mandatory**	
3	Valid Tax compliance	**Mandatory**	
4	Certificate of Registration from NCA(1-8)	**Mandatory**	
5	Trading license/Single Business permit	**Mandatory**	
6	2% Bid bond valid for 120 days/dully filled tender securing declaration form for special group	**Mandatory**	
7	Copy of National ID or passport for all Directors	**Mandatory**	
8	Proof of attending pre-tender site visit for the works.	**Mandatory**	
9	Certificate of registration in target group issued by the national treasury	**Mandatory**	
10	Properly and dully filled Form of Tender; stamped and/or sealed; signed with some authorized to do so.	**Mandatory**	
11	Properly and dully filled bill of quantities; stamped and/or sealed; signed with some authorized to do so**.**	**Mandatory**	
12	Properly and dully filled tender securing declaration forms; stamped and/or sealed; signed with some authorized to do so.	**Mandatory**	

TECHNICAL EVALUATION	Max Score
Registration as a contractor with NCA	
1. NCA 1 [Electrical]	15
2. NCA 2 [Electrical]	13
3. NCA 3 [Electrical]	11
4. NCA 4 [Electrical]	9
5. NCA 5 [Electrical]	7
6. NCA 6 [Electrical]	5
7. NCA 7 [Electrical]	3
8. NCA 8 [Electrical]	2
Experience of the contractor	
1. Years of practice	
a. 5 and above	20
b. 4	16
c. 3	12
d. 2	9
e. Below 1	6

The value of your biggest project undertaken a) Less than Kshs 1 million b) Kshs. 1 – 2 million c) Kshs. 2.1-5 million d) Kshs. 5.1-10 million e) Over Kshs. 11 million **NB:** *(Attach proof i.e copies of completion certificate, LPO or award letters.)*	1 5 10 15 20
Provide audited financial records for last two years	10
Company turnover for the last two years a) Less than Kshs. 1 million b) Kshs. 1 – 2 million c) Kshs. 2- 3 million d) Over Kshs. 3 million	5 10 15 20
Profitability of the company for the last two years a) Less than Kshs. 100,000 profit b) Kshs. 1-2 million profit c) Kshs. 2-4 million profit d) Above Kshs. 5,000,000 Million	4 6 8 10
CVs of key personnel Degree in the relevant field Diploma in the relevant field Craft certificate in the relevant field	 5 3 2
TOTAL SCORE	

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CONDITIONS OF CONTRACT

1. Definitions

1.1 In this Contract, except where context otherwise requires, the following terms shall be interpreted as indicated;

"Bills of Quantities" means the priced and completed Bill of Quantities forming part of the tender [where applicable].

"Schedule of Rates" means the priced Schedule of Rates forming part of the tender [where applicable].

"The Completion Date" means the date of completion of the Works as certified by the Employer's Representative.

"The Contract" means the agreement entered into by the Employer and the Contractor as recorded in the Agreement Form and signed by the parties.

"The Contractor" refers to the person or corporate body whose tender to carry out the Works has been accepted by the Employer.

"The Contractor's Tender" is the completed tendering document submitted by the Contractor to the Employer.

"The Contract Price" is the price stated in the Letter of Acceptance.

"Days" are calendar days; "Months" are calendar months.

"A Defect" is any part of the Works not completed in accordance with the Contract.

"The Defects Liability Certificate" is the certificate issued by Employer's Representative upon correction of defects by the Contractor.

"The Defects Liability Period" is the period named in the Appendix to Conditions of Contract and calculated from the Completion Date.

"Drawings" include calculations and other information provided or approved by the Employer's Representative for the execution of the Contract.

"Employer" Includes Central or County Government administration, Universities, Public Institutions and Corporations and is the party who employs the Contractor to carry out the Works.

“Equipment” is the Contractor’s machinery and vehicles brought temporarily to the Site for the execution of the Works.

“Site” means the place or places where the permanent Works are to be carried out including workshops where the same is being prepared.

“Materials” are all supplies, including consumables, used by the Contractor for incorporation in the Works.

“Employer’s Representative” is the person appointed by the Employer and notified to the Contractor for the purpose of supervision of the Works.

“Specification” means the Specification of the Works included in the Contract.

“Start Date” is the date when the Contractor shall commence execution of the Works.

“ 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.

“Temporary works” are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

“ A Variation” is an instruction given by the Employer’s Representative which varies the Works.

“The Works” are what the Contract requires the Contractor to construct, install, and turnover to the Employer.

2. Contract Documents

2.1 The following documents shall constitute the Contract documents and shall be interpreted in the following order of priority;

(1) Agreement,
(2) Letter of Acceptance,
(3) Contractor’s Tender,
(4) Conditions of Contract,
(5) Specifications,
(6) Drawings,
(7) Bills of Quantities

3. Employer's Representative's Decisions

3.1 Except where otherwise specifically stated, the Employer's Representative will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

4. Works, Language and Law of Contract

4.1 The Contractor shall construct and install the Works in accordance with the Contract documents. The Works may commence on the Start Date and shall be carried out in accordance with the Program submitted by the Contractor, as updated with the approval of the Employer's Representative, and complete them by the Intended Completion Date.

4.2 The ruling language of the Contract shall be English language and the law governing the Contract shall be the law of the Republic of Kenya.

5. Safety, Temporary works and Discoveries

5.1 The Contractor shall be responsible for design of temporary works and shall obtain approval of third parties to the design of the temporary works where required.

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

5.3 Any thing of historical or other interest or significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Employer's Representative of such discoveries and carry out the Employer's Representative's instructions for dealing with them.

6 Work Program and Sub-contracting

6.1 Within seven days after Site possession date, the Contractor shall submit to the Employer's Representative for approval a program showing the general methods, arrangements, order and timing for all the activities in the Works.

6.2 The Contractor may sub-contract the Works (but only to a maximum of 25 percent of the Contract Price) with the approval of the Employer's Representative. However, he shall not assign the Contract without the approval of the Employer in writing. Sub-contracting shall not alter the Contractor's obligations.

7 The site

7.1 The Employer shall give possession of all parts of the Site to the Contractor.

7.2 The Contractor shall allow the Employer's Representative and any other person authorized by the Employer's Representative ,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.

8 Instructions

8.1 The Contractor shall carry out all instructions of the Employer's Representative which are in accordance with the Contract.

9 Extension of Completion Date

9.1 The Employer's Representative shall extend the Completion Date if an occurrence arises which makes it impossible for completion to be achieved by the Intended Completion Date. The Employer's Representative shall decide whether and by how much to extend the Completion Date.

9.2 For the purposes of this clause, the following occurrences shall be valid for consideration;

Delay by :-(a) force
reason of any exceptionally
adverse weather conditions,
or

(b) reason of civil commotion, strike or lockout affecting any of the trades employed upon the Works or any of the trades engaged in the preparation, manufacture or transportation of any of the goods or materials required for the Works, or

(c) reason of the Employer's Representative's instructions issued under these Conditions, or

(d) reason of the contractor not having received in due time necessary instructions, drawings, details or levels from the Employer's Representative for which he specifically applied in writing on a date which having regard to the date for Completion stated in the appendix to these Conditions or to any extension of time then fixed under this clause was neither unreasonably distant from nor unreasonably close to the date on which it was necessary for him to receive the same, or

(e) delay on the part of artists, tradesmen or others engaged by the Employer in executing work not forming part of this Contract, or

(g) Reason of delay by statutory or other services providers or similar bodies engaged directly by the Employer, or

(h) Reason of opening up for inspection of any Work covered up or of the testing or any of the Work, materials or goods in accordance with these conditions unless the inspection or test showed that the Work, materials or goods were not in accordance with this Contract, or

(i) reason of delay in appointing a replacement Employer's Representative, or

(j) reason of delay caused by the late supply of goods or materials or in executing Work for which the Employer or his agents are contractually obliged to supply or to execute as the case may be, or

(k) delay in receiving possession of or access to the Site.

10 Management Meetings

10.1 A Contract management meeting shall be held regularly and attended by the Employer's Representative and the Contractor. Its business shall be to review the plans for the remaining Work. The Employer's Representative shall record the business of management meetings and provide copies of the record to those attending the meeting and the Employer. The responsibility of the parties for actions to be taken shall be decided by the Employer's Representative either at the management meeting or after the management meeting and stated in writing to all who attend the meeting.

10.2 Communication between parties shall be effective only when in writing.

11 Defects

11.1 The Employer's Representative shall inspect the Contractor's work and notify the Contractor of any defects that are found. Such inspection shall not affect the Contractor's responsibilities. The Employer's Representative may instruct the Contractor to search for a defect and to uncover and test any Work that the Employer's Representative considers may have a defect. Should the defect be found, the cost of uncovering and making good shall be borne by the Contractor. However if there is no defect found, the cost of uncovering and making good shall be treated as a variation and added to the Contract Price.

11.2 The Employer's Representative 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 Appendix to Form of Tender

.

11.3 Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified by the Employer's Representative's notice. If the Contractor has not corrected a defect within the time specified in the Employer's Representative's notice, the Employer's Representative will assess the cost of having the defect corrected by other parties and such cost shall be treated as a variation and be deducted from the Contract Price.

12 Bills of Quantities

12.1 The Bills of Quantities shall contain items for the construction, installation, testing and commissioning of the Work to be done by the Contractor. The Contractor will be paid for the quantity of the Work done at the rates in the Bills of Quantities for each item. Items against which no rate is entered by the Tenderer will not be paid for when executed and shall be deemed covered by the rates for other items in the Bills of Quantities.

12.2 Where Bills of Quantities do not form part of the Contract, the Contract Price shall be a lump sum (which shall be deemed to have been based on the rates in the Schedule of Rates forming part of the tender) and shall be subject to re-measurement after each stage.

13 Variations

13.1 The Contractor shall provide the Employer's Representative with a quotation for carrying out the variations when requested to do so. The Employer's Representative shall assess the quotation and shall obtain the necessary authority from the Employer before the variation is ordered.

13.2 If the Work in the variation corresponds with an item description in the Bill of Quantities, the rate in the Bill of Quantities shall be used to calculate the value of the variation. If the nature 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.

13.3 If the Contractor's quotation is unreasonable, the Employer's Representative may order the variation and make a change to the Contract Price, which shall be based on the Employer's Representative's own forecast of the effects of the variation on the Contractor's costs.

14 Payment Certificates and Final Account

14.1 The Contractor shall be paid after each of the following stages of Work listed here below (subject to re-measurement by the Employer's Representative of the Work done in each stage before payment is made). In case of lump-sum Contracts, the valuation for each stage shall be based on the quantities so obtained in the re-measurement and the rates in the Bill of Quantities and the final payment will be made after defects liability period.

14.2 Upon deciding that Works included in a particular stage are complete, the Contractor shall submit to the Employer's Representative his application for payment. The Employer's Representative shall check, adjust if necessary and certify the amount to be paid to the Contractor within 21 days of receipt of the Contractor's application .The Employer shall pay the Contractor the amounts so certified within 30 days of the date of issue of each Interim Certificate.

14.3 The Contractor shall supply the Employer's Representative with a detailed final account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Employer's Representative shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 30 days of receiving the Contractor's account if it is correct and complete. If it is not, the Employer's Representative shall issue within 21 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 Employer's Representative shall decide on the amount payable to the Contractor and issue a Final Payment Certificate. The Employer shall pay the Contractor the amount so certified within 60 days of the issue of the Final Payment Certificate.

14.4 If the period laid down for payment to the Contractor upon each of the Employer's Representative's Certificate by the Employer has been exceeded, the Contractor shall be entitled to claim simple interest calculated pro-rata on the basis of the number of days delayed at the Central Bank of Kenya's average base lending rate prevailing on the first day the payment becomes overdue. The Contractor will be required to notify the Employer within 15 days of receipt of delayed payments of his intentions to claim interest.

15. Insurance

15.1 The Contractor shall be responsible for and shall take out appropriate cover against, among other risks, personal injury; loss of or damage to the Works, materials and plant; and loss of or damage to property.

16. Liquidated Damages

16.1 The Contractor shall pay liquidated damages to the Employer at the rate 0.001 per cent of the Contract price per day for each day after the actual Completion Date is later than the Intended Completion Date except in the case of any of the occurrences listed under clause 9.2. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

17. Completion and Taking Over

17.1 Upon deciding that the Work is complete the Contractor shall request the Employer's Representative to issue a Certificate of Completion of the Works, upon deciding that the Work is completed.

The Employer shall take over the Site and the Works within seven days of the Employer's Representative issuing a Certificate of Completion.

18. Termination

18.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. These fundamental breaches of Contract shall include, but shall not be limited to, the following;

(a) the Contractor stops Work for 30 days continuously without reasonable cause or authority from the Employer's Representative;

(b) the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

(c) a payment certified by the Employer's Representative is not paid by the Employer to the Contractor within 30 days after the expiry of the payment periods stated in sub clauses 14.2 and 14.3 hereinabove.

(d) The Employer's Representative 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.

18.2 If the Contract is terminated, the Contractor shall stop Work immediately, and leave the Site as soon as reasonably possible. The Employer's Representative shall immediately thereafter arrange for a meeting for the purpose of taking record of the Works executed and materials, goods, equipment and temporary buildings on Site.

19. Payment Upon Termination

19.1 The Employer may employ and pay other persons to carry out and complete the Works and to rectify any defects and may enter upon the Works and use all materials on Site, plant, equipment and temporary works.

19.2 The Contractor shall, during the execution or after the completion of the Works under this clause, remove from the Site as and when required within such reasonable time as the Employer's Representative may in writing specify, any temporary buildings, plant, machinery, appliances, goods or materials belonging to him, and in default thereof , the Employer may (without being responsible for any loss or damage) remove and sell any such property of the Contractor, holding the proceeds less all costs incurred to the credit of the Contractor.

19.3 Until after completion of the Works under this clause, the Employer shall not be bound by any other provision of this Contract to make any payment to the Contractor, but upon such completion as aforesaid and the verification within a reasonable time of the accounts therefor the Employer's Representative shall certify the amount of expenses properly incurred by the Employer and, if such amount added to the money paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with this Contract, the difference shall be a debt payable to the Employer by the Contractor; and if the said amount added to the said money be less than the said total amount, the difference shall be a debt payable by the Employer to the Contractor.

20. Corrupt Gifts and Payments of Commission

20.1 The Contractor shall not;

(a) Offer or give or agree to give to any person in the service of the Employer any gifts or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract with the Employer or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract with the Employer.

(b) Any breach of this Condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) shall be an offence under the Laws of Kenya.

21. Settlement of Disputes

21.1 Any dispute arising out of the Contract which cannot be amicably settled between the parties shall be referred by either party 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 by the chairman of the Chartered Institute of Arbitrators, Kenya branch, on the request of the applying party.

SECTION V: APPENDIX TO FORM OF TENDER

This Appendix to Form of tender forms part of the Agreement.

Item	**Data**
Contract period	6 Months,
Priority of Documents	The documents forming the Contract shall be interpreted in the following order of priority: • the Contract Agreement and Appendix to form of agreement • the Letter of Acceptance • the Form of Tender • the Conditions of Contract, Part II - Conditions of Particular Application • the Conditions of Contract, Part I - General Conditions of Contract • the Specifications • the Drawings, • the Priced Bill of Quantities
Law of Contract	Laws of the Republic of Kenya
Language	English
Provision of Site	On Commencement Date
Name and Address of Employer	**County Government of Meru** **Meru**
Authorised Person	**Chief officer** **Electrical, Transport and Energy (Meru)**
Name and Address of the Engineer	**Sub county Engineer** **(MERU REGION)**

Item	Data
Name and Address of Engineer's Representative	Inspector Electrical (Meru)
Performance Security Amount Form	(Refer to guideline Notes) 10% contract sum Bank Guarantee
Requirements of Contractors Design	Not applicable
Programme ⇨ Time of Submission	Within 7 days of Commencement Date
⇨ Form of Programme ⇨ Interval Updates	Bar Chart As requested by the PM
Liquidated Damages Amount payable due to failure to complete	0.01% of Contract Price per Day to a limit of 1% of Contract Price.
Defects Liability period	6 months
Percentage of Retention	10% of Interim Payment
Limit of Retention Money	5% of Contract Price
Valuation of Works	Remeasurements with Bills of Quantities
Minimum Amount of Interim Payment	50 % of the contract sum
Currency of Payment	Kenya Shillings
Rate of Interest	Simple Interest at a rate of 2% above mean Base Lending Rate as issued by the Central Bank of Kenya.
Insurance	Required/ Not required
Insurance ⇨ The Works, materials plants & fees- Contractor's All risks ⇨ Workers compensation (WIBA-workers injury benefits policy)	Amount of Cover The Contract Price stated in the Agreement +15%+replacement cost of equipment on site. As per work injury benefits act 2007 laws of Kenya

SECTION VI: STANDARD FORMS

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FORM OF INVITATION FOR TENDERS

_____[Date]

To: _____ [Name of Contractor]
_____[Address]
_____
_____

Dear Sirs:

Reference:_____[Contract Name]

You are qualified to tender for the above Contract.

We hereby invite you and other qualified Tenderers to submit a Tender for the execution and completion of the Works.

A complete set of Tender documents may be purchased from ____
_____
[Mailing address, cable/telex/facsimile numbers].

Upon payment of a non-refundable fee of Kshs_____

All Tenders shall be accompanied by .....number of copies of the same and a Tender Security in the form and amount of Kshs…… and shall be delivered to:
_____
[Address and location]

at or before _____(time and date). Tenders will be opened immediately thereafter, in the presence of those Tenderers' representatives who choose to attend.

Please confirm receipt of this letter and your intention to Tender in writing.

Yours faithfully,

_____ Authorised Signature

_____ Name and Title

FORM OF TENDER

TO: _____[Name of Employer) _____[Date]

_____[Name of Contract]

Dear Sir,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above Works, We, the undersigned offer to construct, install and complete such Works and remedy any defects therein for the sum of Kshs._____[Amount in figures]Kenya Shillings_____ _____[Amount in words]

2. We undertake, if our Tender is accepted, to commence the Works on the commencement date and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix.

3. We agree to abide 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.

4. We understand that you are not bound to accept the lowest or any Tender you may receive.

Dated this _____ day of _____20_____

Signature _____in the capacity of_____

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

_____[Address of Tenderer]

Witness: Name_____

Address_____

Signature_____

Date_____

LETTER OF AWARD

[Letterhead paper of the Employer]

_____[Date]

To: _____
[Name of the Contractor]

_____
[Address of the Contractor]

Dear Sir,

This is to notify you that your Tender dated _____

for the execution of _____

[name of the Contract and identification number,as given in the Tender documents] for the Contract Price of Kshs. _____ [amount in figures][Kenya Shillings_____(amount in words)] in accordance with the Instructions to Tenderers is hereby accepted.

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents.

Authorized Signature ……

Name and Title of Signatory ……

Attachment :

Tender-Securing Declaration Form (FOR SPECIAL GROUPS)

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

Date: [insert date (as day……., month and…….2018) of Bid Submission]

Tender No.[……]

To: [……insert complete name of Employer]

We, the undersigned, declare that:

- We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.
- We accept that we will automatically be suspended from being eligible for bidding 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 Bid during the period of bid validity specified by us in the Bidding 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 ITT.
- We understand that this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of
  - (I) our receipt of a copy of your notification of the name of the successful Bidder; or
  - (Ii) twenty-eight days after the expiration of our Tender.
- We understand that if we are a Joint Venture, the Bid Securing Declaration must be in the name of the Joint Venture that submits the bi, and the Joint Venture has not been legally constituted at the time of bidding, the Bid Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed: [……insert signature of person whose name and capacity are shown] in the capacity of […….insert legal capacity of person signing the Bid Securing Declaration]

Name: […….insert complete name of person signing the Bid Securing Declaration]

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on ..... day of .....,..... [Insert date of signing]

PERFORMANCE BANK GUARANTEE

To: _____(Name of Employer) _____(Date)

_____(Address of Employer)

Dear Sir,

WHEREAS _____(hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ (hereinafter called "the Works");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognised bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of Kshs. _____ (amount of Guarantee in figures) Kenya Shillings_____ (amount of Guarantee in words), and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of Kenya Shillings _____ (amount of Guarantee in words) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change, addition or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any change, addition, or modification.

This Guarantee shall be valid until the date of issue of the Employer's notice under Sub-Clause 8.2 (Taking-Over Notice), of the Conditions of Contract.

SIGNATURE AND SEAL OF THE GUARANTOR _____

Name of Bank _____

Address _____

Date _____

BANK GUARANTEE FOR ADVANCE PAYMENT

To: _____ [Name of Employer] _____(Date)

_____[Address of Employer]

Gentlemen,

Ref: _____[name of Contract]

In accordance with the provisions of the Conditions of Contract of the above-mentioned Contract, **We,**_____[name and Address of Contractor] (hereinafter called "the Contractor") shall furnish you with a Bank guarantee by a recognised Bank for the sum specified therein as a security for compliance with his obligations in accordance with the Contract in an amount of Kshs._____[amount of Guarantee in figurers] Kenya Shillings_____[amount of Guarantee in words].

We, the _____[bank or financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____[name of Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding Kshs_____[amount of Guarantee in figures]Kenya Shillings _____[amount of Guarantee in words].

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between _____[name of Employer] and the Contractor, shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any such change, addition or modification.

This Guarantee shall remain valid and in full effect from the date of the Advance Payment under the Contract until _____(name of Employer) receives full payment of the same amount from the Contract.

Yours faithfully,
Signature and Seal _____

Name of the Bank or financial institution _____
Address _____

Date _____

Witness: Name: _____

Address: _____

Signature: _____

Date: _____

FORM OF AGREEMENT

THIS AGREEMENT is made on the ……day of ….. 2018 between the **County Government of Meru, of P.O. BOX 120 -60200, Meru, Kenya** hereinafter called the "**Employer** "of the one part and ----------hereinafter called the "**Contractor**" of the other part.

WHEREAS the Employer is desirous that certain works should be executed, viz: ----------

And has accepted a Bid by the Contractor to execute, complete and maintain such works **NOW THIS AGREEMENT WITNESSETH as follows:**

In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:

The said BID dated ----------

- Conditions of Contract; Parts I and II
- The Standard and Special Specifications;
- Priced Bill of Quantities;
- Letter of Acceptance;
- Form of Tender
- Drawings;
- Appendix to the Form of Agreement
- Schedule Of Supplementary Information
- Other Documents/Materials/Conditions agreed and documented.

All aforesaid documents are hereinafter referred to as "**The Contract**".
In consideration of the payment to be made by the **Employer** to the **Contractor**, the Contractor covenants with the Employer to execute and complete the Works in conformity with the provisions of the Contract.

The Employer hereby covenants to pay the Contractor in consideration of the execution, completion and maintenance of the Works at the Contract Price or such other sum as may become payable under the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused their respective common seals to be hereto affixed (or have hereunto set their respective hands and seals) on the day and year first above written.

SIGNED AND DELIVERED
By the said **Employer***:*…….....……..

Signature: …….....

Designation

(Chief Officer, Electrical, Transport and Energy)
(For and on behalf of the said Employer.)

In the presence of:…….....

Signature……

By the said **Contractor:**
…….....……....

Signature……
Designation:……
(For and on behalf of the said Contractor)

In the presence of : .....

Signature:……
Address:……..

QUALIFICATION INFORMATION

TENDER QUESTIONNAIRE

Please fill in block letters.

1. Full name of Tenderer;

   ……

2. Full address of Tenderer to which Tender correspondence is to be sent (unless an agent has been appointed below);

   ……

3. Telephone number (s) of Tenderer;

   ……

4. Facsimile of Tenderer;
   ……

5. Name of Tenderer's representative to be contacted on matters of the Tender during the Tender period;
   ……

6. Details of Tenderer's nominated agent (if any) to receive Tender notices (name, address, telephone, telefax);

   ……

   ……

_____
Signature of Tenderer

Make copy and deliver to:_____(Name of Employer) (The Tenderer

shall leave one copy at the time of purchase of the Tender documents)

CONFIDENTIAL BUSINESS QUESTIONNAIRE

You are requested to give the particulars indicated in Part 1 and either Part 2 (a) or 2 (b) whichever applies to your type of business.

You are advised that it is a serious offence to give false information on this Form.

Part 1 – General

Business Name ……

Location of business premises; Country/Town…….…

Plot No…… Street/Road ……

Postal Address…… Tel No……..

Nature of Business……..…..

Current Trade Licensee No…… Expiring date…….……

Maximum value of business which you can handle at any time: Kshs ……

Name of your Bankers……..…

Branch…….…

Part 2 (b) – Partnership

Give details of partners as follows:

Name in full	Nationality	Citizenship Details	Shares
1……			
2……			
3……			

Part 2(c) – Registered Company:

Private or public…….....…

State the nominal and issued capital of the Company-

Nominal Kshs…….....……

Issued Kshs…….....…

Give details of all directors as follows:

Name in full	Nationality.	Citizenship Details*.	Shares.
1.			
2.			
3.			
4.			

Part 2(d) – Interest in the Firm:

Is there any person / persons in …… …… (Name of Employer) who

has interest in this firm? Yes/No…… (Delete as necessary)

I certify that the information given above is correct.

……	……	……
(Title)	(Signature)	(Date)

* Attach proof of citizenship

SCHEDULE OF LABOUR: - BASIC RATES

(Reference: Clause 4 of Conditions of Particular Application)

LABOUR CATEGORY	UNIT (MONTH/SHIFT/HOUR)	RATES

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

I certify that the above information is correct.

…… …… ……

(Title) *(Signature)* *(Date)*

CERTIFICATE OF TENDERER'S VISIT TO SITE

This is to certify that

[Name/s]……..

……..

Being the authorized representative/Agent of [Name of Tenderer]
……

……

participated in the organized inspection visit of the site of the works for the **(**participated in the organised inspection visit of the site of the work

held on …… day of……20……

Signed……..
(Employer's Representative)

……..

NOTE: This form is to be completed when the site visit is made

FORM OF WRITTEN POWER-OF-ATTORNEY

The Tenderer consisting of a joint venture shall state here below the name and address of his representative who is authorized to receive on his behalf correspondence in connection with the Tender.

……

(Name of Tenderer's Representative in block letters)

……

(Address of Tenderer's Representative)

……

(Signature of Tenderer's Representative)

KEY PERSONNEL

DESIGNATION	NAME	NATIONALITY	SUMMARY OF QUALIFICATIONS AND EXPERIENCE
Headquarters: 1. Managing Director 2. 3. 4. 5. etc.			
Site Office: 1. Site Supervisor 2. 3. 4. 5. 6			

I certify that the above information is correct.

……	……	……..
(Title)	(Signature)	(Date)

SCHEDULE OF THE PROPOSED APPROPRIATE EQUIPMENT.

Mandatory minimum number of equipment required by the Employer for the execution of the project that the bidder must make available for the Contract

Item No.	Equipment Details	Minimum Number Required	No of Equipment Owned by the Bidder	No. of equipment to be hired
1				
2				
3				
4				
5				
6				

The Bidder must attach certified copies of log books or lease agreement of the following

I certify that the above information is correct.

…… (Title) …… (Signature) …….. (Date)

SCHEDULE OF COMPLETED ELECTRICAL WORKS CARRIED OUT IN THE PREVIOUS YEARS

DESCRIPTION OF WORKS AND CLIENT	TOTAL VALUE OF WORKS (KSHS)	CONTRACT PERIOD (YEARS)	YEAR COMPLETED

I certify that the above Civil Works were successfully carried out and completed by ourselves.

…… …… ……
(Title) (Signature) (Date)

SCHEDULE OF ONGOING PROJECTS

DESCRIPTION OF WORK AND CLIENT	CONTRACT PERIOD	DATE OF COMMEN-CEMENT	DATE OF COMPLETION	TOTAL VALUE OF WORKS (KSHS.)	% COMPLETE D TODATE

I certify that the above Civil Works are being carried out by ourselves and that the above information is correct.

…… (Title)

…… (Signature)

…… (Date)

OTHER SUPPLEMENTARY INFORMATION

1. Financial reports for the last three years, balance sheets, profit and loss statements, auditors' reports etc. List them below and attach copies.

……
……
……

2. Evidence of access to financial resources to meet the qualification requirements. Cash in hand, lines of credit etc. List below and attach copies of supporting documents

……
……
……

3. Name, address , telephone, telex, fax numbers of the Tenderer's Bankers who may provide reference if contacted by the Employer.

……
……
……

4. Information on current litigation in which the Tenderer is involved.

OTHER PARTY (IES)	CAUSE OF DISPUTE	AMOUNT INVOLVED (KSHS)

I certify that the above information is correct.

…… …… ……
Title Signature Date

ADJUDICATOR'S AGREEMENT

Identification of Project:

……
(the "Project")

Name and address of the Employer:

……..
(the "Employer")

Name and address of the Contractor:

……..
(the "Contractor")

Name and address of the Adjudicator:

……..
(the "Adjudicator")

Whereas the Employer and the Contractor have entered into a Contract ("the Contract") for the execution of the Project and wish to appoint the Adjudicator to act as adjudicator in accordance with the Rules for Adjudication ["the Rules"].

The Employer, Contractor and Adjudicator agree as follows:

1. The Rules and dispute provisions of the Contract shall form part of this Agreement.

2. The Adjudicator shall be paid:

   A retainer fee of ……..…….. per calendar month(where applicable)

   A daily fee of ……..…

   Expenses (including the cost of telephone calls, courier charges, faxes and telexes incurred in connection with his duties; all reasonable and necessary travel expenses, hotel accommodation and subsistence and other direct travel expenses).

   Receipts will be required for all expenses.

3. The Adjudicator agrees to act as Adjudicator in accordance with the Rules and has disclosed to the Parties any previous or existing relationship with the Parties or others concerned with the Project.

4. This Agreement shall be governed by the laws of……

5. The Language of this Agreement shall be ……..

SIGNED BY ……

For and on behalf of the Employer in the presence of

Witness ……...
Name ……...
Address ……...
Date ……...

SIGNED BY ……

For and on behalf of the Contractor in the presence of

Witness ……...
Name ……...
Address ……...
Date ……...

SIGNED BY ……

For and on behalf of the Adjudicator in the presence of

Witness ……...
Name ……...
Address ……...
Date ……...

FRAUD & CORRUPTION

1 If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site.

2 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed.

3 For the purposes of this Sub-Clause:

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

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

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

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

4 The Contractor declares that:

a) They did not engage in any action to influence the Project implementation process to the detriment of the Employer, in particular no collusive practice took place nor will take place, and

The bidding proceedings, contract award, and execution have not and will not be subject to any corrupt practice as defined in the United Nations Convention to combat corruption dated 31 October 2003.

Dated this _____ day of _____20_____

Signature _____in the capacity of_____

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

_____[Address of Tenderer]

_____[Seal or Stamp of Tenderer]

ENVIRONMENTAL AND SOCIAL COMMITMENT

I have taken due note of the importance to comply with environmental and social standards and regulations.

I, the undersigned, [……] acting as the duly authorized representative of […….],

With respect to the submission of a bid for [……] in accordance with the invitation to tender No [……], I undertake to comply, and ensure that our subcontractors, if any, comply with international environmental and labour standards consistent with applicable law and regulations in the country of implementation of the Project, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties

In addition, I also undertake to adopt any environmental and social risk mitigation measures as defined in the environmental and social management plan or the notice of environmental and social impact issued by the Employer.

Dated this _____ day of _____20_____

Signature _____in the capacity of_____

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

_____[Address of Tenderer]

_____[Seal or Stamp of Tenderer]

FORM RB 1

REPUBLIC OF KENYA

PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD

APPLICATION NO…….OF……..…20……...

BETWEEN

…….APPLICANT

AND

……RESPONDENT (Procuring Entity)

Request for review of the decision of the…… (Name of the Procuring Entity) of ……dated the…day of …….20…….in the matter of Tender No……..…of ……..20…

REQUEST FOR REVIEW

I/We……,the above named Applicant(s), of address: Physical address…….Fax 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.
etc.

By this memorandum, the Applicant requests the Board for an order/orders that: -

1.
2.
etc

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

DECLARATION FORM

Date _____

To _____

_____

_____

The tenderer i.e. (Name and address)_____

_____declare the following:

a) Has not been debarred from participating in public procurement.

b) Has not been involved in and will not be involved in corrupt and fraudulent practices regarding public procurement.

_____	_____	_____
Title	Signature	Date

(To be signed by authorized representative and officially stamped)

Supervision Check List (1/2)

Project Title:	
Contractor:	

	Da
The Engineer's Representative (Project Engineer)	
Resident Engineer	

1. This check list is for Resident Engineer to check contractor's work execution process.
2. Fill in date of checking as (day/month), mark as indicated in Filling Example, and state remarks.
3. Put this check list in the Monthly Progress Report.

Item		Check Point		before	During execution								after	
				Date /	Date /	Date /	Date /	Date /	Date /	Date /	Date /	Date /	Date /	
1	Execution system in general	1-1	Works Execution Programme (including its revised version if any) is submitted before the date specified in contract document	☐	☐	☐	☐	☐	☐	☐	☐	☐		
		1-2	Works Execution Programme properly reflects the given specifications and site conditions	☐	☐	☐	☐	☐	☐	☐	☐	☐		
		1-3	Execution procedures are in accordance with Works Execution Programme		☐	☐	☐	☐	☐	☐	☐	☐		
2	Equipment holding	2-1	All equipment used are properly mobilized in accordance with Works Execution Programme		☐	☐	☐	☐	☐	☐	☐	☐		
		2-2	All equipment used is well maintained during the execution of works		☐	☐	☐	☐	☐	☐	☐	☐		
3	Contractor's in-house staff	3-1	Qualified technical staff of contractor are properly assigned as specified in Works Execution Programme		☐	☐	☐	☐	☐	☐	☐	☐		
		3-2	Contractor's in-house key staff understand work process and schedule properly		☐	☐	☐	☐	☐	☐	☐	☐		
		3-3	Contractor's in-house staff give technical guidance and direction to workers and operators properly and timely		☐	☐	☐	☐	☐	☐	☐	☐		
		3-4	Communications with authority in writing is properly and timely		☐	☐	☐	☐	☐	☐	☐	☐		
4	Personnel employment	4-1	Workers and operators are deployed in accordance with Works Execution Programme		☐	☐	☐	☐	☐	☐	☐	☐		
		4-2	Wage payment is properly made on time		☐	☐	☐	☐	☐	☐	☐	☐		
5	Site base facilities	5-1	Office and stockyard are prepared in accordance with Works Execution Programme		☐	☐	☐	☐	☐	☐	☐	☐		
		5-2	Site is well maintained during the work execution and cleared on completion		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		5-3	Material stored on site is properly managed during the work execution		☐	☐	☐	☐	☐	☐	☐	☐		
6	Quality and quantity management	6-1	Material testing, structural examination, and measurements are properly and routinely conducted based on specifications and Works Execution Programme		☐	☐	☐	☐	☐	☐	☐	☐		

Filling Example : ✓ Check point is satisfactory ■ Check point is unsatisfactory N/A

Supervision Check List (2/2)

Project Title:	
Contractor:	

1. This check list is for Resident Engineer to check contractor's work execution process.
2. Fill in date of checking as (day/month), mark as indicated in Filling Example, and state remarks.
3. Put this check list in the Monthly Progress Report.

Item		Check Point			before	During execution									after	
					Date /	Date /	Date /	Date /	Date /	Date /	Date /	Date /	Date /	Date /	Date /	R
6	Quality and quantity management	6-2	Results of material testing, structural examination and measurements are within the specifications.			☐	☐	☐	☐	☐	☐	☐	☐			
		6-3	Results of material testing, structural examination, and measurements are properly compiled as reports for confirmation			☐	☐	☐	☐	☐	☐	☐	☐			
7	Work scheduling	7-1	Understanding of critical path and its reflection on scheduling are proper			☐	☐	☐	☐	☐	☐	☐	☐			
		7-2	Actual proceedings are periodically compared to the planned schedule described in Works Execution Programme			☐	☐	☐	☐	☐	☐	☐	☐			
		7-3	Changes caused by site conditions are properly handled to keep Works on schedule			☐	☐	☐	☐	☐	☐	☐	☐			
		7-4	All works are completed within the contract term or within the extended term as allowed												☐	
8	Work safety management	8-1	No accident occurs to workers, operators, or third-parties.			☐	☐	☐	☐	☐	☐	☐	☐			
		8-2	Safety of workers and operators is considered			☐	☐	☐	☐	☐	☐	☐	☐			
		8-3	Accident prevention efforts for third-parties are proper			☐	☐	☐	☐	☐	☐	☐	☐			
		8-4	Traffic and site safety devices are properly installed and managed			☐	☐	☐	☐	☐	☐	☐	☐			
		8-5	Temporary facilities (e.g. scaffolding) are constantly checked			☐	☐	☐	☐	☐	☐	☐	☐			
9	Environmental and social management	9-1	Environmental and social mitigation efforts (e.g. against noise, vibration, emission, and dust) are conducted			☐	☐	☐	☐	☐	☐	☐	☐			
		9-2	Waste material from site is properly disposed			☐	☐	☐	☐	☐	☐	☐	☐			
		9-3	Damage to existing roads, works and services is avoided or are repaired when it occurs			☐	☐	☐	☐	☐	☐	☐	☐			
		9-4	Transportation by vehicles is properly done with no overloading, and neither material falling, leakage, nor spillage.			☐	☐	☐	☐	☐	☐	☐	☐			

Filling Example : ✓Check point is satisfactory ■ Check point is unsatisfactory N/A Not appli

PARTICULAR SPECIFICATION

OF

MATERIALS AND WORKS

GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

2.1 General

2.2 Standard of Materials

2.3 Workmanship

2.4 Procurement of Materials

2.5 Shop Drawings

2.6 Record Drawings

2.7 Regulations and Standards

2.8 Setting out Works

2.9 Position of Electrical Plant and Apparatus

2.10 M.C.B Distribution Panels and Consumer Units

2.11 Fused Switchgear and Isolators

2.12 Conduits and Conduit Runs

2.13 Conduit Boxes and Accessories

2.14 Labels

2.15 Earthing

2.16 Cables and Flexible Cords

2.17 Armoured PVC Insulated and Sheathed Cables

2.18 Cable Supports; Markers and Tiles

2.19 PVC Insulated Cables

2.20 Heat Resisting Cables

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2.22 Cable Ends and phase Colours

2.23 Cable Insulation Colours

2.24 Sub-circuit Wiring

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2.26 Insulation

2.27 Lighting Switches

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2.33 Lamps

2.34 lighting Fittings Street lighting Lanterns

2.35 Position of Points and Switches

2.36 Street/Security Lighting Columns

2.37 Timing Control Switch

2.38 Wiring System for Street Lighting

2.39 Metal control Pillar

2.40 Current Operated Earth leakage circuit breaker

2.41 MV Switchboard

2.42 Steel Conduits and Steel Trunking

2.43 Testing on Site

2.1 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.

2.2 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 coloured set of line diagrams relating to operating and maintenance instructions shall be framed and, mounted in a suitable location.

2.3 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.

2.4 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.

2.5 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.

2.6 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 tripfree 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.

2.7 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.

2.8 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-contractors 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 Egatube 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 t o 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-contractors expense.

It will be the Sub-contractors 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.

2.13 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 to of PVC or mild steel (of not less than 12swg) and black enamelled or galvanised 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.

2.14 LABELS

Labels fitted to switches and fuseboards;-

(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 switch
- 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.

2.15 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 armouring 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 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.

2.16 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 04-192:1988
PVC Insulated Armoured Cables	-	Ks 04-194:1990
Armouring of Electric cables	-	Ks 04-290:1987

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 1.5mm² 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 with the details stated in the "Cable Braid and insulation Colours" Clause.

2.17 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.
Where cables rise from floor level to switchgear etc., they shall be protected by P.V.C. conduit, to a height of 600mm from finished floor level, whether the cable is run on the surface or recessed into the wall.

2.18 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 cost cables hooks or clamps, or 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.

2.19 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.

2.20 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.

2.21 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).

2.22 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.

2.23 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
	Main and Sub-Main	
a) Phase	Red	Red
b) Neutral	Black	Black
1) Sub-Circuits Single Phase		
a) Phase	Red	Red
b) Neutral	Black	Black

2.24 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 1.5mm² for all lighting circuits indicated on the drawing.
Power circuits P.V.C cable (minimum sizes).

(i) 2.5mm² for one, two or three 5Amp sockets wired in parallel.

(ii) 2.5mm² for one 15Amp socket.

(iii) 2.5mm² 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.

2.25 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.

2.26 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.

2.27 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

2.28 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

2.29 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

2.30 COOKER OUTLETS

These shall be flush mounted with 13-A switched socket outlet and neon indicator Lamps.
The cooker control units shall be as manufactured by “M.K. Electrical Company Ltd”, or other approved equal KS 04 – 247: 1988

2.31 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.

2.32 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.

2.33 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.

2.34 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.

2.35 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.

2.36 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 upto 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.

2.37 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.

2.38 WIRING SYSTEM FOR STREETLIGHTING

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 Electrical and 900mm away from the road kerb 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 1.5mm² 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.

2.39 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.

2.40 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.

2.41 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

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 meters. 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.

2.42 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 galvanised. Conduit fittings, accessories or equipment used in conjunction with galvanised conduits shall also be galvanised 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 galvanised, the links shall be made by galvanised 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 35mm² 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 galvanized 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 enamelled tubing and galvanising paint for galvanised 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 galvanised 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, galvanised 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.

2.43 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.

(b) 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.

(c) 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.

(d 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.

(eThe 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.

The Sub-contractor shall generally attend on other contractors employed on the project and carry out such electrical tests as may be necessary.

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.

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.

APPENDIX TO GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

The electrical sub-contractor shall comply with the following:-

1. Government Electrical Specifications No. 1 and No. 2.

2. All requirements of Kenya Power and Lighting Company Limited, and Communications Commission of Kenya (CCK).

SECTION E

SCHEDULE OF UNIT RATES

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.

2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.

3. The unit rates will be used to assess the value of additions or omissions arising from authorised variations to the contract works.

4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted.

SCHEDULE OF UNIT RATES

NO	DESCRIPTION	QTY	UNIT	UNIT RATE	
				KSHS	CTS
	1) **Cables** PVC SWA PVC Cables:-				
	2 core 4mm2	1	M		
	2core 2.5mm2	1	M		
	2 core 6mm2	1	M		
	2 core 10mm2	1	M		
	4 core 10mm2	1	M		
	4 core 25mm2	1	M		
	4 core 35mm2				
	2) 6Way TPN distribution board as Crabtree or equivalent	1	NO		
	3) 12 Way TPN distribution board as Crabtree or equivalent.	1	NO		
	4) 8Way SPN Consumer's unit as Crabtree or equivalent	1	NO		
	5) 200 A TPN isolator as Crabtree.	1	NO		
	6) 100 A SPN isolator as Crabtree.	1	NO		
	7) 240V-24 hour Time switch	1	NO		
	8) 200ABusbar Chamber	1	NO		
	9) 150ABusbar Chamber	1	NO		
	10) Security floodlight 500W(Metal Halogen)	1	NO		
	11) 30A TPN RCBO	1	No.		
	12) 20ATPN Contactor	1	1		
	13) 16 SWG surface mounted and spray painted Single tariff Meter box	1	Item 1		
	14)150A Busbar (Standard length)				

E2

SECTION H

BILLS OF QUANTITIES

A) PRICING OF PRELIMINARIES ITEMS.

Prices will be inserted against item of preliminaries in the sub-contractor's Bills of Quantities and specification. These Bills are designated as Bill 1 in this Section. Where the sub-contractor fails to insert his price in any item he shall be deemed to have made adequate provision for this on various items in the Bills of Quantities. The preliminaries form part of this contract and together with other Bills of Quantities covers for the costs involved in complying with all the requirements for the proper execution of the whole of the works in the contract.

The Bills of Quantities are divided generally into three sections:-

a) Preliminaries – Bill 1

Sub-contractors preliminaries are as per those described in section C – sub-contractor preliminaries and conditions of contract. The sub-contractor shall study the conditions and make provision to cover their cost in this Bill. The number of preliminary items to be priced by the Tenderer has been limited to tangible items such as site office, temporary works and others. However the Tenderer is free to include and price any other items he deems necessary taking into consideration conditions he is likely to encounter on site.

b) Installation Items and Other Bills - Bill 2
The brief description of the items in these Bills of Quantities should in no way modify or supersede the detailed descriptions in the contract Drawings, conditions of contract and specifications.
The unit of measurements and observations are as per those described in clause 1.05 of the section C.

c) Summary

The summary contains tabulation of the separate parts of the Bills of Quantities carried forward with provisional sum, contingencies and any prime cost sums included. The sub-contractor shall insert his totals and enter his grand total tender sum in the space provided below the summary.
This grand total tender sum shall be entered in the Form of Tender provided elsewhere in this document

B) NOTES FOR BILLS OF QUANTITIES

1. The Bills of Quantities form part of the contract documents and are to be read in conjunction with the contract drawings and general specifications of materials and works.

2. The prices quoted shall be deemed to include for all obligations under the sub-contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning and all taxes (including **16% V.A.T and 3 % Withholding tax**).

   In accordance with Government policy, the 16% V.A.T and 3% withholding Tax **shall be deducted** from all payments made to the tenderer, and the same shall be forwarded to the **Kenya Revenue Authority (KRA).**

3 All prices omitted from any item, section or part of the Bills of Quantities shall be deemed to have been included to another item, section or part.

4. The brief description of the items given in the Bills of Quantities are for the purpose of establishing a standard to which the sub-contractor shall adhere to. Otherwise alternative brands of **equal** and **approved** quality will be accepted.

   Should the sub-contractor install any material not specified here in before receiving **approva**l from the Project Manager, the sub-contractor shall remove the material in question and, **at his own cost**, install the proper material.

5. The grand total of prices in the price summary page must be carried forward to the **Form of Tender**.

6. Tenderers must enclose, together with their submitted tenders, **detailed manufacturer's Brochure**s detailing Technical Literature and specifications on the following fittings they intend to offer.

   a) Scanner
   b) Light duty UPS
   c) Flash Disc
   d) Street light fitting as Thorn or equivalent

   This shall be used in the tender evaluation to determine the first line aesthetics and quality of fittings offered.

1. Statement of Compliance

I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.

I confirm I have not made and will not make any payment to any person, who can be perceived as an inducement to win this tender.

Signed: …….*for and on behalf of the Tenderer*

Date: ……..

Official Rubber Stamp: ……

SUPPLYDELIVER,FIX ,TEST AND COMMISSION THE FOLLOWING					
Item No	**Description**	**Quantity**	**Unit**	**Unit RATE SHS**	**TOTAL SHS**
1	12m steel galvanized floodlight column made from class “B” steel galvanized pipe complete with 400mm x 400mm bracket as per specification to be provided by Engneer	4	N0		
2	Power point wired in 2.5mm pvc cable t/w/e complete with wiring accessories (excluding fittings)	240	LM		
3	400watts LED floodlight complete with reflector control gear as per specification. The floodlight shall be engraved to codes to be provided.Type Phillips,Nikon or equal approved.	16	N0		
4	Photo cell kit, all accessories included. Type photon or equal approved	4	N0		
5	Metal control pillar as per DRG. To be provided by Engineer with lockable facilities	4	N0		
6	4 Way consumer unit. Type crab-tree or equal approved.	4	N0		
7	20 amps MCBS to fit item No 6 above,type crab tree or any other equal approved.	16	N0		

8	40amps current operated earth leakage circuit braker with rated leakage current of 0.5A. Type crabtree or equal approved by Engineer.	4	N0		
9	80amps contactor as type ABB or equal approved	4	No		
10	6.0mm 2 core pvc/swa/pvc cable under ground as East Africa cable or equal approved	120	LM		
11	Earthling comprising of 6mm2 earth lead and 1800mm long x15mm diameter copper earth electrode with a driving tip and clamp in a removable cover.	4	N0		
12	32mm2 cable gland for terminating underground cable for item no 11 above.	4	N0		
13	A Plate measuring 300mmx450mmx3mm arcwelded 6mm thickness to item N0 1 above, bearing the MERU COUNTY logo	4	N0		
14	Allow provision sum of KENYA SHILLING SEVENTY THOUSAND(81,200for KPLC connection.	4	PC SUM	81200	324,800
	SUB-TOTAL **VAT @16%** **TOTAL**				